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Education by Radio

Volume One

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February 12-December 31, 1931

THE PURPOSE of the Committee shall be to secure to the people of the United States the use of radio for educational purposes by protecting the rights of educational broadcasting, by promoting and coordinating experiments in the use of radio in school and adult education, by maintaining a service bureau to assist educational stations in securing licenses and in other technical procedures, by exchange of information thru a weekly bulletin, and by serving as a clearing house for the encouragement of research in education by radio.—From the by-laws of the National Committee on Education by Radio.

National Committee on Education by Radio

1201 Sixteenth Street Northwest

Washington, D. C.

1931

TABLE OF CONTENTS

VOLUME ONE

1931

Number	Date	Page	Number	Date	Page
1	February	12—The National Committee on Education by Radio..... 1	21	July	2—The Canadian Radio Situation. 83
2	February	19—Wisconsin Uses Radio for Education 5	22	July	16—Radio During May and June... 87
3	February	26—How Does Your State Stand?... 9	23	July	30—Radio Channels for College Stations 91
4	March	5—From the Newspapers..... 13 Radio Notes for Class Study... 15	24	August	13—Below the Rio Grande..... 95 Where is Radio Broadcasting Headed?..... 97
5	March	12—The Freedom of the Air..... 17	25	August	27—Radio During July and August. 99
6	March	19—The Fess Bill for Education by Radio 21 The Public's Rights in Radio.. 22 Freedom of Speech Almost Lost. 23 Radio in Soviet Russia..... 24	26	September	10—Advertising Invades the Schools. 103
7	March	26—The Menace of Radio Monopoly 25	27	September	24—Will There Be Freedom of the Radio? 107
8	April	2—How Does Your State Stand?... 29	28	October	8—Radio From the Citizen's Point of View 111
9	April	9—Radio During March..... 33	29	October	15—Broadcasts to Schools in England 115
10	April	16—Unscrambling the Ether..... 37	30	October	22—The Ohio School of the Air..... 119 Prussia Surveys Educational Radio 121
11	April	23—The Seventy-Second Congress.. 41	31	October	29—What's Happening in Radio?... 123
12	April	30—The School of the Air..... 45 The Enrichment of Adult Life.. 47	32	November	5—The Radio Octopus..... 127
13	May	7—Superpower 49	33	November	12—The Radio Octopus [Concluded] 131
14	May	14—The Future of Radio..... 53 The Power Trust in the Public Schools..... 55	34	November	19—Detroit Convention of Broadcasters 135 Contrasts—John Bull and Uncle Sam 137
15	May	21—Radio During April..... 57	35	November	26—The Impending Radio War ... 139
16	May	28—The Americanization of Amusement 61 Radio in the Schools of England 62	36	December	3—An Open Letter to Members of Congress..... 143
17	June	4—Business Defeatism and Economic Recovery..... 65	37	December	10—How Does Your State Stand?... 147
18	June	11—The Ohio School of the Air.... 69 Pennsylvania's Proposed School of the Air..... 70 Cooperation Between Home and School 71	38	December	17—The Battle of Radio Armaments 151
19	June	18—Education's Rights on the Air.. 73	39	December	24—Educational Functions of Radio. 155 The United States Census Bureau Enumerates Radios..... 156 Education by Radio..... 157
20	June	25—National Committee on Education by Radio..... 79	40	December	31—The World's Oldest Educational Radio Station Carries On..... 159

INDEX TO VOLUME ONE

<p>Adult Education</p> <ul style="list-style-type: none"> — Mexico uses radio in..... 95 — National Advisory Council on Radio in Education inaugurates programs in..... 138 — United States contrasted with Great Britain, in..... 137 — Wisconsin proposes use of radio in..... 5 <p>Adult Life, the enrichment of, (ARTHUR DEAN)..... 47</p> <p>Advertising</p> <ul style="list-style-type: none"> — Billboards, compared with..... 28 — Canada, eliminates — Sunday..... 33 — Condemned..... 13 — Condemned (ELZEY ROBERTS)..... 2 — Crowds out education..... 124 — Damrosch program, interrupted by..... 147 — Discussed (ROBERT MACK)..... 13 — International, condemoed..... 36 — Newspapers vs. radio conflict..... 58 — Schools invaded by..... 103 — Scored by listeners..... 34 <p>ALEXANDER, GROSS W. The Menace of Radio Monopoly..... 25</p> <p>ALLEN, A. T. (quoted)..... 106</p> <p>American Bar Association, The</p> <ul style="list-style-type: none"> — Basic radio assumptions challenged..... 112 — See also..... 101, 125 <p>American Newspaper Publishers' Association..... 58</p> <p>APFLEGATE, A. A. (quoted)..... 14</p> <p>ATWELL, JUDGE WILLIAM HAWLEY (quoted)..... 101</p> <p>AYLESWORTH, MERLIN H. (quoted)..... 25, 26, 162</p> <ul style="list-style-type: none"> — See also..... 40, 53 <p>Bagley, William C. The School of the Air..... 45</p> <p>BELLOWS, HENRY A.</p> <ul style="list-style-type: none"> — At NAB Convention..... 136 — (quoted)..... 101 — See also..... 89, 125, 141 <p>Below the Rio Grande (SENORITA MARIA LUISA ROSS)..... 95</p> <p>BENNETT, EDWARD (quoted)..... 6</p> <p>BIRKENHEAD, WALTER (quoted)..... 34</p> <p>BLANKENHORN, HEBER. The Battle of Radio Armaments..... 151</p> <p>BRADFORD, MRS. HUGH (quoted)..... 105</p> <p>BRIGGS, THOMAS H. (quoted)..... 70</p> <p>British Broadcasting Corporation</p> <ul style="list-style-type: none"> — Announcers, diction of..... 64 — Begins adult education programs..... 137 — "Benevolent despot"..... 64 — Educational program of..... 64 — School programs..... 115 <p>Broadcasting. See publications</p> <p>BURY, J. H. (quoted)..... 28</p> <p>Business Defeatism and Economic Recovery (GLENN FRANK)..... 65</p> <p>Caldwell, Louis G.</p> <ul style="list-style-type: none"> — (quoted)..... 124 — See also..... 101 <p>CALLAHAN, JOHN (quoted)..... 106, 160</p> <p>Canada</p> <ul style="list-style-type: none"> — Eliminates Sunday advertising..... 13 — Number radio sets in..... 3 — Radio League..... 2, 110 <p>Canadian Radio Situation, The (GRAHAM SPRY)..... 83</p> <p>CARLISLE, JOHN (quoted)..... 156</p> <p>CARPENTER, H. A. (quoted)..... 136</p> <p>Cartoon</p> <ul style="list-style-type: none"> — Advertising satired..... 72 — Monopoly satired..... 86 <p>Census. See statistics</p> <p>CHANDLER, HARRY (quoted)..... 63</p> <p>Chicago, its place in the radio world..... 3</p> <p>Children First (editorial)..... 105</p> <p>CODEL, MARTIN</p> <ul style="list-style-type: none"> — (quoted)..... 33, 88 — See also..... 124 <p>Colleges and Universities</p> <ul style="list-style-type: none"> — Arkansas University in litigation..... 100 — Oglethorpe University begins school of the air..... 20, 60 — South Dakota, increases educational programs..... 14 <p>Columbia Broadcasting System</p> <ul style="list-style-type: none"> — American School of the Air..... 45 — Objectionable advertising of..... 33 — Quota units compared with educational stations..... 150 — See also..... 54 <p>Commission discrimination (editorial)..... 155</p> <p>CONDON, RANDALL J. (quoted)..... 104</p> <p>Congress. See Legislation</p> <p>CONRAD, R. DEAN. The Ohio School of the Air..... 119</p> <p>Convention of Broadcasters, The Detroit (TRACY F. TYLER)..... 135</p> <p>COOLIDGE, CALVIN (quoted)..... 12</p> <p>COOPER, WILLIAM JOHN</p> <ul style="list-style-type: none"> — Educational Functions of Radio..... 155 — (quoted)..... 14 <p>Cooperation Between Home and School (JOY ELMER MORGAN)..... 71</p> <p>CORBETT, E. A. Education by Radio..... 157</p> <p>Correction..... 125</p> <p>COUNTS, GEORGE S. Radio in Soviet Russia..... 24</p> <p>Courts</p> <ul style="list-style-type: none"> — Arkansas University in litigation..... 100 — Declare power to regulate radio rests with Congress..... 123 — Important decisions of..... 123 — RCA vs. <i>Milwaukee Journal</i>..... 99 — Radio monopoly brought to..... 35 — Supreme, declines to pass on validity of radio law..... 3 	<ul style="list-style-type: none"> — Supreme, re RCA and Langmuir..... 73, 74, 75 — Wisconsin vs. Federal Radio Commission..... 99 <p>COWAN, C. V. (quoted)..... 98</p> <p>CULVER, CHARLES A. (quoted)..... 27</p> <p>Czechoslovakia, Schools radio equipped..... 2</p> <p>Davis, Representative Ewin L. (quoted)..... 27</p> <p>DEAN, ARTHUR. The Enrichment of Adult Life..... 47</p> <p>DE FOREST, LEE (quoted)..... 5, 14, 35</p> <p>DILL, SENATOR CLARENCE C.</p> <ul style="list-style-type: none"> — Defends KWSC..... 111 — (quoted)..... 144 <p>DOUDNA, EGGAR G. (quoted)..... 106, 159, 160</p> <p>Edison, Thomas A. (quoted)..... 123</p> <p>Editorials</p> <ul style="list-style-type: none"> — Children First..... 105 — Commission discrimination..... 155 — Federal Radio Commission and the Office of Education, The..... 160 — Hats Off to the Courts!..... 126 — Issue, The..... 102, 107 — Lesson from the Movies, A..... 98 — Program at a bad hour, A good..... 138 — Special radio interests fear Congress..... 125 <p>Education by Radio (E. A. CORBETT)..... 157</p> <p>Education on the Air. See publications</p> <p>Education's Rights on the Air (JOY ELMER MORGAN)..... 73</p> <p>Educational Functions of Radio (WILLIAM JOHN COOPER)..... 155</p> <p>Educational Radio Station, The World's Oldest Carries on (HAROLD A. ENGEL)..... 159</p> <p>ELLIOTT, FRANK W. (quoted)..... 136</p> <p>ENGEL, HAROLD A. The World's Oldest Educational Radio Station Carries On..... 159</p> <p>Engineering</p> <ul style="list-style-type: none"> — Shortwaves..... 57 — Synchronization..... 35 — Television..... 35 — Discussed (ROBERT MACK)..... 35 — French progress in..... 3 — Sound, development of..... 59 — See also..... 37 <p>England. Broadcasts to schools in..... 62, 115</p> <p>EVANS, S. HOWARD (quoted)..... 112</p> <p>EWBANK, H. C. L. (quoted)..... 26, 110</p> <p>Federal Radio Commission</p> <ul style="list-style-type: none"> — Criticized for attitude toward education..... 118, 146 — High-power recommendations..... 125 — Licenses, renewal of..... 60 — Office of Education, and the (editorial)..... 160 — Refuses permit to a Minnesota school..... 34 — Rumor of Saltzman's resignation..... 33 — Versus RCA..... 87 — See also..... 73, 78, 161 <p>FEIDELSON, JUDGE CHARLES N. (quoted)..... 102</p> <p>Fess Bill for Education by Radio, The (JOHN HENRY MACCRACKEN)..... 21</p> <p>FESS, SENATOR SIMEON D., and Fess Bill. See Legislation</p> <p>France. See Engineering, television</p> <p>FRANK, GLENN. Business Defeatism and Economic Recovery..... 65</p> <p>Freedom of the Air, The (PAUL HUTCHINSON)..... 17</p> <p>Freedom of the Radio, Will There Be? (KENNETH M. GAPEN)..... 107</p> <p>Freedom of Speech Almost Lost (ARMSTRONG PERRY)..... 23</p> <p>FRIEHEL, KARL. Prussia Surveys Educational Radio..... 121</p> <p>FRIEND, JOSEPH H. (quoted)..... 153</p> <p>FULTON, ALBERT M. (quoted)..... 160</p> <p>Future of Radio, The (H. V. KALTENBORN)..... 53</p> <p>Gapen, Kenneth M. Will There be Freedom of the Radio?..... 107</p> <p>Germany, radio situation in..... 100</p> <p>GOOSSENS, EUGENE (quoted)..... 115</p> <p>GOSLING, THOMAS W. (quoted)..... 106</p> <p>Great Britain, popularity of radio in..... 4</p>	<ul style="list-style-type: none"> — (quoted)..... 4, 25, 73, 135, 150 <p>HURD, VOLNEY (quoted)..... 13</p> <p>HUTCHINSON, PAUL</p> <ul style="list-style-type: none"> — Freedom of the Air, The..... 17 — (quoted)..... 52 <p>International..... 3, 15, 36, 61, 151</p> <p>Issue, The (editorial)..... 102, 107</p> <p>Jacobs, Thornwell (quoted)..... 20</p> <p>JAMES, HERMAN G. (quoted)..... 26</p> <p>JENSEN, C. N. (quoted)..... 106</p> <p>JONES, R. G. (quoted)..... 81</p> <p>Kaltenborn, H. V.</p> <ul style="list-style-type: none"> — Future of Radio, The..... 53 — (quoted)..... 14 <p>KING, SENATOR WILLIAM H. (quoted)..... 59</p> <p>Lafout, Harold A.</p> <ul style="list-style-type: none"> — Criticized for attitude toward educational stations..... 146 — (quoted)..... 33, 35 — See also..... 23, 140 <p>LAMBERT, RICHARD L. (quoted)..... 4</p> <p>Langmuir patent</p> <ul style="list-style-type: none"> — Declared invalid by Supreme Court..... 75 — Discussed (ROBERT MACK)..... 89 <p>LAUTER, VITA (quoted)..... 153</p> <p>Legislation</p> <ul style="list-style-type: none"> — Congress, An Open Letter to Members of..... 143 — Congress holds power to regulate radio..... 123 — Discussed (ROBERT MACK)..... 34 — Discussed (SENATOR WALLACE H. WHITE, JR.)..... 135 — Fess Bill, statement of..... 21, 41, 143, 155 — FESS, SENATOR, praised..... 13 — Pennsylvania, in..... 70 — Seventy-Second Congress, Roster..... 41 — See also..... 139 <p>Lesson from the Movies, A (editorial)..... 98</p> <p>Lincoln's Birthday on radio..... 3</p> <p>Listener Reaction</p> <ul style="list-style-type: none"> — Advertising scored..... 34 — Indignation at Byrd program interruption..... 13 — Pastor protests use of hymns in advertising..... 161 — Programs condemned..... 60 <p>MacCracken, John Henry</p> <ul style="list-style-type: none"> — Fess Bill for Education by Radio, The..... 21 — (quoted)..... 20 <p>MACK, ROBERT (quoted)..... 13, 34, 35, 57, 89, 99</p> <p>MADDY, JOSEPH E. (quoted)..... 117</p> <p>MANN, HORACE (quoted)..... 123</p> <p>MARCONI, MARQUIS (quoted)..... 53</p> <p>MCWAIN, DONALD (quoted)..... 103</p> <p>MENCKEN, H. L. (quoted)..... 101</p> <p>Mexico, uses the radio..... 95</p> <p>MIDDLEBROOK, W. T. (quoted)..... 28</p> <p>MILIKAN, ROBERT A. (quoted)..... 85, 89</p> <p>Monopoly</p> <ul style="list-style-type: none"> — In international amusement..... 61 — Menace of Radio, The (GROSS W. ALEXANDER)..... 25 — See also..... 4, 17, 25, 27, 28, 35, 52, 55, 73, 124, 127, 150 <p>MONSEN, COURTENAY (quoted)..... 82</p> <p>MOORE, R. C. (quoted)..... 106</p> <p>MORGAN, JOY ELMER</p> <ul style="list-style-type: none"> — Answers McWain..... 104 — Cooperation Between Home and School..... 71 — Education's Rights on the Air..... 73 — National Committee on Education by Radio..... 79 — Public's Rights in Radio, The..... 22 — (quoted)..... 13, 33, 151, 152 <p>National Advisory Council on Radio in Education..... 88, 138, 140</p> <p>National Association of Broadcasters..... 135</p> <p>National Broadcasting Company</p> <ul style="list-style-type: none"> — Quota units compared with educational stations..... 150 — See also..... 138 <p>National Committee on Education by Radio</p> <ul style="list-style-type: none"> — Beliefs..... 8 — Intervenes at superpower hearing..... 49 — (MORGAN, JOY ELMER)..... 79 — Purpose, members, activities..... 1 — See also..... 20, 77, 139 <p>Nebraska, legend over capitol in..... 103</p> <p>Newspaper vs. Radio Conflict</p> <ul style="list-style-type: none"> — Stirred at meeting of ANPA..... 58 — See also..... 2 <p>NORRIS, SENATOR GEORGE W. The Power Trust in Public Schools..... 55</p> <p>Norway, school radio in..... 35</p> <p>Ohio Institute for Education by Radio, The Second Ohio School of the Air, The (R. DEAN CONRAD)..... 119</p> <ul style="list-style-type: none"> — See also..... 69 <p>ORTON, WILLIAM</p> <ul style="list-style-type: none"> — Unscrambling the Ether..... 37 — (quoted)..... 15 <p>Paley, William S. (quoted)..... 33</p> <p>Patent Pool..... 57, 88, 124</p> <p>Pennsylvania's Proposed School of the Air..... 70</p> <p>PERRY, ARMSTRONG</p> <ul style="list-style-type: none"> — Freedom of Speech Almost Lost..... 23 — (quoted)..... 20, 27, 34, 48, 56
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How This Index is Made

ARTICLES listed under author and title, are listed also under subject-matter heads when the title inadequately describes the content. Tables are indexed under statistics. Other general subject-headings are cartoons, editorials, photographs, poems, posters, and resolutions. Editorials are listed also under their titles in the main alphabet.

PERRY, ARMSTRONG		— Settles anti-trust suits	124	SPRY, GRAHAM. The Canadian Radio Situation	83
— Radio Channels for College Stations	91	— Supreme Court denies petition in patent case	57	States	
— See also	100, 101	— Versus Federal Radio Commission	87	— Educational stations in	9, 29, 148
Photographs		— Violates anti-monopoly laws	74	— Rights in radio	73, 107, 161
— BAGLEY, WILLIAM C.	45	— See also	17, 25	Stations	
— DILL, SENATOR CLARENCE C.	143	Radio in the Schools of England (EARL Y. POORE)	62	— Educational, measurements of value of	110
— FESS, SENATOR SIMEON D.	21	Radio Octopus, The (DANE YORKE)	127	— List of	9, 148
— FISHER, RT. HONORABLE H. A. L.	115	Radio War, The Impending (JAMES RORTY)	139	— In United States, list of by states	29
— KALTENBORN, H. V.	53	KAUSHENBUSIR, H. S. (quoted)	54	Statistics	
— McCARTY, HAROLD B.	159	Receiving Sets. See statistics		— Census Bureau counts radios	3, 156
— NORRIS, SENATOR GEORGE W.	55	REID, REPRESENTATIVE FRANK R. (quoted)	28	— Chart comparing facilities educational and commercial stations	150
— RULE, JAMES N.	107	Resolutions		— Educational stations in United States	9, 148
— SKINNER, BEVERLY O.	119	— Association of Land Grant Colleges and Universities (1931)	144	— Great Britain's radio investment	3
— SMITH, THURDER M.	111	— Conference on Radio and Education (1930)	7, 24	— Income Tax	28
— WHITE, SENATOR WALLACE H., JR.	135	— Department of Superintendence of NEA (1931)	16	— Programs, content analysis	23
Poems		— National Association of State Universities (1931)	144	— Quota Units	9, 29, 126, 148
— America's Making	109	— National Catholic Educational Association (1931)	101	— Radio sales, wholesale and retail	60
— Building a Temple	108	— National Committee on Education by Radio (January 1931)	8	— Receiving sets in Canada	3
— God Give Us Men!	99	— National Congress of Parents and Teachers (1931)	71, 76	— Receiving sets in United States	84
POORE, EARL Y. Radio in the Schools of England	62	— National Education Association (1930)	76	— World, stations and receiving sets in	24, 36
Posters		— National Education Association (1931)	100	— See also	54
— Insult to Congress, An	158	— National University Extension Association (1931)	79	SUMMERS, REPRESENTATIVE JOHN W. (quoted)	127
— Power Trust and the Public Schools, The	150	— Rhode Island Institute of Instruction (1931)	137	Superpower	
— Power Trust Promoter Becomes Radio President	162	— World Federation of Education Associations (1931)	100	— Hearing before Federal Radio Commission	49
— Shall Public Servants Serve the Public?	118, 146	— Wyoming State Teachers Association (1931)	159	Synchronization. See engineering	
— Superintendents Favor Educational Channels	16	RIGHTMIRE, GEORGE W. (quoted)	22	Taishoff, Sol (quoted)	57, 158
— Why Educational Broadcasting Stations	52	ROBERTS, ELZEY. Condemns advertising	2	Teaching by radio	
Power Trust, The		ROBINSON, IRA E.		— Approved in Cleveland schools	3
— And the public schools (chart)	150	— (quoted)	6, 111	— In England	62, 115
— In the Public Schools (SENATOR GEORGE W. NORRIS)	55	— Stand in RCA case	87	— In Mexico	95
Programs		RORTY, JAMES. The Impending Radio War	139	— In Prussia	121
— American School of the Air	45	ROSS, SENORITA MARIA LUISA. Below the Rio Grande	95	— Oglethorpe University	20, 60
— Analyzed for educational content	23	Russia, Radio in Soviet (GEORGE S. COUNTS)	24	— Ohio School of the Air	69, 119
— At a bad hour, A good (editorial)	138	Saltzman, Charles Mck.		— School bands in Michigan	117
— National Advisory Council on Radio in Education	138	— (quoted)	135	— See also	5, 45, 137, 155, 157
— North Carolina School of the Air	14	— Resignation rumored	33	Television. See engineering	
— Ohio School of the Air	69, 120	— Vote in RCA case	87	TURNER, C. E. (quoted)	14
— Prussian Schools	121	School of the Air, The (WILLIAM C. BAGLEY)	45	TYLER, TRACY F.	
— Schools of England	62, 115	Schools		— Convention of Broadcasters, the Detroit	135
— See also	14, 34, 64	— Advertising invades	103	— Defends KUOA	113
PROUT, F. T. (quoted)	59	— Bands taught by radio	117	— (quoted)	100
Prussia Surveys Educational Radio (KARL FRIEDEL)	121	— Cleveland	3	TYSON, LEVERING. Addresses NAB Convention at Detroit	136
Publications		— England	62, 115	Umberger, H. (quoted)	27, 106
— Broadcasting, announcement of first issue	124	— Minnesota, denied broadcast license	34	Unscrambling the Ether (WILLIAM ORTON)	37
— Education on the Air (1931)	123	— Norway	35	Vienna, radio situation in	101
Public's Rights in Radio, The		— Radio notes for class study	15	Webster, Glenn E. Where is Radio Broadcasting Headed?	97
— (JOY ELMER MORGAN)	22	— Realize radio need following Kansas blizzard	57	WELLS, H. G. (quoted)	14
— See also	112	Schools of the Air		WHEELER, SENATOR BURTON K. (quoted)	27
Quota Units		— North Carolina begins	14	WHITE, SENATOR WALLACE H., JR. (quoted)	135
— By population	126	— Oglethorpe University begins	20, 60	WILBUR, RAY LYMAN (quoted)	77
— Commercial vs. educational	76, 150	— Ohio, The	69, 119	Wisconsin	
— Method of assigning	147	— Pennsylvania's proposed	70	— Denied right to combine stations	90
— See also	9, 29, 148, 150	— Wisconsin, The	159	— Proposes use of radio for education	5
Radio Armaments, The Battle of (Heber Blankenborn)	151	— See also	142	— School of the Air	159
Radio Broadcasting, Where is it Headed? (GLENN E. WEBSTER)	97	Shortwaves. See engineering		Yorke, Dane. The Radio Octopus	127
Radio Channels for College Stations (ARMSTRONG PERRY)	91	SINCLAIR, UPTON (quoted)	156		
Radio Corporation of America		Special radio interests fear Congress (editorial)	125		
— Litigation with Milwaukee Journal	99	SPENCER, W. L. (quoted)	106		
— Ready to form patent pool	88				

The National Committee on Education by Radio

The National Committee on Education by Radio was organized on December 30, 1930 as the result of a series of events and conferences which took place during 1930 and which indicated the clear need for a more active interest in radio on the part of educational workers. The purpose of the Committee is to secure to the people of the United States the use of radio for educational purposes by protecting the rights of educational broadcasting, by promoting and coordinating experiments in the use of radio in school and adult education, by maintaining a Service Bureau to assist educational stations in securing licenses and in other technical procedures, by exchange of information through a weekly bulletin, by encouragement of research in education by radio, and by serving as a clearinghouse for research.

The members of this Committee and the groups with which they are associated are as follows:

J. L. Clifton, Director of Education, Columbus, Ohio, National Council of State Superintendents

Arthur G. Crane, President, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents

R. C. Higgy, Director, Radio Station WEAO of Ohio State University, Columbus, Ohio, Association of College and University Broadcasting Stations

J. O. Keller, Head of Engineering Extension, Pennsylvania State College, State College, Pennsylvania, National University Extension Association

Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association

John Henry MacCracken, 744 Jackson Place, Washington, D. C., American Council on Education

Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association

H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities

Joy Elmer Morgan, Chairman, 1201 Sixteenth Street, N. W., Washington, D. C., National Education Association

The activities of the Committee are financed by a five-year grant from the Payne Fund. The members serve without pay. The Committee will maintain a general office at 1201 16th Street, N. W. and a Service Bureau in Room 997, National Press Building, Washington, D. C. This is the first number of a weekly bulletin which will seek to spread information relating to education by radio. Every one who receives a copy is invited to make suggestions for the improvement of this bulletin. Save these bulletins for reference.

ASSERTS RADIO 'ADS' DISGUST LISTENERS

Elzey Roberts Asks State Publishers to Bar News Broadcasting.

SPORTS PUBLICITY HIT

Association at Lake Placid Meeting Elects Arthur D. Hecof of Albany President.

Special to The New York Times.

LAKE PLACID, N. Y., Jan. 13.—

The ally of the newspapers in combating radio advertising would be "the great army of radio listeners who are disgusted with the blatant advertising blurbs that fill the atmosphere," Elzey Roberts, president of The St. Louis Star and chairman of the radio committee of the American Newspaper Publishers Association, declared at the New York State Publishers meeting, which closed today.

A resolution instructing the executive committee that it is in the public interest to cooperate with the national association that proper standards of advertising are maintained in the radio field was adopted.

W. C. Dapping, of The Auburn Citizen, called upon the publishers to guard against unlicensed advertising in their news columns. Speaking particular of professional sport, he urged that more space be given to amateur sport. He cited instances where organizations maintained press agents to get publicity in the news columns, but refused to buy advertising space.

Holdings Public Opposes Radio Ads.

Mr. Roberts declared that "the public does not like radio advertising. They like the excellent programs that come with radio advertising, but they want those programs undiluted with commercial messages that are rammed down their throats with monotonous regularity," he said. "If radio advertising continues to grow in quantity and annoyance, it is not unreasonable to suppose that a demand may be created to cease commercialization of the radio in the United States and put it on the basis of broadcasting in England. There a tax of about \$2 for each radio receiver supplies a sufficient fund to provide ample entertainment of high standard including grand opera."

"The United States is the only country that permits radio to be used as the billboard of the air," he continued. "I believe that the first step newspapers should take to adapt themselves to radio competition is to put radio where it can stand on its own feet. Let it get all of the growth to which it is entitled on its own merits and none on that obtained by draining the resources of its sponsor, the newspaper."

"To that end there should be a demand on all the press associations that they cease to furnish to broadcasting stations, free of charge, news which newspapers pay them to collect and which is usually broadcast before the newspapers can print it.

"Printed radio programs should be skeletonized to include only items of

real news interest, with the elimination of trade names, except, of course, in those rare instances when something of great news interest demands such mention."

A. D. Hecof Elected President.

Jerome D. Barnum, publisher of the Syracuse Post-Standard, declined renomination for president, but accepted a place on the executive committee. The following officers were elected:

President—Arthur D. Hecof of The Albany Evening News.

Vice President—J. Noel Macy of the Westchester papers.

Second Vice President—R. D. Corson of The Lockport Evening Sun.

Treasurer—Arthur D. Irving of The Glens Falls Post Star.

Secretary—Henry Hall of The Jamestown Journal.

Executive Committee—Ralph E. Bennett of The Binghamton Press, William J. Connors of The Buffalo Courier-Express, Frank E. Gannett of Rochester, Jerome D. Barnum of Syracuse, Henry L. Fris of The Albany Times Union.

Karl H. Thelsing of the American Newspaper Publishers' Association of Indianapolis was named executive secretary.

The publishers made plans for a three-days mechanical conference at the Empire State School of Printing at Ithaca in the Spring, to which mechanical heads of papers and representatives of advertising departments will be invited for research work in typography of advertising. The school is maintained by the Publishers Association.

NEWSPAPERS WARN RADIO.

Demand "Staying in Own Field" in Minnesota on Pain of Reprisal.

ST. PAUL, Jan. 24 (AP).—Radio was warned today by the Minnesota Editorial Association to "stay in its own field" or member newspapers of the association would cease publishing radio programs and take other action.

The resolution of warning, adopted at the annual convention, also called upon all newspapers in Minnesota "to discontinue the practice of furnishing radio stations with news bulletins, whether used with credit or without, and cease the publication of all free forms of radio publicity."

The resolution declares that radio "having become an open competitor of the newspapers, in both the news and advertising fields, should be forced to confine itself to purely radio features." It adds, however, that the newspapers recognize the value of radio as a useful human agent and as an entertainment factor and stand ready to cooperate, but feel that the two spheres are distinct and that the industries can be helpful to each other "if each respects the other's field."

CANADIANS DEMAND GOVERNMENT TAKE OVER BROADCASTING

By NEA Service

OTTAWA, Jan. 00.—To fight an "American air invasion" the Canadian Radio League has been formed here with the object of passing a radio bill in the Canadian Parliament whereby all broadcasting would be operated as a government monopoly.

A little over a year ago the Aird report on broadcasting in Canada advocated establishment of a government operated chain of broadcasting stations of high power to reach throughout Canada.

The report was incorporated as a bill, presented to Parliament and dropped for matters deemed more urgent. It is now shelved for the time being, to be brought up again at the next session early in the new year.

The Radio League was formed to have the bill put through.

The league contends that today there are nine stations in the United States each of 50,000 watt power, flooding the Dominion. Each of those stations has more power than all the broadcasting stations together in the Dominion, which have but 33,000 watt output.

In addition, says the league, the most powerful stations in Canada import American chain programs to put on their own chains. A large part of Canada never hears a Canadian program, the league says.

These and other salient points tending to show that Canada is flooded by American advertising, are being advanced by the league as reasons why Canada should build a chain of high powered stations operated under government ownership and free of advertising.

from the Washington Star
January 8, 1931.

Czecho Schools to Have Sets.

PRAGUE (AP).—Radio sets are to be installed in 13,000 primary schools of Czechoslovakia at a cost of approximately \$1,800,000. The ministry of education has created a radio section which will have charge of the installation. Preliminary plans call for broadcasting special school programs twice daily.

EVENING STAR
WASHINGTON. D. C.
FEBRUARY 9, 1931.
CENSUS SOON FINISHED

Radio Figures Show 44.4 Per Cent
of Families Have Sets.

Having completed its census of American radio-receiving sets on April 1, 1930, the Census Bureau hopes to have the total compiled by April 1 of this year.

In the meantime, it is issuing as fast as they can be compiled the "radio set populations" by States. The first State count last week showed that New Hampshire, with 119,660 families, has 53,111 with sets. In other words, 44.4 per cent of the families of the State have radios. The second count released showed Delaware, with 59,295 families, has 27,183, or 45.8 per cent, owning radios.

444,676 Receiving Sets in Canada.

Canada had 444,676 radio receiving sets in operation at the end of 1930, says a bulletin of the Canadian Pacific Railway. The Canadian government charges a license fee of \$1 a year to sustain the Federal radio administration, although broadcasting is operated as a private enterprise as in the United States.

CHICAGO will come on the air with a bang this week. It is to be the originating point of 49 National Broadcasting Co. program periods formerly presented from New York.

The change will bring the total network programs from Chicago to more than 120. It was made partly because the New York studio facilities are overcrowded. All of the shifts are to be on the "blue" network side, of which WJZ is the key station.

N. B. C. officials announced that the move was "considered one of the most important in broadcast history" and another step in fulfillment of the prophecy of M. H. Aylesworth that Chicago is destined for first place in the realm of radio.

* * * *

LINCOLN'S birthday is to be fittingly observed on both the N. B. C. and Columbia networks February 12—the

same date Pope Pius XI will make his first world-wide radio talk. The climax is to come with the address of President Hoover over the two chains.

Besides the President's talk, Columbia is to have an address coming from London by John Drinkwater, who wrote the plays "Abraham Lincoln" and "Robert E. Lee."

Radio is an extension
of the Home. It should
pull up not down, forward
not back.

THE EVENING STAR
FEBRUARY 6, 1931.

BIG RADIO INVESTMENT

British Manufacturing Industry
Valued at \$400,000,000.

While broadcasting is a government monopoly in Great Britain, the business of manufacturing radio receiving equipment is in the hands of private enterprise. A total invested capital of nearly \$400,000,000, "every penny of which is British," is represented in the British Radio Manufacturers' Association, William Adamson, M. P., and secretary of state for Scotland, declared recently.

The 3,250,000 receiving set licenses issued by the government represent a listening public of 13,250,000, he estimated, and a total of 4,000,000 sets is expected to be in use within another year.

Perfects Color Television.

M. Barthelemy, French television experimenter, claims to have perfected a system of color television which excels anything achieved in other countries, says a report from George R. Canty, Department of Commerce trade commissioner at Paris. Not only can facial features be reproduced distinctly but entire scenes can be transmitted and received by radio, the inventor claims.

Station in Two Countries.

LAREDO, Tex. (AP).—A truly international station has gone on the air here. Studios of XEP are in the Hamilton Hotel, on the American side of the Rio Grande, while the sending towers are in Nuevo Laredo, Mex. It uses two wave lengths, 430 and 730 kilocycles.

From the Washington Times
January 5, 1931

RULING ON RADIO
VALIDITY DECLINED

Questions Whether Broadcast Stations
Have Property Right in
Air Not in Proper Form.

By the Associated Press.

The Supreme Court today declined to pass on the validity of the law under which the Radio Commission operates.

The controversy reached the court in questions submitted by the Circuit Court of Appeals and involved whether radio broadcasting stations had a property right to the air.

Justice Roberts had repeatedly refused to answer the questions regarding the validity of the radio act because they were not presented in proper form.

The commission required Clinton R. White to reduce the power of Station WCRW, at Chicago, and refused to renew the licenses of Stations WMBB and WOK, the former at Chicago and the latter at Homewood, near Chicago.

The owners of the stations challenged the validity of the radio act and claimed property rights to the air, which they said could be taken from them only by compensation.

From the New York
Evening World
Jan. 20, 1931, page 31

TEACHERS VOTE
RADIO LESSONS
AN AID TO STUDY

Find Interest Stimulated
in Pupil—Even Parents
"Listening In"

While the value of the radio in education has been much discussed, its use in teaching arithmetic has been found through experiment to be practical. Of fifty-two teachers in Cleveland whose classes had radio instruction during the past year, thirty-nine voted approval of the method.

According to the report of Supt. of Schools R. G. Jones, "the most frequent advantage mentioned in the questionnaires sent to the fifty-two teachers was the interest stimulated in the pupil and the power of concentration the pupil is developing. The most frequent disadvantage was the inelasticity of the lesson."

"It was the consensus of opinion that the bright pupil needed a few more difficulties to master and that the slow child should be allowed to take more time."

Cleveland schools are continuing the lessons this year and these suggestions made by teachers are being given careful consideration. One teacher reported that she has not had a solitary failure since radio work began. "Some pupils were a little slower than the others, but were not complete failures," she said.

Introduction of the radio for classroom work also is creating interest among the parents and many of them "listen in" while pupils anxiously await their radio mornings. Another teacher expressed the opinion that "radio has developed judgment and independence in finding one's individual weakness and has encouraged a desire to correct them."

Twenty-seven hundred school children learned their arithmetic from the loud speaker instead of their classroom teacher during 1929-30. They added, subtracted and multiplied by radio as arithmetic lessons were broadcast from a local station. The lessons, presented twice a week, were prepared and broadcast by Ida M. Baker, a mathematics teacher in Cleveland, who also seems to possess that intangible radio personality that is necessary to successful broadcasting.

Arithmetic was chosen as the subject for radio presentation in Cleveland because it is a definite subject and one that can be measured accurately. Experimental lessons were conducted in one building for two semesters over a public address system before they were broadcast to the entire city.

THE QUESTION OF MONOPOLY

"The question of monopoly in radio communication must be squarely met. It is not conceivable that the American people will allow this new-born system of communication to fall exclusively into the power of any individual, group, or combination. Great as the development of radio distribution has been we are probably only at the threshold of development of one of the most important human discoveries bearing on education, amusement, culture, and business communication.

"It can not be thought that any single person or group shall ever have the right to determine what communication may be made to the American people. We can not allow any single person or group to place themselves in a position where they can censor the material which shall be broadcast to the public.

"Radio communication is not to be considered as merely a business carried on for private gain, for private advertisement, or for entertainment of the curious. It is a public concern impressed with the public trust and to be considered primarily from the standpoint of public interest to the same extent and upon the basis of the same general principles as our other public utilities." --Herbert Hoover as Secretary of Commerce testifying before the House Committee which had under consideration the Radio Act in 1925.

RADIO POPULAR IN GREAT BRITAIN

"It is, of course, to be expected that parties which are interested in the possibility of exploiting the radio for advertising purposes should try to spread abroad the suggestion that British Broadcasting Corporation programme policy is not popular with listeners over here. There is a simple and unanswerable retort to this, which is to make known the fact that at the beginning of 1930 the total number of ten-shilling licenses taken out by British listeners at our Post Office for permission to instal receiving sets was 2,937,276, and on January 1st, 1931, it was 3,392,450 - an increase of 455,174 during the twelve months. This increase is greater than in previous years, and shows that the popularity of wireless is growing faster than ever in this country"-- From a personal letter from Richard L. Lambert, Editor, THE LISTENER, The British Broadcasting Corporation's Literary Weekly.

Wisconsin Uses Radio for Education

THE STATE OF WISCONSIN has taken a step which has prophetic significance for the future of education by radio. It has asserted its right as a state to use this powerful instrument in connection with its educational enterprises. In a brief filed before the Federal Radio Commission, docket number 984, the University of Wisconsin and the Department of Agriculture and Markets, each of which has been operating a radio broadcasting station, joined in an application to the Federal Radio Commission requesting permission to construct a 5000-watt station at a point approximately ten miles south of Stevens Point to operate on a 900-kilocycle frequency daytime only, substituting this station for the two now in existence. This application, if granted, will give Wisconsin a station powerful enough to reach all parts of the state.

An abstract of the testimony as given in the brief on behalf of the applicants follows:

Dr. Glenn Frank, president of the University of Wisconsin, testified in part as follows:

The University of Wisconsin and the Department of Agriculture and Markets are joint applicants for a construction permit to consolidate two radio stations now operated by these two state agencies into a single station with sufficient power to enable the service agencies of the state government and the University to reach citizens in all parts of the state. In addition to these two state agencies, the Department of Public Instruction, the State Board of Health, the Wisconsin Highway Commission, and the State Conservation Commission purpose to make use of the unified station, if granted, and have become parties to an agreement that will provide an adequate operating budget. The application, therefore, is an application for adequate radio facilities for the various and varied agencies of the state government of Wisconsin. This fact at once lifts the proposed station out of the classification

alike of strictly commercial stations and of strictly educational stations.

The University of Wisconsin was first licensed to operate, an experimental

WE DESIRE to point out that the power to govern, control, and regulate public school systems and educational facilities is one of the powers not delegated to the United States by the constitution, nor prohibited by it to the states, and is reserved to the states respectively or to the people. Since the state has this power, it follows that it also has the right to make use of such facilities as it chooses to more efficiently carry out its plans and programs. The state has chosen to use radio.—From Brief, Docket 984, p17.

radio telegraph station in 1916 before the days of broadcasting. The first telephone broadcasts from an educational institution were made from this station in 1920. In all the intervening years the University has been carrying on pioneering experimentation and educational broadcasting. Some of the services that have been and are being rendered through the existing University station [WHA] and that will be enlarged if the application is granted are as follows:

Agricultural information—The College of Agriculture, as a part of its extension service, is on the air daily with timely technical information for the farmers of Wisconsin. This is supplementary rather than a duplication of the market report service rendered over the Stevens Point station [WLBL, now operated by the Department of Agriculture and Markets].

The homemaker's hour—Five mornings a week programs are given by the

resident and extension staff of the home economics department of the College of Agriculture. Other members of the University staff are being utilized to make these programs as varied and as vital as possible.

Adult education—The University of Wisconsin is engaged in varied ventures in adult education, and radio is considered an important instrument. Through WHA the University is providing from time to time discussions of significant modern social, economic, and political problems by eminent scholars. The department of political science provides a weekly discussion of current political problems. The department of English provides discussions of current books and the like.

The University is convinced that the commonwealth can be enriched by a constructive and comprehensive program of adult education properly presented by a radio service that reaches thruout the commonwealth. The University is ready to carry out such a program but with its present inadequate radio facilities it would as well speak into empty space.

Supplementary instruction for rural schools—Wisconsin has many schools in rural communities and small towns that cannot provide educational facilities comparable to the facilities provided in the larger cities. The department of public instruction is interested in the possibilities of radio as a medium through which supplementary instruction may be provided for such schools. If the state has an adequate station under its control, it can syndicate its best teaching genius for the benefit of all its schools in supplement of local teaching staffs.

The University Committee on Radio Research has just completed the first of a series of experiments to determine the effectiveness of the radio in supplemental instruction for rural schools. Two courses—music and current events—were taught by radio in this first experi-

THE LISTENING PUBLIC is becoming more critical of program quality and more lukewarm to what is being offered them. Meanwhile radio advertising from the "local" stations has become so uncontrollable that one must wonder at the patience of the suffering public. Yet the broadcasters are greedily selling more and more time for impudent and undisguised sales talk.—Lee DeForest, president of the Institute of Radio Engineers for the past year, in his farewell address.

ment. Five hundred children in Wisconsin grade schools have taken final examinations on this instruction that came to them by radio. The result indicated that in the teaching of music, instruction by radio may be superior to direct classroom instruction. In the teaching of the current events course, the results were not as decisive as in the teaching of music but the scales tipped in favor of radio. These experiments are to be continued but will be useless unless adequate radio facilities are available.

Health information—The State Board of Health and the Medical School of the University are making use of the existing station WHA in statewide health education. A program of disease prevention and health promotion is making halting progress because it lacks facilities for prompt and comprehensive access to the entire state.

Conservation information—Members of the State Conservation Commission have made use of the existing station [WHA] in their effort to secure a statewide understanding of its problems and statewide interest in its programs. The Commission proposes to broadcast notices and instructions at times of intense fire hazards. Since the federal government will shortly own a vast acreage of forest lands in Wisconsin, this use of radio becomes of vital concern to federal as well as state interests.

Reviving the town meeting—The state of Wisconsin is interested in the safeguarding and promoting of a free and full discussion of problems of the common life of the commonwealth. *Wisconsin should have a state-controlled radio station like that requested in this application to enable it to recreate in this machine age the source of unhampered, intimate, and sustained discussion of public issues that marked the New England town meeting and the Lincoln-Douglas debates.* The request for a more powerful station is in part a request for a statewide forum in which issues of public policy may be threshed out alike by the nonpolitical scholars and by the political leaders of the commonwealth. It would be part of the operating policy of the requested station that all political groups in the state should have equal access to its microphone.

The state agencies referred to are now using the present radio facilities at their disposal and desire to use in a more comprehensive and constructive fashion the requested radio facilities for the following purposes:

[1] To serve the agricultural interests of the state by furnishing technical and market information.

[2] To serve the households of the

IT CANNOT be denied that a monopoly of radio is now insistently claimed by a group, and that its power and influence are so subtle and effective as to portend the greatest danger to the fundamentals of our government. No greater issue presents itself to the citizenry. A monopoly of mere property may not be so bad, but a monopoly of the voice and expression of the people is quite a different thing. The doctrine of free speech must be preserved.—Ira E. Robinson, member Federal Radio Commission, in an address before the National Education Association, Columbus, Ohio, July, 1930.

state by furnishing technical counsel on the construction, care, and conduct of the efficient home.

[3] To serve the adult citizenry of the state by furnishing continuous educational opportunities beyond the campus of the University.

[4] To serve the rural schools of the state by supplementing their educational methods and materials.

[5] To serve public interests and public enterprise by providing them with as good radio facilities as the commercial stations have placed at the disposal of private interests and private enterprise.

[6] To serve the interests of an informed public opinion by providing a statewide forum for the pro and con discussion of the problems of public policy.

Such services require, for maximum effectiveness, that commercial stations be supplemented by noncommercial stations of the sort here requested. Commercial stations render important public service but it is desirable that they be supplemented by noncommercial stations publicly supported and dedicated to the promotion of public interests and public enterprise. [R. 4-24.]

Edward Bennett, chairman of the department of electrical engineering of the University of Wisconsin and technical director of radio station WHA, described by witness Jansky as "one of

the outstanding electrical and radio engineers in the country" [R. 232] and one who has made large contributions to the field of radio communication, testified in part as follows:

The radio station operated by the University of Wisconsin was first licensed as an experimental radio telegraph station about June, 1916. The tubes for this earlier station were made by the late Professor Terry and his assistant, Professor Jansky, who later became professor of radio engineering at the University of Minnesota. From this station Professor Terry conducted in 1920 the first telephone broadcast from any educational station in the country. The University of Wisconsin received its first official license to broadcast in the latter part of 1921 and from that date to the present has continued in the field of strictly noncommercial, educational broadcasting.

The power allotted to the two existing stations [WHA and WLBL] is insufficient to enable the state agencies entrusted with their operation to render service to the more remote portions of the state.

With the object of obtaining for themselves and for the other departments of the state better radio facilities the two agencies entrusted with the operation of the existing stations on April 28, 1930, mailed to the Federal Radio Commission an application, 4-P.B.-1370, for a construction permit to consolidate the two stations into a 5000-watt station to be located rurally near the center of the state, this station to be licensed to broadcast during daylight hours on the 900-kilocycle channel now used by the Stevens Point station, WLBL.

This proposal to merge the two stations into a single centrally located station must necessarily be made contingent upon the granting of a license for a station of sufficient power to enable it to reach a large percentage of the citizens of Wisconsin. In the event of a denial of a license for adequate power the only alternative by which the educational and service agencies of the state can render service by radio is by our continuing to operate two stations of more moderate power located in the northern and southern portions of the state.

Armstrong Perry, a witness on behalf of applicants, testified.

His occupation is that of a specialist in education by radio. In connection with this particular work he has visited each of the 48 states for the purpose of interviewing state education officials.

In discussing the educational programs of commercial stations Mr. Perry stated that one disadvantage is that there is no guarantee of continuity in the program. The commercial station is under the necessity to break even financially and that means that it must sell for advertising purposes such time as it can. He cited an example where an educational broadcast was interrupted for the purpose of broadcasting a commercial program.

Mr. Perry stated that while, in his opinion, educational work by radio may still be in the experimental stage, he ascertained in his investigation that there was a very distinct need for educational broadcasting stations. Mr. Perry stated that it was still his opinion that it was advisable, in order to secure for educational broadcasting its greatest usefulness and most valuable growth, that it should be given a protective and assured standing so that it may be conducted by the school, college, and university officials and officials of state departments of education without fear of withdrawal of broadcasting facilities from their use or control, the introduction of advertising or unwanted propaganda into educational programs, and undue interference of one station with another.

Upon cross-examination Mr. Perry stated that public education is a function of the state and that the right of the state to use radio in education is fundamental. He further stated on cross examination that the state of Wisconsin was justified in making this application and that it had a right to plan its own educational programs and to apply to the Commission for what it thinks necessary to carry that program out.

Charles L. Hill, a witness on behalf of the applicants, testified.

He is chairman of the Wisconsin Department of Agriculture and Markets and is president of the National Dairy Association and a member of the executive committee of the American Dairy Federation and National Dairy Council.

The Wisconsin Department of Agriculture and Markets was created by the legislature of 1929 when the previous Department of Agriculture, Dairy and Food Commission, Department of Markets, State Fair Board, Treasury Agent, and Humane Agent, all were combined in the one Department of Agriculture and Markets, a three-man commission. All of the agricultural activities of the state outside of education are vested in the Department of Agriculture and Markets.

One of the other activities of this department is the conducting of radio station WLBL, instituted to serve the agricultural interests of the state.

THE CONFERENCE on Radio and Education meeting in Chicago Monday, October 13, 1930, recommends that the Congress of the United States enact legislation which will permanently and exclusively assign to educational institutions and to government educational agencies a minimum of fifteen percent of all radio broadcasting channels which are, or may become, available to the United States. The Conference believes that these channels should be so chosen as to provide satisfactory educational service to the general public.—Resolution adopted by the Conference on Radio and Education.

In the fall of 1921 the Department of Markets instituted radio market broadcasts thru the University of Wisconsin radio station WHA. The information for these market broadcasts was taken from the federal Bureau of Agricultural Economics leased wire, an extension of which ran to the office of the Department of Markets in the state capitol. This temporary arrangement was supplanted in the fall of 1922 by the establishment of radio station WPAH at Waupaca. At the time the Waupaca station was started the leased wire over which market information was received was moved from the state capitol at Madison to station headquarters at Waupaca. This station was moved to Stevens Point in 1924 where it was licensed under the call letters WLBL. This station has operated continuously since that date.

Station WLBL broadcasts market information daily at regular hours. Daily reports are received over the private leased market wire of the U. S. Department of Agriculture, Bureau of Agricultural Economics. These broadcasts disseminate information pertaining to livestock, dairy products, fruits, vegetables, and miscellaneous crops. Weather reports are broadcast daily supplemented with special weather reports and frost warnings, the use of which has been very helpful to the growers of such crops as cranberries and tobacco. WLBL has also been used ex-

tensively for the dissemination of information of an educational nature released by the extension service of state and federal departments and divisions. Considerable attention has been given to the broadcast of community programs and toward the furtherance of boys' and girls' 4-H club work.

The Department of Agriculture and Markets hopes to extend the service rendered by radio station WLBL so that it may reach the general public of the state with broadcasts whereby the public may become better informed upon matters pertaining to its state government. It is planned thru cooperation with the state Board of Health to more thoroughly acquaint the people of Wisconsin with methods for the care and prevention of disease, sanitation, and sanitary measures.

It is also planned to release to the people thru bulletins furnished by the Highway Commission information pertaining to highways, highway construction, highway costs, highway finances, detours, and general road conditions, together with outlining the Highway Commission's program. In cooperation with the Conservation Commission the department expects to broadcast fire warnings and disseminate information pertaining to Wisconsin's natural resources.

In cooperation with the Wisconsin Department of Education it is proposed to make the talent of the Department of Education available to the people thru radio broadcasts. The department plans to extend the service to include the various educational agencies at the University of Wisconsin in the broadcast program thru facilities that will make these features accessible to a greater number of people than have been reached heretofore. The department hopes to extend this service so that talks by people of national prominence when given at Madison may be broadcast by remote control thru this state-owned-and-operated radio station.

The radio market broadcast program of the Department of Agriculture and Markets has demonstrated its importance in years gone by. Radio station WLBL has rendered a distinctive service to the people of Wisconsin in its dissemination of market information which is of vital importance to them.

It is the feeling of the commissioners of the Department of Agriculture and Markets that if the Federal Radio Commission sees fit to grant this request the state, thru its own radio station, will be in position to serve all the people of the state of Wisconsin adequately just as

thoroughly as the people within a radius of 50 to 75 miles of Stevens Point and a radius of 50 miles of Madison are now being served by the two stations which exist at present. The granting of this application will make it possible for the state to accomplish thru one radio broadcasting station, in a thorough manner, for the benefit of the entire state, that which has been accomplished heretofore by the two stations operating independently for a small group of people.

The commissioners of the Department of Agriculture and Markets feel that it is very important that this application be granted to enable all the departments of the state government to reach all of the people of the state by a non-commercial, state-owned station.

Mr. Hill also referred to the following organizations from which his department would obtain material for broadcast programs:

State Horticultural Society
State Potato Growers Association
Wisconsin Livestock Breeders Association

Cranberry Growers Association
Wisconsin Dairymens Association
4-H Clubs
State and County Fairs
Southern Wisconsin Cheesemakers Ass'n
State Creamery and Buttermakers Ass'n
National Cheese Producers Federation

Conclusions—Following the summary of the testimony as outlined in its brief the state of Wisconsin summarizes its conclusions under the following heads:

1. The state of Wisconsin has a fundamental right to the use of radio in connection with its educational system.

2. Educational broadcasting should have an assured standing and adequate facilities.

3. Sufficient talent is available to enable applicants to broadcast highgrade, satisfactory programs.

4. The applicants have the financial resources, engineering and research facilities to enable them to construct and operate the proposed station according to approved standards.

5. The state of Wisconsin is under quota.

6. The granting of this application will not result in making the state over quota; neither will it materially increase the quota.

7. The proposed location has been selected with a view of delivering the maximum service to residents of Wisconsin whose need for service is the greatest.

8. The granting of this application will decrease the number of broadcasting stations now in existence.

9. The granting of this application will not necessitate a change in the time, frequency, or power in use by any other broadcasting station.

10. The granting of this application will not cause any interference with reception of other stations operating on 900 kilocycles thruout those areas where they can legitimately be expected to deliver broadcast service.

The National Committee on Education by Radio believes

That colleges and universities with radio broadcasting stations have in their possession one of the most powerful and effective tools for popular education which exists at the present time.

That the broadcasting activities of educational institutions should be looked upon as major educational enterprises within these institutions, comparable in service and importance with other major departments.

That the officers of these institutions, their boards of control, and legislative bodies to which they look for appropriations, should regard their services to individual students and the general public rendered by means of radio as an important and appropriate extension and supplement to similar services rendered within the classrooms of the institution.

That such services have a valid claim to public support and justify expenditure for equipment and personnel.

That the use of radio broadcasting as a constructive educational procedure is in its infancy.

That the radio channels which are now in the possession of institutions are immensely valuable; that they should be retained and their use further developed looking toward the growth of adult education which is now taking place throughout the country.

That this development of programs of adult education by radio stations associated with educational institutions will help to offset the present tendency toward centralization and network monopoly.

The National Committee on Education by Radio looks upon the service of radio stations associated with educational institutions as a service of the whole people. Such service is one of the highest uses to which this national resource can be put. Because such service concerns the entire body of citizens it should be given first place when the question of assigning radio channels is before legislative bodies, the Federal Radio Commission, or the courts.—Statement adopted by the National Committee on Education by Radio at its meeting on January 28, 1931, at Washington, D. C.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the groups with which they are associated are as follows:

J. L. Clifton, director of education, Columbus, Ohio, National Council of State Superintendents.
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.
R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, 744 Jackson Place, Washington, D. C., American Council on Education.
Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save these bulletins for reference or pass them on to your local library. Education by radio is a pioneering movement. These bulletins are, therefore, valuable.

How Does Your State Stand?

The following list of educational broadcasting stations shows the radio facilities of the United States which are associated with educational institutions. The data used here has been made available through the courtesy of Chairman Saltzman of the Federal Radio Commission and its chief engineer, Dr. C. B. Jolliffe. These figures show that the educational stations occupy 24.06 units out of a possible total of 400 units which are available to the United States. In other words, we have turned over without charge to commercial interests more than 93 percent of our radio channels and have starved the educational institutions down to a total of less than seven percent while the other leading countries of the world have reserved all their valuable radio broadcasting channels for educational and civic purposes. By a brief study of the following table you can discover how your state stands in this matter.

EDUCATIONAL RADIO STATIONS ARRANGED BY ZONE AND STATE FIRST ZONE

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
Connecticut Storrs	WCAC	Conn. Agricultural College	600	$\frac{1}{2}$ time	0.2
New York Buffalo	WSVS	Seneca Vocational High School	1370		0.2
Canton	WCAD	St. Lawrence Univ.	1220	Day	0.3
Ithaca	WEAI	Cornell University	1270	Day	0.5
New York City	WCDA	Italian Educational Brdcastg. Co. Inc.	1350	$\frac{1}{4}$ time	0.1
Troy	WHAZ	Rensselaer Polytechnic Institute	1300	.14 time	0.08
Vermont Burlington	WCAX	University of Vermont	1200	$\frac{1}{2}$ time	0.1
Total -					1.48

(The following states in this zone have no educational stations: Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island)

SECOND ZONE

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
Michigan E. Lansing	WKAR	Mich. State College	1040	Day	0.5
Ohio Columbus	WEAO	Ohio State University	570	$\frac{1}{2}$ time	0.5

SECOND ZONE—Continued

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
Pennsylvania					
Grove City	WSAJ	Grove City College	1310		0.2
Lewisburg	WJBU	Booknell University	1310	$\frac{1}{2}$ time	0.1
State College	WPSC	Penn. State College	1330	Day	0.3
Virginia					
Emory	WESC	Emory & Henry College	1200		0.3
Total-					1.90

(The following states in this zone have no educational stations: West Virginia, Kentucky)

THIRD ZONE

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
Alabama					
Birmingham	WAFI	Ala. Polytechnic Institute	1140	$\frac{1}{2}$ time	2.5
Arkansas					
Fayetteville	KCOA	Univ. of Arkansas	1390	1 time	0.5
Florida					
Gainesville	WDFP	Univ. of Florida	830	1 P 2 Night Hrs.	1.9
Georgia					
Atlanta	WEST	Georgia School of Technology	890	$\frac{1}{2}$ time	0.25
Toccoa	WFTI	Toccoa Falls Institute	1450		0.5
Louisiana					
New Orleans	WFL	Loyola University	830	$\frac{1}{2}$ time	2.5
Oklahoma					
Chickasha	KOCW	Okla. College for Women	1400		0.5
Norman	WHAO	Univ. of Oklahoma	1010	$\frac{1}{2}$ time	0.3
Texas					
College Station	WTAV	Agri. & Mech. College of Texas	1120	$\frac{1}{2}$ time	0.3
Total-					9.35

(The following states in this zone have no educational stations: Mississippi, North Carolina, South Carolina, Tennessee)

FOURTH ZONE

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
Illinois					
Urbana	WILL	University of Illinois	890	$\frac{1}{4}$ time	0.12
Indiana					
W. Lafayette	WBAA	Purdue University	1400	.15 time	0.12

FOURTH ZONE--Continued

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
Iowa Ames	KOI	Iowa State College of Agri. & Mech. Arts	640	Day	1.5
Decorah	KMLC	Luther College	1270	Day - $\frac{1}{2}$ time	0.05
Iowa City	KSOI	State Univ. of Iowa	880	.42 time	0.25
Kansas					
Lawrence	KFBU	Univ. of Kansas	1220	$\frac{1}{4}$ time	0.5
Manhattan	KSAC	Kansas State Agri. Col.	580	$\frac{1}{2}$ time	0.4
Minnesota					
Minneapolis	WLB-WGMS	Univ. of Minnesota	1250	$\frac{1}{4}$ time	0.25
Northfield	KPMX	Carleton College	1250	$\frac{1}{4}$ time	0.25
Northfield	WCAL	St. Olaf College	1250	$\frac{1}{4}$ time	0.25
Missouri					
Columbia	KFRU	Stephens College	530	$\frac{1}{4}$ time	0.15
St. Louis	WBF	St. Louis University	760	Day	0.5
Nebraska					
Lincoln	WCAJ	Nebr. Wesleyan Univ.	530	.15 time	0.05
North Dakota					
Grand Forks	KFJM	Univ. of N. Dak.	1370		0.2
South Dakota					
Brookings	KFDY	S. Dak. State College	550	$\frac{1}{2}$ time	0.4
Rapid City	WCAT	S. Dak. State School of Mines	1200		0.2
Vermillion	KUSD	Univ. of S. Dak.	890	$\frac{1}{4}$ time	0.2
Wisconsin					
Green Bay	WBY	St. Norbert College	1200		0.2
Madison	WEA	Univ. of Wisconsin	940	Day	0.5
Milwaukee	WEAD	Marguerite University	1120	.15 time	0.05
				Total-	5.15

FIFTH ZONE

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
California Oakland	KROT	Educational Brcdstg. Corp.	930	$\frac{1}{2}$ time	0.4
San Jose	KQJ	Pacific Agri. Foundation Ltd.	1010		0.5
New Mexico State College	KCB	New Mex. College of Agri. & Mech. Arts	1180	1/3 time	1.57
Oregon Corvallis	KOAC	Oregon State Agri. Col.	550		1.0
Portland	KRPS	Benson Polytechnic Sch.	1420	$\frac{1}{4}$ time	0.05

FIFTH ZONE---Continued

State City	Station	Owner	Frequency	Hrs. Operation	Quota Units
Washington					
Lacy	KGY	St. Martins College	1200		0.2
Pullman	KWSC	State College of Wash.	1220		1.25
				Total-	5.17

(The following states in this zone have no educational stations: Arizona, Colorado, Montana, Nevada, Utah, Wyoming)

Total for U.S.- 24.06

Calvin Coolidge

Says: A new social force is being developed by radio waves. The address of the Pope was given wider broadcasting than any other ever delivered, reaching almost all over the world. The morning papers carry radio photographs of Marconi in Rome preparing for its transmission. Report comes simultaneously of a successful experiment in television by which people in Leipzig were able to recognize the image of a man in Schenectady. The time may not be far away when it will be possible to have a receiving set in the home that will produce a sound motion picture. Central stations may be able to receive and broadcast to the eye and ear events taking place all over the world.

It is difficult to comprehend what an enormous power this would be. New forces are constantly being created for good or for evil. When primitive people come in contact with civilization usually they use its powers for their own destruction. Unless the moral power of the world increases in proportion to its scientific power there is a real danger that the new inventions will prove instruments of our own destruction. If moral development keeps step peace and good will have gained new allies. From the Washington Post, February 14, 1931 (Copyright, 1931.)

No member of Congress can escape his personal obligation to preserve the public's rights in radio.

The future of a nation depends upon the ideas which are put into the minds of its people.

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- Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
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- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

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From the Newspapers

BYRD WAS INTERRUPTED—More than one listener expressed indignation during the past week because Rear Admiral Richard E. Byrd's speech at the National Education Association Convention in Detroit was taken off the air before he had concluded.

"I could easily discern in the subdued voice of the announcer the wrong he felt in depriving radio listeners from hearing Byrd's complete speech," said a set owner in Brooklyn. "I was completely disgusted when I heard the announcer literally thrust an unwelcome program upon a helpless but hitherto engrossed audience. I immediately switched to another station rather than listen to the selling talk that followed. I wonder why we have tolerated for so long a time the broadcasting of programs which have no other thought than the selling of some commercial product. As for myself, I would be more than pleased to pay a yearly tax for broadcast programs without the penalty of listening to an advertisement."—From the New York Times, March 1, 1931.

Education by Radio—When Senator Fess introduced a bill in the Senate the other day providing that 15% of the available radio facilities of the United States be set aside for the use of a nation-wide correspondence course, exclusively for educational purposes, he evidenced the constructive statesman he is. A school man himself he readily recognized the value of expanding to its limit the opportunities for carrying information and instruction to every person within the limits of the country by means of this newest of educational agencies. Senator Fess does not confine his activities in the Senate to setting up straw men and knocking them over in a vain attempt to impress the folks back home that he is doing something for his country. He does not obstruct the progress of good government by continually crying "stop thief," as a certain few of his colleagues do. Senator Fess represents the people of a progressive state, and his ideals lead him to propose and support constructive programs rather than merely to oppose the constructive programs of the administration, without ever suggesting anything better. If some of the other states which have been slinging mud at Ohio men for some time would send up men equally as com-

petent and sane as Senator Fess, this country would take several strides forward.—From the Republican, Findlay, Ohio, January 19, 1931.

INFERIOR PROGRAMS and sales talks lessen demand for radio sets—The sale of radio sets could be immensely increased simply by improving the quality of radio programs—by freeing them from excessive sales talks until there would be enthusiasm among listeners generally. "The-public-be-damned" policy is shortsighted from the point of view of the radio industry itself. The theory that nothing must go on the radio except that which has wide commercial appeal will be suicidal to broadcasting. The best in every phase of life first makes its appeal to the few. Standards are thus set which eventually others are able to reach.
—Joy Elmer Morgan.

Canada Plans Big Cut in Air Ads on Sunday—Toronto, Feb. 12, (AP).—Elimination of all advertising from radio programs broadcast in Canada on Sunday, other than the mention of the sponsor's name, address and nature of business or product, was agreed upon today by the Canadian Association of Broadcasters.

It was thought this should be done in the interest of the proper observance of Sunday.

It also was decided that week day programs after 7 p. m. should not include advertising to exceed five per cent of the time on the air of any one program.

Individual commercial announcements, known as "spot announcements," should be debarred after that hour, the broadcasters ruled.

Practically all radio broadcasting stations in Canada were represented at the meeting.—From the New York American, February 13, 1931.

Waning Interest Is Radio Worry. Excessive Advertising May Result in Many Changes in Programs—By Robert Mack—Indications that the

American dyed-in-the-wool interest in broadcasting is waning because of excessive advertising are disturbing radio's inner circle.

The incessant campaign against the "overdose" of advertising accompanying many programs is having its repercussions with the broadcasters. A condition is taking shape that may change the make-up of programs in many ways, and there is even talk of Government control of broadcasting, after the manner adopted by virtually all other nations, with no advertising on the air at all. In other countries the listener pays for his programs by an arbitrary tax on his receiving set.

Warranted or not, the wave of public resentment against commercialization of broadcasting is increasing. It is evidenced in communications received by the Federal Radio Commission, as well as by those closely associated with the industry. Listening, it is reported in some quarters, already has been greatly reduced, and this is attributed to an excess of advertising blurbs.

Such personages as Dr. Lee De Forest, inventor of the vacuum tube, and Ira E. Robinson of the Federal Radio Commission have stated that a "revolution" of listeners against commercialization is brewing. And many others have fallen into line.

Another who envisions the fall of the "American plan" of broadcasting unless conditions are alleviated forthwith is Volney D. Hurd, president of the National Radio Editors' Association and radio editor of the Christian Science Monitor.

Although, he states, both systems are good if properly conducted, events in Canada and many rumblings in the United States indicate that the American plan is not turning out the results it should because of "too much advertising talk and too much mediocre program material." Canada, he points out, has been using a modified American plan, operating its stations by advertising but charging a small annual license fee to listeners to support the cost of radio administration.

"Canada's radio commission, appointed to study this problem," he adds, "has recommended government control. Canadians, not only getting advertising from their own stations but being bom-

barded across the border by a mass of American advertising entertainment, are now definitely moving to adopt the government control—or listener tax—method.

"Some 40 newspapers have already pledged their support to the plan. National organizations, university professors and financial, labor and industrial groups are out to further the cause."

As to the United States, Mr. Hurd states that with so many American newspapers now opposed to radio, it would not be difficult for an organized effort to be made to convert the American plan now in use into a Government controlled plan, with a 24-hour-a-day choice of three or four programs, minus all advertisements. With some 13,000,000 sets in use in this country, only a very small tax would have to be adopted to give the best in talent and entertainment, he points out.

"It is difficult to believe that the American radio casting interests will fail to see the trend in which Canada is leading the way, and seeing it, take immediate steps to remove those things from radio casting which feed energy to such a movement. Unless such steps are taken, however, the Government control movement will probably spread to the United States."

(Copyright, 1931, by the Consolidated Press.)—From *The Evening Star*, Washington, D. C., January 31, 1931.

South Dakota moves ahead—At the beginning of this present year station KFDY, the voice of South Dakota State College, increased its broadcasting time 150 per cent. Now, instead of broadcasting markets and the weather, a chimes concert and perhaps one talk, we are broadcasting from five to eight excellent talks every day, carrying popular if elementary education on various subjects to the people of the state. The range of talks is as wide as the college itself and the reports we receive are highly gratifying. We see a real future in education by radio in South Dakota.—Statement from a letter by A.

A. Applegate to the Chairman of the Committee, February 27, 1931.

Possibilities in health education by radio—Thanks for sending me the material from your Committee on Education by Radio. I am glad that you are at work on this project and I heartily commend your activities. I have fol-

YOU are the most important people in the whole civilized universe. The schoolmaster's place is not only important, but supremely important. That is my thesis. I want to put it with boldness, shamelessness, arrogance, and aggression. I want to suggest that they should up and take hold of the world. I shall tell you nothing new if I betray a consciousness that arrogance in taking hold of the world is not a characteristic of all schoolmasters. It is extraordinary that a lot of schoolmasters seem to be unconscious not only of the importance but of the range of their functions.—H. G. Wells, in the *Manchester (England) Guardian Weekly*.

lowed with interest the developments in the radio and I look forward to the day when Health Education may be served through this medium.—From a letter to the Chairman of the Committee by C. E. Turner, Doctor of Public Health, Massachusetts Institute of Technology.

A protest against commercialism—I am intensely interested in the activities and proposed program of the National Committee on Education by Radio. I shall be pleased if you will keep me in constant touch with your Committee and its progress. It is high time that the Educators over the country banded together for the purpose of obtaining from Congress appropriate recognition of the benefits which radio could confer upon the American Public

in the field of education. I have from the very beginning of radio broadcasting been outspoken in my protests against the ever growing tendency to prostitute this magnificent medium in the interests of commercialism and salesmanship.—From a letter by Lee De Forest to the Chairman of the Committee, February 26, 1931.

North Carolina starts school of the air—The State Department of Public Instruction of North Carolina announces the inauguration of THE NORTH CAROLINA RADIO SCHOOL. Below is an outline of the course and schedule of the broadcasts. These programs are broadcast on station WPTF, Raleigh, N. C., and will commence on *Monday, February 23*.

- I. Citizenship. Monday
11:30-11:40 Current Events
11:40-11:50 Recreatory Reading
11:50-12:00 Character Training
- II. Science. Tuesday
11:30-11:45 Studies in Science
11:45-12:00 Health and Physical Education
- III. Social Studies. Wednesday
11:30-11:45 Geography and Travel
11:45-12:00 History and Social Development
- IV. Art, Music and Literature. Thursday
11:30-11:45 Fine Arts. Music Appreciation
11:45-12:00 Literature. Industrial Arts.

Governor O. Max Gardner will open the Radio School with a talk to the students and State Superintendent A. T. Allen will introduce the educational program and the faculty committee who will furnish the radio programs. Mrs. E. L. McKee, State Senator, also will speak on the opening program.

I have before me *Bulletin Vol. 1, No. 3*, February 26, 1931, of the series which I understand will be issued by your committee. I would hasten to congratulate you on getting out information of this kind. I believe that a bulletin of this sort will serve a very useful purpose—Statement of William John Cooper, Commissioner of Education in a letter to the chairman, March 3, 1931.

PAYING FOR TIME ON commercial stations would not give the educational program a complete right of way. Stations would insist that the program must interest most of their listeners, lest competing stations win them away. Nor will stations offend important advertisers by denying them the right to purchase popular periods on particular days.—H. V. Kaltenborn, editor of the *Newspaper of the Air*.

Radio Notes for Class Study

RADIO IS HERE. Its development is one of the marvels of modern science and industry. No one can now estimate the reach of its influence—its possibilities for good or for evil. Whether or not it is brought within the four walls of the schoolroom, it will permanently affect the work of the school and the attitude of the public toward education. The radio may magnify the superficial and the trivial or it may exalt the higher and the more significant values. It may spread prejudice or goodwill, truth or error, beauty or ugliness. It may magnify the city as against the country or the commercial as against the cultural. During the present period of its rapid expansion it should be a subject of intensive study in every educational institution. Teachers and pupils should discuss this new giant, not only in its scientific but in its educational and civic aspects. What is the relation of the United States government to radio? What is the Federal Radio Commission? What are its responsibilities and its duties? What kind of men compose its membership? Are they engineers, army officers, educators? What is the attitude of Congress toward this new force in American life? To whom do the radio channels belong? How are they assigned and for how long a period? Are the states and the localities given their share of the invaluable rights to the air? Is freedom of speech safeguarded? Do great commercial interests in fact have censorship over what goes to the American people? What will be the effect of granting increased power to the wealthier broadcasting stations? What percent of the radio channels should be assigned exclusively and permanently to education? Should commercial advertising be allowed on the international channels? Are radio programs growing better or worse? Should narcotic advertising be allowed on the air? These are only a few of the many questions which arise constantly in a consideration of radio development. Unless the schools and interested citizens study these questions and

take appropriate action, mistakes will be made in the development of radio which will be costly to democracy.

The public domain of the air—The discovery of radio is like Columbus' discovery

THE MATERIAL on this page will be useful in many ways. It can be used in current events in schools of all types, in classes in social studies and science, in school radio clubs, in parent-teacher meetings, and faculty meetings. No teacher can confine himself to the four walls of the schoolroom and perform his full duty. Education is as broad as the community and as long as life. The great educational agencies outside the school—the newspaper, the movies, radio—are the concern of every citizen. These agencies will respond favorably to intelligent, constructive influence and leadership. Let the teachers do their part to create a public sentiment which will demand the highest standards.

of America. It opens up a vast new continent of rights and possibilities. To see that this new gift is used wisely and constructively to promote education and human welfare is the concern of all citizens. A National Committee on Education by Radio has been created to urge Congress to "enact legislation which will permanently and exclusively assign to educational institutions and to government educational agencies a minimum of fifteen percent of all radio broadcasting channels which are, or may become, available to the United States" just as certain sections of land were set aside from the public domain for the encouragement of schools. This is a conservative measure and would help to protect the college and university stations from the constant efforts of commercial stations to take away their rights. Every school has an interest in this question. Let teachers and the children write to their representatives in Congress urging this important legislation.

Just suppose—Suppose a group of public-spirited citizens or even the President of the United States wished to take to the people

a protest against the monopolization of radio by commercial interests. It would be necessary to go to the monopolized chains and to ask them for the privilege of using their facilities. Is this a dignified position for a great nation whose Congress has always held that the broadcasting channels belong to the people?

High power grab temporarily thwarted—On December 15, chief examiner Ellis A. Yost of the Federal Radio Commission recommended superpower of 50,000 watts or more for all 40 stations using cleared channels. This would have put many smaller stations at a disadvantage. The Commission had earlier issued an order limiting the superpower stations to 20. By a vote of 4 to 1 it held to this earlier order. Commissioner Harold A. Lafount alone voted for the 40.

Wisconsin takes the lead—There has been much talk about states' rights from the earliest days of the Republic. *At no other point have states' rights ever been so seriously threatened as in the tendency to allow outside monopoly of radio.* Wisconsin has now taken the lead in a proposal to develop for the use of the state and its educational agencies the Wisconsin Broadcasting Station which will compare with the best private stations. Is your state taking measures to protect its rights in the air?

How to influence radio programs—There are two most effective ways to influence radio programs: First, to commend that which is good; second, to condemn that which is bad. If once each week every radio listener would write one letter of praise and letters of protest as needed to the radio stations to which he listens conditions would tend to improve. It is a good class exercise to have each child write an actual letter of each of these types based on programs to which he has listened. It is a good plan to discuss in the school the programs to which children listen at home, giving special attention to programs which deal with current events, particularly addresses by civic leaders and statesmen. No child should be allowed to miss the great events of history which are now available on the radio.

International radio relations—International radio practise is governed by a convention or agreement. The next conference to revise this agreement will be held in Madrid in 1932. There have been many new developments since the last convention and the conference of 1932 will have many important problems to decide. During the present decade radio programs will develop to a point where they will cross international boundaries as freely as they now cross the boundaries of the states.

BROADCASTING in America began, and has largely remained, in the almost unchecked control of the owners of radio patents and the manufacturers of radio receiving sets. The state has abdicated. There is no obvious reason why the advertisers that support broadcasting should also consider me. The Radio Corporation has my money but does not need my vote. I am tired of turning the dial.—From "The Level of Thirteen-Year-Olds" by William Orton in *The Atlantic Monthly*, January, 1931.

Superintendents Favor Educational Channels

THE RADIO, THE QUESTION OF MONOPOLY—
The radio broadcasting channels belong to the public and should never be alienated into private hands. We believe that there should be assigned permanently and exclusively to educational institutions and departments a sufficient number of these channels to serve the educational and civic interests of the locality, the state, and the nation; and that these channels should be safeguarded by the federal government. The Department of Superintendence indorses the work of the National Committee on Education by Radio in its efforts to protect the rights of educational broadcasting.—Resolution adopted by the Department of Superintendence of the National Education Association at Detroit, Michigan, February 26, 1931.

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The Freedom of the Air^a

BY PAUL HUTCHINSON

NONE of the other miracles of applied science has begun to appeal to the public imagination as has the development of radio. Nor is it likely that any of the inventions of this century will exercise a commensurate influence on human thought and manners of living. It is only yesterday that Bellamy, writing "Looking Backward," dared his fantastic dream that, at the touch of a button, sounds might be projected from distant control stations into the homes of cities of the future. Last night some 14,000,000 American families could flip a switch, turn a dial, and settle back to blissful contemplation of Mr. Rudy Vallee's crooning celebration of the dietetic and therapeutic values of Fleischmann's yeast. Next year . . . but who can guess what next year will bring in the way of new marvels?

All this has come upon us so suddenly that we have hardly begun to adjust ourselves to its presence and potentialities. It was only ten years ago, on the night when the sovereign freemen of America chose to go back to normalcy under the leadership of Warren Gama-liel Harding, that the Pittsburgh station of the Westinghouse Electric company, now heard even on the ice barrier that guards the south pole, sent out the first public radio broadcast. What wonder that most Americans should be so overwhelmed with the marvel of this device that they have given slight thought to its social and political significance! Yet in a recent newspaper, tucked away on the radio page, I came upon this meaningful item:

The fiery attack of former Senator "Jim" Reed of Missouri against what he described as the "radio trust" is going on the air again, but via the medium of "canned music." More than 100 independent stations have promised to broadcast a phonograph record of the former senator's speech on the "march of monopoly," which was so rudely interrupted by what appeared to be a spurious SOS alarm while it was being delivered over a nationwide hook-up of the Columbia Broadcasting system. The speech was shut off to listeners in New York's metropolitan area by the re-

ported SOS while the former senator was in the midst of his vitriolic condemnation of the Radio Corporation of America.¹

What lies behind this? A dark and sinister plot by certain radio interests against freedom of speech and the right to independent discussion over the air? Probably not. The chances are that the interruption of Senator Reed's speech—which wasn't much of a speech, it must be admitted, except from the standpoint of its powers of vituperation and condemnation—was the work of mischief-makers without any connection with the so-called "radio trust." But the mere occurrence was enough, whatever its explanation, to arouse the already excited suspicions of scores of independent radio broadcasters and link them in this concerted gesture of defiance.

For these independent radio broadcasters are convinced that, young as their industry is, it has already fallen largely into the hands of monopoly interests with definite political and social commitments; that the tendency is toward the strengthening of this monopoly control; and that, unless drastic action to the contrary is taken in the near future, *the nation will awaken to find that a vested right has been established by these monopoly interests which will give them virtual power of veto over all that is presented to the mind of the public through the medium of this new and unmatched method of approach.*

It is the contention of these opponents of the present radio policy that there is being built up in this country an interlocking oligarchy of favored banking interests, power companies, public utility companies, electric equipment manufacturers, wire and wireless communication companies, talking picture producers and distributors, vaudeville and moving picture theaters, and broadcasting stations which, once it is legally as it now is financially established, will have a monopoly control of the most effective means of public discussion and propaganda. Once this monopoly is established, it is claimed, control of the popular mind by the powers which stand behind this monopoly can

be maintained virtually without challenge.

It is the purpose of this study to consider the situation as it now is in the United States, with a view to discovering the extent to which these fears are well-founded. Is it true that this new industry, with its vital relation to questions of public policy, is falling under monopoly control? Is it true that the great power interests are largely concerned in its ownership and direction? Is it true that a situation is forming in which the voice of the independent, of the nonconformist, can be heard, if at all, only on sufferance?

Are we to have freedom of the air? Or are we not?

[2] In the title of this opening instalment of this series of articles I have spoken of the radio industry as a giant. How big a giant is it? The answer seems to be that it is so big a giant that nobody has yet been able to measure its size with absolute certainty. And every financial estimate advanced needs to be accompanied by a statement making clear what is included. Thus, on the occasions of his appearances before various governmental investigating bodies, Mr. Oswald F. Schuette, executive secretary of the Radio Protective association—the organization of independent manufacturers of radio equipment—has been in the habit of referring to the "radio trust" as a six billion dollar combine, much to the annoyance of the officers of the Radio Corporation of America. What Mr. Schuette has had in mind, as he has explained when pressed, is the combined assets of the companies behind the R. C. A.—General Electric, Westinghouse, Western Electric, American Telephone & Telegraph, United Fruit, R. C. A.-Victor, General Motors, and so on—since that constitutes, from his point of view, the full financial power which the independent radio manufacturer must buck.

Ten years ago there were not more than 500 radio receiving sets of any kind in the United States. Two years later, in 1922, the number of sets in operation—many of them assembled by amateur radio enthusiasts from separate parts bought in the open market—was estimated at 60,000. Today the number of receiving sets in operation is approxi-

^a This article which is the first installment in a series of seven is reprinted from the Christian Century for March 11, 1931, by the courteous permission of the publisher, 440 South Dearborn Street, Chicago, Illinois.

¹ The Chicago Daily News, October 16, 1930.

mately 14,000,000. Giving these an average retail cost of \$70—which is certainly conservative—these sets now in service in homes represent an investment of at least \$980,000,000.

Other estimates give equally large figures. Thus, Mr. B. J. Grigsby, president of the Grigsby-Grunow company of Chicago, the largest manufacturers of receiving sets in the United States, has stated that the sale of 3,900,000 sets in this country in 1929 represented an outlay of \$490,000,000 by the retail purchasers.² A recent article in the New York Times, explaining the newly awakened interest of Mr. John D. Rockefeller, jr., in the industry, states that the expenditure for radio instruments in 1929 was approximately \$850,000,000, which is almost twice as large as Mr. Grigsby's estimate, but does not come from quite as partial a source.³ Mr. M. H. Aylesworth, president of the National Broadcasting company, while testifying at Washington, accepted figures of \$650,000,000 as representing the annual volume of radio business in the United States.⁴

If the radio industry is interpreted to mean the manufacture and use of all products which are dependent on the vacuum tube and the photo-electric cell, then the annual volume becomes much larger. Probably the best estimate available of this total business is that made by Mr. O. H. Caldwell, a former member of the federal radio commission. Mr. Caldwell holds that the annual expenditure for all forms of radio equipment in the United States reaches the stupendous sum of \$1,142,000,000! This total is composed of these six elements:

Sale of receiving sets.....	\$ 405,000,000
Tubes, installations, replacements	217,000,000
Talking picture equipment and production	150,000,000
Audio equipment	130,000,000
Radio communications	90,000,000
Miscellaneous apparatus using tubes	150,000,000
	\$1,142,000,000 ⁵

No wonder that Mr. Rockefeller is interested in such an industry to the ex-

²Hearings before the committee on interstate commerce, United States Senate, January 14, 1930, p. 1769.

³"Science Brings to Us a Unique Radio City," by Orrin E. Dunlap, jr. New York Times, June 22, 1930.

⁴Hearings before the committee on merchant marine and fisheries, House of Representatives, January 25, 1929, p. 619.

⁵Chicago Daily News, September 12, 1930.

tent of building for it a headquarters costing \$250,000,000 and covering three blocks in the heart of New York city!

[3] At the present moment, the radio industry is in process of general overhauling. As was to be expected when a new commercial development showed such immediate and vast financial returns, adventurers of all sorts were attracted into it. The commercial purposes of many of these adventurers may have been perfectly honorable, but lacking sufficient capital to carry over initial periods without large profits, they have been rapidly forced out. It is the contention of the independents that much of the high mortality rate among manufacturers of radio equipment has been due to unfair business practices of the Radio Corporation of America. There may be something in this charge, as we shall see later. But it is also unquestionably true that many current disappearances, both of manufacturers, retailers, and of broadcasting stations, are to be charged to the normal processes of stabilization in a new industry.

In the manufacture of radio equipment, the same process is under way at present which marked the automotive field during the first two decades of this century. The trend is toward fewer and larger manufacturing companies. Thus, the official list of membership in the Radio Protective association submitted to the government last year shows that out of 56 firms which have belonged to that organization, 24 are "merged, out of business, resigned, or in receiver's hands." Even among the remaining 32, the executive secretary of the association testified to his fear that some were bankrupt.⁶ As these words are written, the Grigsby-Grunow company, largest of the independents, is passing through a refinancing process.

The same shaking down is going on in the retail field. A few years ago every American city contained large numbers of retail radio stores, frequently advertising in sensational fashion, but largely engaged in an attempt to unload on an uneducated public radio equipment and parts of inferior quality or outmoded design. Some of these stores continue in existence, but the number is being rapidly lessened. It will not be long before the retailing of radio goods will be on as reliable a basis as that of groceries.

⁶Hearings before the committee on interstate commerce, United States Senate, January 21, 1930, p. 57.

The mortality rate in broadcasting stations is equally striking. Stations cost from \$25,000 up to erect—the "up" representing figures climbing to \$500,000 in the case of the major stations. *The value of wave lengths has never been commercially determined, but if a vested right in a wave length could be established—it being remembered that there are only ninety available channels, or wave lengths, in the broadcasting band—the value would certainly be very large.* Yet, despite all the factors which operate to keep stations going once they are established, hundreds of broadcasting stations have already definitely ceased to function, while there are many more which are barely broadcasting enough to hold their licenses.⁷

Contrasted with this disappearance of units on the "independent" side of the radio situation is the rapid growth of the resources and interests on the "trust" side. The radio trust is the Radio Corporation of America, a child, as has been seen, of General Electric, Westinghouse and A. T. & T. But R. C. A.—to give it its customary trade name—has in its own turn become a parent. It has, for example, given birth to the National Broadcasting company, with its "red" and "blue" chains. It has acquired the largest share of the country's vaudeville, Radio-Keith-Orpheum, and through Radio Pictures and the recent purchase of Pathé it is moving into the king row in the motion picture industry. Radio-Victor has the lion's share of the phonograph record business. R. C. A. Photophone practically controls the manufacture and distribution of the equipment which makes possible the talking pictures. Radio Music is a new subsidiary, and is seeking to dominate the popular music trade. General Motors Radio, one of the latest developments, combines the immense resources of the two corporations named for the manufacture of radio equipment

⁷The federal radio commission reports that no official statistics are available of the number of stations which have gone off the air, but the mortality rate, especially among low-powered stations, has been high. A recent book, "This Thing Called Broadcasting," by Alfred N. Goldsmith, vice-president of the Radio Corporation of America, and Austin C. Lescarboura, former managing editor of the Scientific American, says (p. 42) that there were 1,400 broadcasting stations in operation in the United States in 1924, in contrast with 611 in 1930. On October 13, 1930, Commissioner of Education Cooper testified that 23 stations owned by educational institutions had gone off the air since January 1, 1930.

in automobiles and receiving sets. The full list of subsidiaries of R. C. A. must now reach to at least twenty corporations. When it is noted how large a portion of the "propaganda" agencies in a country—press, pulpit, school, stage, screen, radio, popular music—is included in this R. C. A. business empire, the social importance of the issue here discussed will be clear.⁹

[4] Persons familiar with the history of industries in the United States are likely to see in this loss of numbers by the "independents" and growth of size by the "trust" a normal commercial process, which may be expected to proceed until the "trust" has attained an unchallenged domination of the field, leaving perhaps a few large corporations in competition with various portions of R. C. A.'s total enterprise. But there are at least three questions in the radio situation which will require attention before the radio industry can settle down to anything like a fixed form.

These three unsettled issues are all legal.

The first grows out of the government's suit to dissolve R. C. A. as a corporation operating in defiance of the anti-trust laws. This suit, which was filed by the Attorney-General of the United States in the district court at Wilmington, Delaware, on May 13, 1930, is based on the contention that the patent pool controlled by R. C. A. (of which more later) is in reality a means of establishing a monopoly in the field of radio communication. The case will be a long time in passing through the courts, but until it is finally settled the legal status of this great corporation and the patent rights of independent manufacturers must remain under question.

A second legal issue still to be decided concerns the extent of congressional control over the broadcasting industry. So far, that control has not been seriously challenged, although one or two test cases are now in the courts. *Has congress the right to give to a federal radio commission, or to any other body, such broad and dictatorial rights as it has given? Can it maintain the present system of granting broadcasting licenses for six months' terms only, or for any other limited period, reserving the right to order any station off the air at the end of any such license*

⁹ See testimony of Oswald F. Schuette before hearings of committee on interstate commerce, United States Senate, May 27, 1929, p. 43.

period? Or does a station, by the assignment of a wave length, obtain a property right in that wave length of which it cannot be deprived under the 14th amendment to the federal constitution?¹⁰ The radio commission is marking time until the courts rule on this question. It can be seen that the decision, when it comes, is bound to have a far-reaching effect upon the whole broadcasting industry.¹⁰

The third legal issue which awaits settlement in the radio field is action by the Supreme Court. Up to date, the Supreme Court has refused to pass upon any decisions of lower courts dealing with radio matters. But the size of this industry is so large, the property rights involved are so extensive, and the public interest so clear, that it is inevitable that sooner or later the Supreme Court will be forced to review decisions in this field. Obviously, such action will have in it the possibility of completely overturning any legal basis for the industry which may have been established by decisions of lower courts.

So long as the three issues named remain unsettled the radio industry cannot be said to have found the final basis for its development. Perhaps this is a godsend, since it seems much too early—after only ten years of broadcasting—to allow the new industry to harden into its final forms. Fortunately, there still may be time for legislators and the public generally to study what is at stake, and to reach reasoned conclusions as to what the final structure and policy of this great industry ought to be. But first public ignorance and apathy must be overcome.

[5] In all this talk of the radio industry's development, there has been almost no mention of the attitude of the public. For the most part, the public has shown little interest in the fight between radio "independents" and "trust," probably because it has known little about it. Provided he got good

¹⁰ That the R. C. A. point of view supports this establishment of vested rights in the air is shown by these words from the book written by its vice-president and a collaborator: "As in the growth of empires, in broadcasting as well, the squatter rights of yesterday become the dignified titles of ownership of tomorrow." ("This Thing Called Broadcasting," page 53).

¹¹ Since this was written the court of appeals of the District of Columbia has upheld the right of the federal radio commission in the case of station KFKB of Milford, Kansas, to refuse to renew a station's license. But this power will not be finally established until the Supreme Court has upheld this decision.

reception, the average American citizen has cared little who made his radio set, or who sold it, or who provided his programs. His attitude toward radio has been controlled by a different set of interests entirely.

Up to five years ago the radio was regarded by the majority of Americans as a novelty. And, in the sets then in use, it generally *was* a novelty. It made little difference what the radio program might be, but otherwise normal citizens would sit up half the night to bring in a faint series of jazz band cacophonies from the other side of the continent. At that period, it was the radio log-book that counted; church deacons matched lies as to the stations they had heard.

About five years ago it began to dawn on the general public that there was no particular pleasure in listening to trash, just because it came from a distance. "Silent nights" were abandoned in the cities; the chains assumed their present importance. Entertainment became the demand of the radio owner, and stations went to large expense to discover the sort of entertainment wanted and to supply it. No longer a miracle, and no longer a toy, the radio receiving set had to prove itself a source of genuine entertainment to retain interest and sales value.

Today we are moving into a new period when there is widespread discrimination shown in the choice of radio entertainment. Different programs appeal to different people, but these people are beginning to find the programs that they like and are leaving their radios silent during long periods when those programs are not on the air.¹¹ The stations that have been maintained principally as local advertising enterprises are finding it almost impossible to secure any audience whatever. Even such advertising material as is permitted in connection with chain programs finds the public more restless, more resentful than in the past.

What does this experience of the past presage for the future?

Well, it is possible that the develop-

¹¹ Studies made for advertisers by Crossley, Inc., an independent research organization, show that even at night, when the radio audience is at its maximum, only one-sixth of the receiving sets are in use at 6 p. m.; one-third at 7 p. m.; two-fifths at 8 p. m.; one-half at 9 and 10 p. m.; one-third at 11 p. m., and one-fourth at midnight. The most popular radio feature, Amos 'n' Andy, is heard by from 50 to 55 per cent of all sets in use. No other feature reaches over 40 per cent. (Cf. article in *Fortune*, December, 1930.)

ment of a new novelty would give a new stimulus to the industry. Specifically, television may, when made more practical than it is at present, revive some of the radio enthusiasm which abounded a few years ago. It is to be noted that the officers of R. C. A. have emphasized the part they expect television to play in their program after they move into the new headquarters now under construction in New York.

Barring such a revolutionary change, however, it is doubtful whether the public can be stimulated to any very rapid turnover in radio equipment. Once let a family install a receiving set that works well, of a type that does not demand constant mechanical attention, and it will be hard to make it bite on the annual model bait. The industrial depression in which the country now finds itself has served as a corrective of this extravagance, if one was needed.

But it does seem reasonable to expect that, as time passes, there will be a growing demand for greater differentiation in the entertainment offered. With more than six hundred radio stations operating, every receiving set in the United States ought to be within hearing distance of at least a dozen stations at one time. With a dozen stations available, the radio listener ought to be able to tune in, at any time, almost any sort of program which his mood leads him to desire. Until that condition has been brought to pass, neither Congress nor the radio broadcasting agencies will have secured an organization of the broadcasting industry which meets the full desires and expectations of the public.

Oglethorpe to Begin Education by Radio. Regular Credit to Be Given if Notes Are Submitted and Examinations Taken on Work.—

Atlanta, February 28.—A university of the air, with courses taught by radio, is planned here as soon as equipment can

be installed, Dr. Thornwell Jacobs, president of Oglethorpe University, announced yesterday.

"It will be possible for any person who is the owner of a radio to listen to every college course that can be successfully taught over the radio without charge," Dr. Jacobs said. "If any person desires to obtain regular college credits and degrees by radio he has only to do the work in a regular and systematic manner—to attend every radio lecture, make notes thereon, submit them to the professor in charge for examination and criticism, study the texts and correspondence sheets furnished by the university and stand the customary examinations at the close of the work, and, of course, pay the regular tuition fees. He or she will be able to obtain the greater part of a college course in that way.

"We propose to found and operate a complete extension university of the air. The radio department will be of equal standing, dignity and order with the undergraduate and graduate departments of the university."—From the Star, Washington, D. C., March 1, 1931.

The need for independent educational stations—There are thirty radio broadcasting stations owned and operated by states and located at the state colleges and universities. The committee is endeavoring to protect these stations and other educational stations from the encroachments of commercial broadcasters and to have enough broadcasting channels reserved to insure the proper development of stations operated primarily for the benefit of the public. The determined effort of the commercial broadcasters to bring all educational broadcasting under the control of commercial concerns which have and exercise the right of censorship over their programs is not in the public interest, convenience or necessity. It tends rather to monopoly and the exploitation of the

public for the profit of commercial concerns operating broadcasting stations.

Members of the federal radio commission have suggested that instead of reserving channels for educational stations, the federal government should compel commercial stations to give part of their time every day for educational broadcasting. An argument to close our schools and colleges and transfer their activities to the theaters and motion picture houses would be just as logical. Either would mean the tying up of education with the show business and with the business of advertising.

Commercial stations need no urging to broadcast educational programs. They are constantly approaching educators and public officials to provide authoritative educational programs. Approximately ten percent of broadcasting time is devoted to programs of an informational or educational nature. However, education is not the primary objective of the commercial station. What it is after is profit, gained directly from the sale of advertising time or indirectly through the building up of prestige for commercial concerns. The only way to insure freedom of speech and intellectual liberty, so far as radio is concerned, is to keep a good percent of the broadcasting stations under the control of the educators and of the elected representatives of the people.—Armstrong Perry, Director, Service Bureau, National Committee on Education by Radio.

Radio is in its infancy but already its problems are here. How shall we think of radio? As a toy for our delight in hours of ease, as a political device for manipulating votes, as a loud speaker for propaganda, as ballyhoo for every kind of racket, as the advertising column of legitimate trade, as sounding board for the musician, as pulpit for the preacher, as sower going forth to sow truth and falsehood, pleasure and pain, hope and disillusionment on good ground, trodden waysides, and superficiality's stony areas?—John Henry MacCracken.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the groups with which they are associated are as follows:

J. L. Clifton, director of education, Columbus, Ohio, National Council of State Superintendents.

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.

R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.

J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.

Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.

John Henry MacCracken, 744 Jackson Place, Washington, D. C., American Council on Education.

Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.

H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.

Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save these bulletins for reference or pass them on to your local library. Education by radio is a pioneering movement. These bulletins are, therefore, valuable.

The Fess Bill for Education by Radio

JOHN HENRY MACCRACKEN

EVERY NEW INVENTION creates its own problems. The invention of printing turned the world upside down. Church and state both felt its revolutionary influence. The automobile created and destroyed land values. Invented to speed transportation it brings traffic to a standstill in many a congested street.

Radio is in its infancy but already its problems are here. How shall we think of radio? As a toy for our delight in hours of ease, as a political device for manipulating votes, as a loud speaker for propaganda, as ballyhoo for every kind of racket, as the advertising column of legitimate trade, as sounding board for the musician, as pulpit for the preacher, as sower going forth to sow truth and falsehood, pleasure and pain, hope and disillusionment on good ground, trodden waysides, and superficiality's stony areas?

Sometimes problems create their own solutions. To state a problem is often to find one's self on the road to solution. It has not been necessary for the government to step in and decree that automobiles shall have eight cylinders in preference to six. The government is not greatly concerned as to what is telegraphed over the wires. On the basis of the old adage that one should not look a gift-horse in the mouth we were all rather disposed at first to leave programs to the beneficent broadcasters. Things are generally worth just what they cost, we reminded ourselves. Is it possible that the world has entered a new era and that now at last we are to get something for nothing? But life is the great schoolmaster. We have seen an individual fortune of a hundred million dollars accumulated in a score of years from the

sale of radio sets. We ask ourselves "are we getting this for nothing after all?" We see great corporations competing for



UNITED STATES SENATOR SIMEON D. FESS of Ohio, who introduced the Fess radio bill into the Senate on January 8.

the privilege of being beneficent. We see the right of squatters' sovereignty contested in the Supreme Court. We see great nations wrangling over the privileges of the air. We begin to think there must be value in this imperial domain. The heavens which have been set aside as public domain of the hereafter are apparently open to homestead here and now. Claim your channel with a quaver as you once claimed your quarter-section with a stake.

But if there are more claims than quarter-sections, more autos than the street can hold, more broadcasters than channels, and the claimants cannot follow by agreement among themselves the old rule of big business—multiplication, division, and silence—government must step in and establish and enforce traffic rules.

So the Federal Radio Commission was set up and licenses required of would-be broadcasters. First the bill contained a clause that preference should be given by the Commission to educational broadcasting.

But one of the Senators contended you could trust the Commission to see that education, the fondest hope and the greatest pride of the American people, the bulwark of the republic, received the preference that was its due, and the clause was stricken from the bill on that understanding.

The Commission in operation, however, takes the view that commercial broadcasting for gain is a universal interest because everybody wants to make money and nobody can make money without satisfying some human desire, but that educational broadcasting is a special interest, directed toward a special and selfish end, because it strives to give what only a minority desire, what the educators think will make better citizens, but which the majority, they suspect, reject because they have no desire to become better citizens. The Commission is willing that commercial broadcasting should graciously concede the minority a proportionate minority share for educational broadcasting, but are not willing that the use of any stated share of broadcasting should be set aside for

BE IT ENACTED by the Senate and House of Representatives of the United States of America in Congress assembled, That the second paragraph of section 9 of the Radio Act of 1927, as amended by an Act entitled "An Act continuing for one year the powers and authority of the Federal Radio Commission, under the Radio Act of 1927, and for other purposes," approved March 28, 1928, is amended by adding at the end of said paragraph, as amended, the following:

"Not less than 15 per centum, reckoned with due weight to all factors determining effective service, of the radio-broadcasting facilities which are or may become subject to the control of and to allocation by the Federal Radio Commission, shall be reserved for educational broadcasting exclusively and allocating when and if applications are made therefor, to educational agencies of the Federal or State Governments and to educational institutions chartered by the United States or by the respective States or Territories."—From a bill to amend the Radio Act of 1927, by Senator Fess in the Senate, January 8, 1931.

the use of the schools as a matter of government policy. Education is not a federal function anyway, they point out. Let it take its chance with religion as a gleaner in the corners, or use the air that belongs to the separate states. Thus the radio question lands us in the very heart of political theory.

The other argument is not a theoretical but a practical one. The reservation of any part for education is not necessary. Colleges and universities are not using to the full what is now available. The commercial station would be glad to distribute anything you have to say, at least anything that meets their rules and passes their censors.

If education is a special interest it is the broadest special interest the government knows—broader than agriculture, broader than labor. It is not a private

interest. The government does not leave it to the father and mother to say whether or how long a child shall go to school. The government in peace as well as in war can say what education it requires of the father and of the mother for citizenship. So important an interest cannot afford to owe its share of the air domain to favor, not even to political favor. It must possess it of right and by law. Only thus can it be that free agent which the people desire, with no interests to serve save the public good.

Just what proportion of the air domain shall be set aside for education is of minor importance. The apportionment of land in the Northwest Territory was a little over eight percent, or three sections out of every thirty-six sections for education and religion. In the taxing of income it is fifteen percent which the

government is willing should escape tax if devoted to the public welfare. Fifteen percent seems a fair proportion in view of present utilization and the needs of future expansion. It has been written into the Fess bill. The opposition is not to the percentage, but to the principle.

Who do you think owns the air? Do a majority of the people you know feel that it would be fair to set aside a small share for education? If you don't want education yourself, are you willing the other fellow should have his chance at it? Do you think knowledge should be the exclusive possession of the few or should be shared with all, as soon after discovery as possible. Are you willing that your children and the child across the street should know as much as you know? If you are, support the Fess bill.

The Public's Rights in Radio

THE DEVELOPMENT of radio opened up a new world. There was no precedent in law or experience. This development has been rapid. There has been little time for consideration of the farreaching problems involved. The Congress has taken the general view that broadcasting rights are the property of the general public and that the channels which might be assigned to stations by the Federal Radio Commission should be allotted for fixed periods so that there might be opportunity for new arrangements in the light of experience and developments.

Within a remarkably short time radio broadcasting has moved forward until it is now on a highly profitable basis. It becomes apparent that rights to the air have enormous commercial value which is certain to increase with the further development of the nation. Realizing this fact, the large financial and industrial groups, which are interested in dividends and in the control of public opinion, are seeking to obtain permanent rights in this new field.

The time has come for the educational

and civic forces of the nation to face this situation with vision and courage.

In the first place it is important that the permanent rights of the public in the radio broadcasting channels shall not be alienated into private hands. Whatever plan of licensing may be followed the ultimate ownership and control should rest permanently with the general public and should be in charge of authorities who will be able to safeguard the rights of the public against the powerful and persistent efforts of any private interest which may arise.

Second, provision must be made to safeguard the educational and civic uses of radio from encroachment by commercial interests. Under existing conditions stations in the colleges have been under steady pressure from commercial stations who have sought to take away their assignments. Many schools have already had their assignments of broadcasting channels discontinued or have given up because of the difficulty of the struggle. This crushing out of the educational stations has led to widespread discontent

and to a determination on the part of certain members of Congress and of persons interested in the higher uses of radio to demand that a reasonable fraction of broadcasting channels be set aside permanently for the purpose of education, even as a part of the public domain was set aside to encourage common schools.

Before radio can be used most effectively for education, time will be required for research and experiment. If broadcasting channels are not reserved now they will be lost before the educational program can be developed under public auspices. This is a problem which should be studied in every school and discussed by every faculty. The policy of reserving air channels for the purposes of education should be encouraged by resolutions adopted by local, state, and national education associations and civic groups of all kinds. Let representatives in Congress protect the rights of the public in this matter which is of such large concern to future generations. This is one of the major problems before the American people.—J. E. M.

INOTE a considerable effort to show to the public that the Commercial Broadcasting Companies are offering great facilities to the educational institutions, thereby making it unnecessary for these institutions to own and operate their own broadcasting stations and therefore making it unnecessary for Congress to pass the 15% Bill. One element which is not discussed, at least I have not seen it, is that the Commercial stations may at any time cut off these educational institutions and attach a heavy compensation to their services, or that they may so allocate their time bands as to make them practically useless for educational institutions. The loud pedal is on the general statement that the Commercial Companies are making generous proposals.—President George W. Rightmire of the Ohio State University in a letter to the National Chairman, February 16, 1931.

Freedom of Speech Almost Lost

ARMSTRONG PERRY

HONORABLE HAROLD A. LAFOUNT of the Federal Radio Commission has rendered a valuable service to education and to the country in conducting a survey [see next page] to develop the facts concerning programs presented over radio broadcasting stations during the week of January 11-17, inclusive. It shows that the educational stations, attacked constantly by commercial broadcasters on the one hand and unprotected by the Federal Radio Commission on the other, are reduced to a mere handful, with inadequate power and time to make their work effective.

The facts presented by Commissioner Lafount are a warning and a challenge to the federal government, to the officials of the states, to educators, and to all citizens. They indicate clearly that freedom of speech, so far as radio is concerned, is almost lost. Only 42 stations,

owned and operated by states or by educational institutions chartered by states, reported, while the number of commercial and religious stations reporting was 522. The reason for combining the figures for the commercial and religious stations is not clear but, in all probability, less than 10 percent of the total represents religious stations.

Commercial stations are not common carriers, although radio broadcasting has been declared to be interstate commerce. The owners of commercial stations have and exercise the right of censorship over their programs. The tendency toward monopoly is strong and already the largest stations thruout the country are controled, to a greater or less extent, by chain broadcasting companies with headquarters in New York. This places in the hands of small groups of men in New York a large measure of control

over public opinion thruout the country.

Closely affiliated with the dominant radio group are other commercial groups whose business also involves the use of the public domain for private profit. Few educators or citizens would argue that the education of the youth of America, or of the adults, should be placed in the hands of such groups, yet commercial monopoly of the radio channels would mean just that, so far as radio is concerned. Commissioner Lafount is to be commended for bringing the situation to the attention of the country thru his survey. It is to be hoped that other states will follow the example of Michigan, Wisconsin, Oregon, South Dakota, and other leaders and fight for the right of the states to have radio facilities to use in performing educational functions reserved to them by the Constitution of the United States.

PARTIAL ANALYSIS OF PROGRAMS PRESENTED OVER RADIO BROADCASTING STATIONS DURING WEEK OF JANUARY 11 to 17 INCLUSIVE [FEDERAL RADIO COMMISSION, WASHINGTON, D. C., MARCH 9, 1931.]

	Stations operated by Educational Institutes		Commercial and Religious Stations In										Total	
			1st Zone		2nd Zone		3rd Zone		4th Zone		5th Zone			
	Hrs.	Mins.	Hrs.	Mins.	Hrs.	Mins.	Hrs.	Mins.	Hrs.	Mins.	Hrs.	Mins.	Hrs.	Mins.
No. Hrs. used brdcastg. programs from studios by Educators	128	18	137	41	239	34	192	30	169	34	139	25	1007	02
No. Hrs. used brdcastg. programs originating in Educational Institutions.....	70	01	67	25	69	22	55	05	94	27	75	13	431	33
No. Hrs. used brdcastg. other data considered educational but not necessarily by professional educators..	89	50	407	07	315	44	374	08	470	23	364	20	2021	32
Total No. of Hrs. used in brdcastg. educational programs described above....	286	09	612	13	624	30	621	43	734	24	578	51	3457	50
No. of Hrs. used in Brdcastg. data provided by Fed. Government	50	30	83	21	98	18	209	41	176	--	123	25	741	15
No. hrs. used in brdcastg. data provided by City, County and State.....	23	16	39	22	57	19	82	13	89	41	98	15	390	06
No. of Hrs. used in brdcastg. speeches of general character	46	17	213	23	123	18	100	53	149	58	158	34	792	23
No. of Hrs. used in brdcastg. classical music	200	09	978	50	848	31	943	45	1232	15	1579	10	5782	40
No. Hrs. used in brdcastg. for Red Cross, Community Chest, and similar organizations	14	45	111	38	68	41	78	20	114	06	82	26	469	56
Total Number of Hours on the Air	1027	10	5425	42	5577	22	6285	30	7390	16	8078	45	33,784	45
Number of stations reporting	42		83		79		98		115		105		522	

(Compiled under the direction of Commissioner Lafount and submitted without comment.)

NOTE: There were 605 licensed broadcasting stations on February 1, 1931.

Radio in Soviet Russia

IN THE EARLY DAYS of the revolution Lenin is reported to have said that the radio is the unwritten newspaper of the masses. Whether this statement is apocryphal or not, it contains the guiding principle in the development of the radio in the Soviet Union. As we have seen, the country is equipped with some fifty radio transmission stations which are distributed according to plan from Archangel to Baku and from Minsk to Vladivostok. Thru a vast network of receiving sets, which is being extended every day, these stations serve as centers for the systematic report to the masses of the fortunes of the Five-Year Plan.

The work of the radio, in so far as it is devoted to the program of construction, is divided into three parts. First, all significant reports of a general character with regard to the plan are sent out over the radio; second, the proceedings of all important conferences dealing with the plan, such as the conferences of the Planning Commission and the central executive committees, are carried to the people thru the radio; third, all major achievements in the fulfillment of the plan are reported from day to day by means of the so-called radio newspaper. This institution, which in content is much like the ordinary newspaper, constitutes such an important part of the radio program that it merits examination in some detail.

The radio newspaper is prepared by a responsible bureau in the Commissariat of Post and Telegraph and is organized in a number of editions designed to reach different classes of listeners. There are editions for industrial workers, for peasants, for agricultural laborers, for women, for the Red Army, for the Young Communists, for the Pioneers, and for other groups in the population. Since the linguistic complexion of the Union is so variegated and since the Soviet government has no scruples against informing

peoples living beyond the borders of the country about the plan, the paper is prepared in various tongues. Among these are Russian, Ukrainian, White Russian,

THE CONFERENCE on Radio and Education meeting in Chicago Monday, October 13, 1930, recommends that the Congress of the United States enact legislation which will permanently and exclusively assign to educational institutions and to government educational agencies a minimum of fifteen percent of all radio broadcasting channels which are, or may become, available to the United States. The Conference believes that these channels should be so chosen as to provide satisfactory educational service to the general public.

Tartar, Uzbek, Armenian, Georgian, Chinese, Korean, English, and German.

In reporting the progress of the plan the paper again follows the injunction of Lenin that the material presented should not be purely informational. In addition to facts it includes evaluations and strives to make a personal appeal to the radio audience. The preparation of the newspaper in separate editions represents an obvious effort to make the paper interesting. Finally, provision is made for the promotion of discussion and the raising of questions. The listeners are encouraged to send queries to the great central stations; answers are then prepared and broadcast. Ten minutes of the hour devoted to the newspaper are given to these so-called discussions.—*From The Soviet Challenge to America* by George S. Counts.

World Radio Sets Number 24,000,000. United States Has 10,500,000 of the Total, Which Are Valued at \$1,500,000,000. Owners Abroad Pay Fees. License to Support Broadcasting Ranges from \$44 in Turkey to 39 Cents in France.—*Special to the New York Times.*

Washington, Jan. 17.—More than 24,000,000 radio sets, valued at about \$1,500,000,000, are now in use throughout the world and 10,500,000, with a value of \$676,000,000, or about 45 per cent of the world's total, are in the United States, according to a survey just completed by Lawrence D. Batson of the Department of Commerce. The total investment in broadcasting stations, he said, was estimated at approximately \$29,000,000, of which one-half is represented by stations in the United States.

Socket-power sets account for 52 per cent of the total number in use in North America; for about one-half of the sets in Europe and one-quarter of those in South America. Crystal sets are fewest in North and South America, representing 1 and 2 per cent, respectively, and highest in Russia and Turkey, where the ratio is around 20 per cent.

In the majority of countries outside the United States and Canada, Mr. Batson said, the cost of broadcasting is paid by a system of license fees levied on the radio sets in use. These range from as low as 39 cents in France to as high as \$44 per set in Turkey. The average license fee, however, runs between \$3 and \$4, and the amount paid yearly by radio fans between \$40,000,000 and \$45,000,000.

The United States today is the world's largest exporter of radios. Foreign sales rose from something more than \$9,000,000 in 1927 to \$12,000,000 in 1928, and more than \$23,000,000 in 1929.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the groups with which they are associated are as follows:
J. L. Clifton, director of education, Columbus, Ohio, National Council of State Superintendents.
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.
R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save these bulletins for reference or pass them on to your local library. Education by radio is a pioneering movement. These bulletins are, therefore, valuable.

The Menace of Radio Monopoly

RADIO CORPORATION OF AMERICA—In the field of radio, the world figure is the Radio Corporation of America. R. C. A. was initially established for the ship-to-shore communication, and in connection with a radio patent pool.

It is now interested in motion picture production, distribution, and exhibition; in the phonograph industry; in vaudeville; in music production; in television; in manufacturing and selling vacuum tubes; in producing and marketing equipment for broadcasting and receiving; in various other allied arts and industries, as well as in telegraphic and cable communications, and in radio broadcasting.

Report of the hearings on the Couzen's communications bill is significant from the standpoint of the mass of testimony directed against the Radio Corporation, also unfavorable to the other groups constituting the so-called "radio trust." The combine was accused on all sides of being guilty of intimidation and exploitation, not stopping short of any measure "to destroy its rivals in the tube field," and crush "its competitors in every field."

R. C. A. Subsidiaries—The Radio Corporation is organized under separate state and national laws, as for example: The Marconi Telegraph Cable Company of New Jersey; Radio Corporation of America of Argentina, Inc.; Canadian Marconi Company.

It has absorbed the 700 Keith-Albee theaters, the Orpheum chain of theaters, the Pantages chain of theaters, in addition to chains of vaudeville and motion-picture theaters outside the United States. It has purchased the majority of stock in Film Booking Offices of America, Inc., the Victor Talking Machine Co., etc.

The following subsidiaries are some of those enumerated at the hearings:

National Broadcasting Company, Radio Marine Corporation of America, Radio-Keith

Orpheum Corporation, Radio-Keith Orpheum Distributing Corporation, Radio Corporation of America Photophone, Inc., Radio Corpora-

KILLING THE EDUCATIONAL STATIONS—Does it make any difference to America, that, under the administration of the present Federal Radio Commission, twenty-three educational broadcasting stations went out of existence between January 1 and August 1, 1930—twenty-three in seven months? Is this what the Congress of the United States calls "the public convenience, interest and necessity?"—Gross W. Alexander in a letter to Senator Charles W. Waterman dated February 28, 1931.

tion of America Communications, Inc., General Motors Radio Corporation, Radio Music Co., [N. B. C.], Radio Victor Corporation of America, Marconi Telegraph Cable Co. of New York, Audio Vision Appliance Co., Canmar Investment Co., Radio Real Estate Corporation of America, United States Radio Supply Co., and others.

Mediums of Mass Communications and the Public Utilities—The National Broadcasting Company was organized at the suggestion of Mr. Owen D. Young, at that time chairman of the boards of the Radio Corporation and the General Electric Company. [A] He selected Mr. Merlin H. Aylesworth to become its president. [B] "At the time that Mr. Aylesworth was employed to take the presidency of the National Broadcasting Company he was the director of public relations, or publicity, of the National Electric Light Association." [C] During Mr. Aylesworth's period of service with the National Electric Light Association as managing director, that organization engaged in an astounding campaign to influence the

clergy, chambers of commerce, the press, all kinds of civic organizations, local politicians, college professors, superintendents of schools, and textbook publishers. As revealed by the Federal Trade Commission, it engaged in a "conspiracy" to corrupt the public intelligence thru unreliable statistics and onesided propaganda on behalf of unregulated, privately-owned utilities.

A sample of Mr. Aylesworth's policy is given in the following: [D]

"I would advise any manager who lives in a community where there is a college to get the professor of economics interested in your problems. Have him lecture on your subject to his classes. Once in a while it would pay you to take such men, getting \$500 or \$600 a year, or \$1000 perhaps, and give them a retainer of \$100 or \$200 a year for the privilege of letting you study and consult with them. For how, in heaven's name, can we do anything in the schools of the country with the young people growing up, if we have not first sold the idea of education to the college professor?"

At a convention in Birmingham, he said: [E] "Don't be afraid of the expense. The public pays the expense."

"Since its formation," admits Mr. Aylesworth, [F] "the National Broadcasting Company has done everything in its power to awaken the educators of this country to the possibilities of radio broadcasting in conjunction with the work of schools and colleges."

Columbia System Married to the Movies—The Columbia Broadcasting System is owned fifty percent by the Paramount-Famous-Lasky Corporation. By securing possession of 26 percent of Class A stock and 26 percent of Class B stock [which is one percent more in each case than it now has], the Paramount pictures would dominate the Columbia System.

Occasional rumors have it that the National Broadcasting Company will merge with the Columbia System as soon as public sentiment will warrant. In case R. C. A. succeeds in absorbing Paramount, it will be inevitable.

THE QUESTION OF MONOPOLY in radio communication must be squarely met. It is not conceivable that the American people will allow this new-born system of communication to fall exclusively into the power of any individual, group, or combination. It can not be thought that any single person or group shall ever have the right to determine what communication may be made to the American people. We can not allow any single person or group to place themselves in a position where they can censor the material which shall be broadcast to the public.—Herbert Hoover as Secretary of Commerce testifying before the House Committee which had under consideration the Radio Act in 1925.

Domination of Pictures Said Planned by R. C. A.—After a joint announcement by Adolph Zukor, of Paramount-Famous-Lasky Corporation and William Paley of Columbia Broadcasting System that Paramount had acquired half interest in Columbia, the announcement was made that the Radio Corporation had acquired the Pantages circuit, and, failing in immediate negotiations to absorb the Fox and Zukor film interests, the Radio Corporation agent was quoted in the press as saying: [G] "We are going ahead with our competitive program more competitively than ever. We are going to buy and build theaters, and what competition we can't swallow into our organization, we'll dynamite out of the field."

This was followed by an official denial. Public disclaimers, however, in which words of negation have scarcely dried in the newsprints before the thing disavowed takes place, are common, and reports of activities along these lines continue.

Radio Rapidly Becoming a Theater Man's Game—Broadcasting stars are eagerly sought by film producers. Film stars appear before the microphone. Since their voices reproduce similarly thru radio or talkies, a good artist is good thru either medium. This and other factors have direct bearing upon the organization of the twin industries of radio and talkies and their cultural influences. Radio is rapidly becoming a theater man's game.

N. B. C. and the Music Industry—The following testimony regarding the Radio Corporation's plans in the field of music to be carried out thru the National Broadcasting Co. was given in testimony of President Aylesworth before the Senate Interstate Commerce Committee: [H]

"I am going to loan \$600,000 of it to the Radio Music Company, which we have organized with two music publishers, one standard and one popular, for the protection of the radio industry, for the protection of broadcasting. . . . It is necessary for us to be in the music business to protect ourselves. . . . We hold that this new music company will develop American music, American composers,

for both educational music and for popular music. Nothing of that sort has ever been accomplished in this country. We think radio is the medium that can do it. All right, if radio is the medium that can do it, we have to con-

IF THE EDUCATIONAL institutions are going to be thrown on the mercies of the Federal Radio Commission, we can't make a beginning. So far as my experience has gone, we can't even get the Commission to acknowledge receipt of letters. It may be that some commercial programs are educational and that some educational programs are commercial. But the object is clearly different.—Herman G. James, President, University of South Dakota, at the Chicago Radio Conference on October 13, 1930.

trol the music situation. It is a simple business proposition with a little touch of sentiment in it."

Government Institutes Action to Restrain R. C. A.—During May, 1930, the federal government brought charges against the Radio Corporation and seven or eight of its relations alleging: ". . . an unlawful combination and conspiracy in restraint of trade and commerce among the several States, and with foreign nations in radio communication and apparatus, and the defendants are parties to contracts, agreements, and understandings in restraint of said commerce. . . ."

Senator Couzens, chairman of the legislative committee [Interstate Commerce] asserts that the litigation should be "of great public interest and concern" to every American citizen.

A Court Decision Against R. C. A. Espionage—In a decision favorable to the DeForest Radio Company by a New Jersey court, the following appears: [I]

"The radio company for the past two or three years has planted spies in the complainant's factory in Jersey City to learn, it is

claimed, its trade and trade secrets. Probably half a dozen of them at times held jobs in the complainant's works, doing the bidding of the radio company and all the while pretending to serve loyally both employers, for pay from each. . . . The radio company admits imposing its spies, as employees on the complainant. . . . I am not satisfied that the efforts of defendant's spy system was confined, as it is claimed, to ferreting out infringements of violations of the covenants mentioned. . . . I am not at all content with this explanation that the defendant's aims were solely selfprotective. I am impressed that it sought a line on all the complainant's activities, and certainly its orders to the spies were not short of that. Their espionage was general. However that may be, the case as it stands convicts the defendant, by its own confession, of unlawful conduct by mean and reprehensible methods."

Great Cultural Institutions used to Advertise N. B. C.—An indication of one purpose underlying the "public-service" programs of the National Broadcasting Company which are furnished free of charge to associated stations, was recently made at Washington.

Being asked if such programs as those sponsored by the Foreign Policy Association, the Federal Council of Churches, the National League of Women Voters, and other leading organizations, were for the purpose of benefiting the people primarily, or for "popularizing the system," the head of the N. B. C. replied that they were "good advertising."

In a different form, the question was bluntly put, apparently to preclude any misunderstanding. [J]

"And those public service programs are a part of the business game of popularizing your own company?" he was asked.

"Yes," was Mr. Aylesworth's reply.

This conforms to previous official declarations that there is "no altruism" in the policies of N. B. C. It raises, however, a much more serious question relative to the machinations of great financial interests desiring to manipulate social and cultural institutions on behalf of their far-reaching policies and aims.

National Radio Education and Ownership of Facilities—High officials of R. C. A. and N. B. C. are frank in saying they desire to do in the field of education what they are doing in the

THERE ARE FIELDS of education where the commercial broadcaster is at great disadvantage and is immediately open to the charge of prejudice. For instance, if we should give a course in economics over a station that has marked economic views, or if they should try to get it sponsored by a large corporation, we feel that our instruction would be prejudiced by that hookup just as we would feel that if a book were presented by an oil company to every school in the state, it would prejudice the material in that book.—H. C. L. Ewbank, Chairman, Radio Research Committee, University of Wisconsin, at the Chicago Radio Conference on October 13, 1930.

religious field—put on a national educational program thru their chain of stations. The industry agrees that an independent body of educators should organize the programs, “so as to avoid the suspicion of propaganda.” Then, if convenient hours can be found, the commercial facilities will be made available to the educator’s organization.

Some hesitancy, however, seems to be manifest among certain leaders in accepting the offer. They advise that motives are an important factor, when considering associating their work with profitmaking enterprises, and say: [K]

“To properly appreciate educational material from stations operating for profit, one should understand motives, and know which programs are broadcast for the purpose of creating new markets for goods, which are intended to support or popularize the broadcaster, which are planned as propaganda for the ‘proper geese,’ which aim to present felicitations and an atoning kiss to public opinion and the federal authority, and which are designed for enrichment of human life.”

It is contended by the industry and some educators that special facilities for educational uses or groups would be useless and wasteful duplication. It is replied that this contention is natural and to be expected, and pointed out that if broadcasting stations were common carriers, *subject to use by any individual or institution*, the contention would have more merit. A typical protest follows:

“Is it another race that is to be won by throwing golden apples to allure the attention of a possible contestant? Are we confronted with the old method of offering special privileges to our best leaders and institutions in the interest of commercial expediency, and for the sake of eliminating such competition as they might afford in case they were to set up a broadcasting structure with facilities of their own?”

Ownership of stations is the crux of the matter. Whoever controls facilities is bound to control their uses.

In his report to the Advisory Committee on Education by Radio, Mr. Armstrong Perry of the Payne Fund and federal Office of Education, asserts:

“The control of educational broadcasting at its source appears to be the most important element in education by radio at this time. The officials of public education have not

found it possible to control educational broadcasting completely where they controlled the broadcasting stations from which the broadcasting was done.”

IT SEEMS TO ME that we must have a distinctly different allocation from commercial stations. I don’t believe that the two interests can be harmonized. If somebody is to define the field of education it is not going to be a commercial agency. It is distinctly our burden. I believe we should endeavor to secure preferential privileges for the public educational institutions.—H. Umberger, Kansas State Agricultural College, at the Chicago Radio Conference on October 13, 1930.

Economic Centralization of Control—Permitting the machine agents of mass communication to gravitate into the power of a single corporation or handful of financiers it is said would be to invite catastrophe.

Yet, this is taking place. Senator Wheeler brought out at the Interstate Commerce committee hearings that: [L]

“ . . . Fifty-three of the favored stations were given more than fifty percent of the picked channels, while the balance of more than six hundred stations were assigned . . . to the remaining thirty-eight channels.”

Senator Dill indicated that twenty-five of the forty cleared channels carried the National Broadcasting Com-

[A] Senate-6, p. 1205. [B] House of Representatives, 15430, p. 546. [C] H. R. 15430, p. 775. [D] Social Service Bulletin, Vol. 20, No. 11, p. 2. [E] H. S. Raushenbush, “High Power Propaganda,” p. 2. [F] Senate-6, p. 1702. [G] Senate-6, p. 1806. [H] Los Angeles Times, 6-27-29; Examiner, 6-29-30. [I] Senate-6, p. 1713. [J] From 132 Atlantic Reporter, p. 496 et seq.; Court of Errors and Appeals of New Jersey, Feb. 1, 1926. Equity 65 (2). [K] Senate-6, p. 1710. [L] Pacific-Western Broadcasting Federation, Ltd. [M] Senate-6, p. 2345. [N] Senate-6, p. 2346.

pany’s programs, and twelve were on the Columbia chain, leaving three cleared channels for independent stations. Continued Senator Wheeler: [M]

“Now by this network of owned or controlled stations, the Radio Trust or the Power Trust, or the two combined, completely cover the entire United States on the very best channels. . . . And they as a matter of fact can present or they can prevent practically any program which they desire.”

Similarly, on the thirty-four short-wave channels set apart by international agreement for international relay broadcasting, the R. C. A. and its relations have fifteen positions. Fifteen of these exceedingly valuable and important positions for one commercial group in one country out of thirty-four for the entire world seems a large proportion.—From a special memorandum by Gross W. Alexander, which is largely a review of hearings of the Senate Interstate Commerce and House Merchant Marine and Fisheries Committees having to do with radio legislation.

GOVERNMENT SUIT AGAINST THE RADIO TRUST—On the thirteenth of last month there was filed in the United States District Court of Wilmington, Delaware, the most important antitrust suit in the history of this country, because, if prosecuted to a logical conclusion, it will result in the dissolution of the most powerful, wealthiest, most sinister, and most arrogant monopoly which ever oppressed the public, terrorized its competitors or flaunted the laws of any country.

This action was commenced by the Attorney General of the United States against ten corporations with aggregate assets of \$6,000,000,000 who are charged in the petition with violating the Sherman antitrust law. The combination against which this suit was directed are generally known to the public as the Radio Trust.

The ten corporations against whom this suit was brought are Radio Corporation of America, General Electric Company, American Telephone and Telegraph Company, R. C. A. Photophone, Inc., Western Electric Company, Inc.,

ON THE VERY FACE of the situation it is inevitable that we cannot mix educational and commercial stations on the same frequency. That isn’t an opinion; it is based upon plenty of evidence. Our good commercial friends tell us they are willing to devote some of their time to educational work. That is probably true, but they do it, of course, not from a missionary point of view, not from a standpoint of education per se, or their interest in it, but because it builds up goodwill and indirectly influences the returns from their commercial work.—Charles A. Culver, Carleton College, representing the Association of College and University Broadcasting Stations, at the Chicago Radio Conference on October 13, 1930.

Westinghouse Electric and Manufacturing Company, R. C. A. Radiotron Company, Inc., R. C. A. Victor Company, Inc., General Motors Radio Corporation, and General Motors Corporation.

According to their balance sheets of December 31, 1928, the assets of the chief defendants were:

R. C. A. Victor Companies—\$141,563,336.
General Electric Company—\$460,455,322.
Westinghouse Electric and Manufacturing Company—\$233,690,111.
American Telephone and Telegraph Company—\$3,826,683,584.
General Motors Corporation—\$1,242,894,869.

The assets of these companies have since been materially increased; the assets of the American Telephone and Telegraph System, at the end of 1929, according to the company's statement, were \$4,228,430,088. This does not enumerate the assets of several of the defendant companies. The petition in this case, which is signed by the Attorney General of the United States and five assistants to the Attorney General, as well as by the United States Attorney, is admirably drafted, apparently after careful and deliberate thought and preparation.

The petition in this case constitutes a ringing indictment against this lawless Radio Trust.—From a speech of Representative Ewin L. Davis of Tennessee in the House of Representatives, June 19, 1930.

MONOPOLISTIC CONTROL OF RADIO SCORED—It is extremely important that the Congress shall enact such legislation as will recover this priceless treasure—radio—from monopolistic control by a few corporations which are using it for a private profit and gain. Sixty million radio listeners in the United States are keenly interested in all efforts to prevent the air from being monopolized by a few gigantic corporations serving their own selfish ends.

The aim and purpose of the Radio Trust is to secure vested rights in the air, and when it has been successful in

its attempts, goodbye to freedom of the air. It will never be possible, then, to loosen the grip of the monopoly on the radio facilities, and a virtual dictatorship will prevail in the United States in

ONE THING I AM SURE OF—
and we have demonstrated it in our own experience—is that we cannot share time with a commercial station on a satisfactory basis. If we don't get Congress to legislate giving us air rights, I think our case is hopeless.—
W. T. Middlebrook, Comptroller, University of Minnesota, at the Chicago Radio Conference on October 13, 1930.

all matters concerning this marvelous new means of communication.

Never in the history of the nation has there been such a bold and brazen attempt to seize control of the means of communication and to dominate public opinion as is now going on in the field of radio broadcasting.—By Frank R. Reid, Representative from Illinois, in the *American Teacher*, November, 1930.

BILLBOARDS OF THE AIR—Radio channels have often been likened to the highways of the air. Today in America, like the motor highways, these ether routes are filled with advertising billboards, spoiling the musical scenery which is their normal charm.

Seated at the dial of a radio set, the seeker of beauty finds himself in a position analogous to the driver of a motor car. A splendid road is found. It is called "Hungarian Rhapsody" by Liszt. Suddenly a vocal billboard breaks in upon the satisfying mental picture the rhapsody has brought and announces that unless you eat "Piff's Particular Pickles" you have known only a dismal world. If

you haven't tried Piff's Pickles, you ought to stop listening and hurry down to the nearest grocer to get some before he is all sold out of this popular product. . . .

The radio listener is beginning to think that seeking beauty along the ether pathways is an illusion, a promise that can never be kept. He buys a radio set to enjoy music, only to find that what he has invested in is in large part the right to open his door to a thousand and one ballyhoo artists, who too often differ from the familiar circus sideshow announcers only in the accents used. . . .

That a movement for radio billboard elimination is under way is apparent to those who keep their ears to the ground.—From an editorial in the *Christian Science Monitor*, February 28, 1931.

THE PROGRESS OF CIVILIZATION depends in an increasing measure, on things which are within man's power. Prominent among these are the advancement of knowledge and the deliberate adaptation of his habits and institutions to new conditions. Unrestricted freedom of discussion is thus required. If the history of civilization has any lesson to teach it is this: there is one supreme condition of mental and moral progress which it is within the power of man himself to secure, and that is perfect liberty of thought and discussion. The establishment of this liberty may be considered the most valuable achievement of modern civilization.—From *A History of Freedom of Thought* by J. B. Bury.

CENSUS OF INCOME RETURNS IS GIVEN—Any man with an income of \$1,000,000 a year is considered to be worth on a five percent basis at least \$20,000,000. In 1929, 504 individuals reported incomes of \$1,000,000 or more. This was almost the same number as in the preceding year—511 being in the "big class," as against 496 in 1927. United States had 38,650 millionaires in 1929. From the *Washington Star*, March 17, 1931.

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Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, 744 Jackson Place, Washington, D. C., American Council on Education.
Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
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How Does Your State Stand?

HERE for the first time there appears a list of the broadcasting stations of the United States showing the quota units assigned to each. From this list each state and each zone is able to see at a glance exactly where it stands in the assignment of rights to the air and how these rights are divided between different types of broadcasting service.

How to read this table—This table is arranged first by zones with the names of states under each zone in alphabetical order. Note that a total of 400 units is available to the United States. There being five zones, each is entitled to eighty units. Opposite the name of each state the word *due* is followed by figures showing the number of units to which the state is entitled according to the table furnished by the Federal Radio Commission. Following the word *under* or *over* is a figure which represents the difference between what the state is due and what it has. A continuing effort is made to adjust the quota of each state to its *due*.

Under the name of each state, stations are arranged alphabetically by cities showing for each station the call number, its location, whether (C) commercial, (E) educational, (F) fraternal, (R) religious, (P) police, or (G) government. Next follows the figure showing the power used in watts or kilowatts followed by a number showing the frequency used and initials (ST) shared time, (FT) full time, (LT) limited time, (PT) part time, or (DT) day time on the air. Full time as defined by the Federal Radio Commission is from 6 AM to midnight. The last figure in each line shows the quota units charged to that particular station by the commission. It will be noted that stations operating with one kilowatt power on a regional channel are charged one quota unit.

The material in this bulletin has been prepared by Clyde C. Hall for the National Committee on Education by Radio from official data.

ZONE I DUE 80.00 HAS 75.11 UNDER 4.89
Connecticut Due 4.46 Has 3.50 Under 0.96
 Education Units 0.2 Com. Units 3.3
 WICC Bridgeport c 250w 600kc ST 0.20
 * WTIC Hartford c 50kw 1060kc ST 2.5
 ** WDRS Hartford c 500w 1330kc FT 0.6
 WCAC Storrs E 250w 600kc ST 0.2

Delaware Due 0.67 Has 0.70 Over 0.03
 Educational Units 0.0 Com. Units 0.7

WDEL Wilm'n c 250w 350w 1120kc FT 0.5
 WILM Wilmington c 100w 1420kc FT 0.2

Dist. of Col. Due 1.33 Has 1.30 Under 0.03
 Educational Units 0.0 Com. Units 1.3

IT SHOULD BE NOTED that out of a total of 400 units which are available to the United States, educational stations occupy only 23.16 units. The two great commercial chains occupy 268 units, of which the National Broadcasting Company claims 171.33 and the Columbia Broadcasting System claims 96.67 units.

Is it not apparent that the common schools which occupy the full time of 30,000,000 young people and their teachers have needs and resources which entitle them to more than one-sixteenth of these invaluable radio frequencies as a permanent, independent and exclusive possession?

WOL Washington c 100w 1310kc FT 0.2
 ** WMAL Wash. c 250w 500w 630kc FT 0.5
 * WRC Washington c 500w 950kc FT 0.6

Maine Due 2.22 Has 2.0 Under 0.22
 Educational Units 0.0 Com. 2.0
 WR00 Augusta c 100w 1370kc FT 0.2
 WABI Bangor c 100w 1200kc FT 0.2
 ** WLBZ Bangor c 500w 620kc FT 0.6
 * WCSH Portland c 1kw 940kc FT 1.0

Maryland Due 4.56 Has 4.10 Under 0.46
 Educational Units 0.0 Com. Units 4.1
 * WBAL Baltimore c 10kw 1060kc ST 2.5
 ** WCAO Baltimore c 250w 600kc FT 0.4
 WCBM Balti. c 100w 250w 1370kc FT 0.3
 WFBR Baltimore c 500w 1270kc FT 0.6
 WTBO Cumb'd c 100w 250w 1420kc FT 0.3

Mass. Due 11.85 Has 10.08 Under 1.77
 Educational Units 0.0 Com., Units 10.08
 * WBZA-WBZ Boston c 15kw 990kc FT 5.0
 * WEEI Boston c 1kw 590kc FT 1.0
 WHDH Boston c 1kw 830kc DT 0.58
 WLOE Boston c 100w 250w 1500kc PT 0.15
 ** WNAC-WBS Boston c 1kw 1230kc FT 1.0
 WSSH Boston R 500w 1410kc ST 0.04
 WSHR Fall River c 250w 1450kc FT 0.4
 WLEX Lexington c 500w 1410kc ST 0.3
 WLEY Lex'n c 100w 250w 1370kc FT 0.15
 WBSO Needham c 500w 920kc DT 0.3
 WNBH New Bedford c 100w 1310kc FT 0.2
 WMAP S. Dartmouth c 500w 1410kc ST 0.26
 ** WORC-WEPS Worcester c 100w 1200kc FT 0.2
 * WTAG Worcester c 250w 580kc FT 0.4

N. H. Due 1.31 Has 0.20 Under 1.11
 Educational Unit 0.0 Com. Unit 0.2
 WKAV Laconia c 100w 1310kc FT 0.2

N. J. Due 11.21 Has 11.53 Over 0.32
 Educational Units 0.0 Com. Units 11.53
 WCAP Asbury Park c 500w 1280kc ST 0.2
 ** WPG Atlantic City c 5kw 1100kc ST 4.15
 WCAM Camden c 500w 1280kc ST 0.2
 WBMS Hackensack c 250w 1450kc ST 0.1
 WAAT Jersey City c 300w 940kc DT 0.2
 WHOM Jersey City c 250w 1450kc ST 0.1
 WKBO Jersey City c 250w 1450kc ST 0.1
 WAAM Newark c 1kw 2½kw 1250kc ST 0.54
 WGPC Newark c 250w 1250kc ST 0.06
 WNJ Newark c 250w 1450kc ST 0.1
 WOR Newark c 5kw 710kc FT 5.0
 WODA Paterson c 1kw 1250kc ST 0.43
 WJBI Red Bank c 100w 1210kc ST 0.05
 WOAX Trenton c 500w 1280kc ST 0.2
 WAWZ Zarephath R 250w 1350kc ST 0.1

New York Due 35.10 Has 39.20 Over 4.10
 Educational Units 1.18 Com. Units 38.02
 WMBO Auburn c 100w 1310kc FT 0.2
 WBNF Binghamton c 100w 1500kc FT 0.2
 WBRG Brooklyn c 500w 1400kc ST 0.15
 WBBR Brooklyn c 1kw 1300kc ST 0.29
 WCGU Brooklyn c 500w 1400kc ST 0.15
 WMIL Brooklyn c 100w 1500kc ST 0.05
 WFOX Brooklyn c 500w 1400kc ST 0.15
 WLTH Brooklyn c 500w 1400kc ST 0.15
 WMRQ Brooklyn c 100fi 1500kc ST 0.05
 * WBEN Buffalo c 1kw 900kc FT 1.0
 WEBR Buffalo c 100w 200w 1310 FT 0.3
 ** WGR Buffalo c 1kw 550kc FT 1.0
 ** WKBW Buffalo c 5kw 1480kc FT 2.0
 WMAK Buffalo c 1kw 1040kc LT 0.54
 WSVS Buffalo E 50w 1370kc FT 0.2
 WCAD Canton E 500w 1220kc DT 0.3
 WGBB Freeport c 100w 1210kc ST 0.05
 WBGF Glens Falls c 50w 1370kc FT 0.2
 WEAI Ithaca E 1kw 1270kc DT 0.5
 WLGI Ithaca R 50w 1210kc FT 0.2
 WMRJ Jamaica c 100w 1210kc ST 0.05
 WOCL Jamestown c 25w 1210kc FT 0.2
 WLTX L. I. City c 100w 1500kc ST 0.05
 ** WBAC-WBQ New York c 5kw 860kc FT 5.0
 WBNX New York c 250w 1350kc ST 0.1
 WCDA New York E 250w 1350kc ST 0.1
 * WEAF New York c 50kw 660kc FT 5.0
 WEVD New York c 500w 1300kc ST 0.17
 WGSB New York c 500w 1180kc LT 0.35
 WHAP New York R 1kw 1300kc ST 0.29
 WHN New York c 250w 1010kc ST 0.12
 * WJZ New York c 30kw 760kc FT 5.0
 WLWL New York R 5kw 1100kc ST 0.85
 WMCA New York c 500w 570kc ST 0.3
 WMSG New York c 250w 1350kc ST 0.1
 WNYC New York G 500w 570kc ST 0.3
 WOV New York c 1kw 1130kc DT 0.5
 WPCB New York c 500w 810kc DT 0.32
 WQAO-WEAP N. Y. R 250w 1010kc ST 0.12
 WRNY New York c 250w 1010kc ST 0.17
 WFOE Patchogue c 100w 1370kc FT 0.2
 ** WOKO Poughkeepsie c 500w 1440kc ST 0.45
 * WHAM Rochester c 5kw 1150kc FT 5.0
 ** WHEC-WABO Roch'r c 500w 1440kc ST 0.45
 WNBZ Saranac Lake c 50w 1290kc DT 0.1
 * WGY Schenectady c 50kw 790kc FT 4.0
 ** WFBL Syracuse c 1kw 2½kw 1360kc FT 1.25
 WSYR-WMAC Syracuse c 250w 570kc FT 0.4

WHAZ Troy E 500w 1300kc ST 0.08
WHDL Tupper Lake C 10w 1420kc DT 0.1
WIBX Utica C 100w 300w 1200kc FT 0.3
WWRL Woodside C 100w 1500kc ST 0.05
WCOH Yonkers C 100w 1210kc ST 0.05

Porto Rico Due 4.32 Has 0.60 Under 3.72
Educational Units 0.0 Commercial 0.60
WKAQ San Juan C 500w 890kc FT 0.60

Rhode I. Due 1.91 Has 1.40 Under 6.51
Educational Units 0.0 Commercial 1.40
WMBA Newport C 100w 1500kc FT 0.2
WPAW Pawtucket C 100w 1210kc ST 0.1
WDWF-WLSI Provid'ce C 100w 1210kc ST 0.1
** WEAN Provid'ce C 250w 500w 780kc FT 0.5
* WJAR Provid'ce C 250w 400w 890kc FT 0.5

Vermont Due 1.00 Has 0.50 Under 0.50
Educational Units 0.1 Com. Units 0.40
WCAX Burlington E 100w 1200kc ST 0.1
WSYB Rutland C 100w 1500kc FT 0.2
WNRX Springfield R 10w 1200kc ST 0.1
WQDM St. Albans C 5w 1370kc DT 0.1

Virgin I. Due 0.06 Has 0.0 Under 0.06
Educational Units 0.0 Com. Units 0.0

ZONE II Due 80.00 Has 71.46 Under 8.54

Kentucky Due 7.54 Has 7.62 Over 0.08
Educational Units 0.0 Com. Units 7.62
* WCKY Covington C 5kw 1490kc ST 1.12
WFIW Hopkinsville C 1kw 940kc FT 1.0
* WHAS Louisville C 10kw 820kc FT 5.0
WLAP Louisville C 100w 250w 1200kc FT 0.3
WPAU Paducah C 100w 1420kc FT 0.2

Michigan Due 13.88 Has 11.30 Under 2.58
Educational Units 0.5 Com. Units 10.8
WELL Battle Creek C 50w 1420kc FT 0.2
** WBCM Bay City C 500w 1410kc FT 0.6
WKZO Berrien Springs C 1kw 590kc DT 0.5
WHDF Calumet C 100w 250w 1370kc FT 0.3
** WXYZ Detroit C 1kw 1240kc FT 1.0
* WJR Detroit C 5kw 750kc FT 5.0
WMBC Detroit C 100w 250w 1420kc FT 0.3
* WWJ Detroit C 1kw 920kc FT 1.0
WKAR East Lansing E 1kw 1040kc FT 0.5
WDFP Flint C 100w 1310kc FT 0.2
WASH Grand Rapids C 500w 1270kc ST 0.3
WOOD Grand Rapids C 500w 1270kc ST 0.3
WJBK Highland Park C 50w 1370kc ST 0.15
WIBM Jackson C 100w 1370kc ST 0.15
WMPC Lapeer R 100w 1500kc FT 0.2
WKBZ Ludington C 50w 1500kc FT 0.2
WBEO Marquette C 100w 1310kc FT 0.2
WEXL Royal Oak C 50w 1310kc FT 0.2

Ohio Due 19.05 Has 18.45 Under 0.60
Educational Units 0.5 Com. Units 17.95
WHBC Canton R 10w 1200kc ST 0.02
WFBE Cincinnati C 100w 250w 1200kc FT 0.3
** WKRC Cincinnati C 1kw 550kc FT 1.0
* WLW Cincinnati C 50kw 700kc FT 5.0
* WSAI Cincinnati C 500w 1330kc FT 0.6
* WGAR Cleveland C 500w 1450kc FT 0.6
WJAY Cleveland C 500w 610kc DT 0.3
** WHK Cleveland C 1kw 1390kc FT 1.0
* WTAM Cleveland C 50kw 1070kc FT 5.0
* WAIU Columbus C 500w 640kc LT 0.38
** WCAH Columbus C 500w 1430kc ST 0.45
WEAO Columbus E 750w 570kc ST 0.5
WSEN Columbus C 100w 1210kc FT 0.2
WSMK Dayton C 200w 1380kc ST 0.3
WJW Mansfield C 100w 1210kc FT 0.2

WHBD Mount Orab C 100w 1370kc FT 0.2
WIBR Steubenville C 50w 1420kc FT 0.1
** WADC Tallmadge C 1kw 1320kc FT 1.0
** WSPD Toledo C 500w 1kw 1340kc FT 0.8
** WKBN Youngstown C 500w 570kc ST 0.3
WALR Zanesville C 100w 1210kc FT 0.2

Penna. Due 27.64 Has 19.74 Under 7.90
Educational Units 0.6 Com. Units 19.14
WCBA Allentown C 250w 1440kc ST 0.2
WSAN Allentown C 250w 1440kc ST 0.2
WFBG Altoona C 100w 1310kc ST 0.15
WNEB Carbondale C 10w 1200kc FT 0.2
WIRG Elkins Park R 50w 930kc DT 0.1
WEDH Erie C 100w 1420kc FT 0.2
WSAJ Grove City E 100w 1310kc FT 0.2
WBAK Harrisb'g F 500w 1kw 1430kc ST 0.32
WCOD Harrisburg C 100w 1200kc ST 0.1
** WHP Harrisburg C 500w 1kw 1430kc ST 0.33
WJAC Johnstown C 100w 1310kc ST 0.1
WGAL Lancaster C 100w 1310kc ST 0.1
WKJC Lancaster C 100w 1200kc ST 0.1
WJBU Lewisburg E 100w 1210kc ST 0.1
* WLBW Oil City C 500w 1kw 1260kc FT 0.8
* WCAU Philadelphia C 10kw 1170kc FT 5.0
WELK Phila. C 100w 250w 1370kc FT 0.3
* WFAN Philadelphia C 500w 610kc ST 0.3
* WFI Philadelphia C 500w 560kc ST 0.3
WHAT Philadelphia C 100w 1310kc ST 0.07
* WIP Philadelphia C 500w 610kc ST 0.3
* WLIT Philadelphia C 500w 560kc ST 0.3
WPEN Phila. C 100w 250w 1500kc FT 0.3
WRAX Philadelphia C 250w 1020kc DT 0.22
WTEL Philadelphia C 100w 1310kc ST 0.07
KDKA Pittsburgh C 50kw 980kc FT 5.0
KQV Pittsburgh C 500w 1380kc ST 0.45
* WCAE Pittsburgh C 1kw 1220kc FT 1.0
** WJAS Pittsb'gh C 1kw 2½kw 1290kc FT 1.25
WWSW Pittsburgh C 100w 1500kc FT 0.2
WRAW Reading C 50w 1310kc ST 0.1
WGBI Scranton C 250w 880kc ST 0.2
WQAN Scranton C 250w 880kc ST 0.2
WNBO Silver Haven C 100w 1200kc ST 0.18
WPSC State College E 500w 1230kc DT 0.3
WBAX Wilkes-Barre C 100w 1210kc ST 0.1
WBRE Wilkes-Barre C 100w 1310kc FT 0.2
WRAK Williamsport C 50w 1370kc FT 0.2

Virginia Due 6.94 Has 9.50 Over 2.56
Educational Units 0.3 Com. Units 9.20
WJSV Alexandria C 10kw 1460kc FT 2.0
WBTM Danville C 100w 1370kc ST 0.1
WEHC Emory E 100w 250w 1200 FT 0.3
WLVA Lynchburg C 100w 1370kc ST 0.1
WGH Newport News C 100w 1310kc FT 0.2
** WTAR-WPOR Norfolk C 500w 780kc FT 0.6
WLBG Petersburg C 100w 250w 1200kc FT 0.3
WBBL Richmond R 100w 1210kc LT 0.02
WMBG Richmond C 100w 1210kc FT 0.18
* WRYA Richmond C 5kw 1110kc FT 5.0
** WDBJ Roanoke C 250w 500w 930kc FT 0.5
WBRX Roanoke C 250w 1410kc FT 0.2

W. Virginia Due 4.95 Has 4.85 Under 0.10
Educational Units 0.0 Com. Units 4.85
WHIS Bluefield C 100w 1420kc FT 0.2
WOBU Charleston C 250w 580kc ST 0.2
WMMN Fairmont C 250w 500w 890kc FT 0.5
WSAZ Huntington C 250w 580kc ST 0.2
WVVA Wheeling C 5kw 1160kc ST 3.75

ZONE III DUE 80.00 HAS 92.09 OVER 12.09

Alabama Due 7.39 Has 6.05 Under 1.34
Educational Units 3.75 Com. Units 2.30
* WAPI Birmingham E 5kw 1140kc ST 3.75
** WRRC Birmingham C 500w 1kw 930kc FT 0.8
WKBC Birmingham C 100w 1310kc FT 0.2

WJBY Gadsden C 50w 1210kc FT 0.2
WOBX Mobile C 500w 1410kc ST 0.45
WSFA Montgomery C 500w 1410kc ST 0.45
WFDW Talladega C 100w 1420kc FT 0.2

Arkansas Due 5.17 Has 4.40 Under 0.77
Educational Units 0.5 Com. Units 3.90
KLCN Blytheville C 50w 1290kc DT 0.1
KUOA Fayetteville E 1kw 1390kc ST 0.5
KFFW Fort Smith C 50w 1340kc DT 0.1
* KTHS Hot Spgs Nt Pk C 10kw 1040kc ST 2.5
** KLRA Little Rock C 1kw 1390kc ST 0.5
KGGH Little Rock R 100w 1200kc FT 0.2
KGFJ Little Rock R 250w 890kc FT 0.4
KBTM Paragould C 100w 1200kc DT 0.1

Florida Due 4.09 Has 8.35 Over 4.26
Educational Units 1.9 Com. Units 6.45
* WFLA-WISUN Clearw'tr C 1kw 2½kw 620kc
FT 1.25
WRUF Gainesville E 5kw 830kc LT 1.9
* WJAX Jacksonville C 1kw 900kc FT 1.0
** WQAM Miami C 1kw 560kc FT 1.0
* WIOD-WMBF Miami C 1kw 1300kc FT 1.0
** WDBO Orlando C 500w 1kw 1120kc FT 0.4
WCOA Pensacola C 500w 1340kc FT 0.6
** WDAE Tampa C 1kw 1220kc FT 1.0
WMBR Tampa C 100w 1370kc FT 0.2

Georgia Due 8.09 Has 7.60 Under 0.49
Educational Units 0.85 Com. Units 6.75
** WCST Atlanta E 250w 500w 890kc ST 0.25
* WSB Atlanta C 5kw 740kc FT 5.0
WRDW Augusta C 100w 1500kc FT 0.2
WRBL Columbus C 50w 1200kc FT 0.2
WMAZ Macon C 250w 500w 890kc ST 0.25
WFDV Rome C 100w 1370kc FT 0.2
** WTOC Savannah C 500w 1260kc FT 0.6
WQDX Thomasville C 50w 1210kc FT 0.2
WRBI Tifton C 20w 1310kc FT 0.1
WTFI Tocoa E 500w 1450kc FT 0.6

Louisiana Due 5.83 Has 8.50 Over 2.67
Educational Units 2.5 Com. Units 6.0
KMLB Monroe C 50w 1200kc DT 0.1
WABZ New Orleans R 100w 1200kc ST 0.1
** WDSU New Orleans C 1kw 1250kc FT 1.0
WJBO New Orleans C 100w 1420kc FT 0.2
WJBW New Orleans C 100w 1200kc ST 0.1
* WSMR New Orleans C 500w 1320kc FT 0.6
WVL New Orleans E 5kw 850kc ST 2.5
KRMD Shreveport C 50w 1310kc ST 0.1
KTBS Shreveport C 1kw 1450kc FT 1.0
KTSL Shreveport C 100w 1310kc ST 0.1
KWEA Shreveport C 100w 1210kc FT 0.2
KWKH Shreveport C 10kw 850kc ST 2.5

Mississippi Due 5.60 Has 2.90 Under 2.70
Educational Units 0.0 Com. Units 2.90
WBRQ Greenville C 100w 250w 1210kc FT 0.3
WGMN Gulfport C 100w 1210kc FT 0.2
WRBJ Hattiesburg C 10w 1370kc FT 0.2
* WJDX Jackson C 1kw 1270kc FT 1.0
WCOC Meridian C 500w 1kw 880kc FT 0.8
WDIX Tupelo C 100w 1500kc FT 0.2
WQBC Vicksburg C 300w 1360kc DT 0.2

N. Carolina Due 8.83 Has 7.82 Under 1.01
Educational Units 0.0 Com. Units 7.82
** WWNC Asheville C 1kw 570kc FT 1.0
** WBT Charlotte C 5kw 1080kc FT 5.0
WSOC Gastonia C 100w 1210kc FT 0.2
WBIG Greensboro C 500w 1440kc FT 0.6
* WPTF Raleigh C 1kw 680kc LT 0.62
WBBT Wilmington C 100w 1370kc FT 0.2
WSJS Winston-Salem C 100w 1310kc FT 0.2

Oklahoma Due 6.67 Has 9.0 Over 2.33
Educational Units 0.8 Com. Units 8.2
KGGF Alva C 100w 1430kc FT 0.2
KOCW Chickasha E 250w 500w 1400kc FT 0.5

KGMT Elk City C 100w 1210kc FT 0.2
KCRC Enid C 100w 250w 1370kc ST 0.15
WNAD Norman E 500w 1010kc ST 0.3
** KFJF Oklahoma City C 5kw 1480kc FT 2.0
KFNR Okla. City R 100w 250w 1310kc FT 0.3
KGFG Oklahoma City C 100w 1370kc ST 0.1
* WKY Oklahoma City C 1kw 900kc FT 1.0
WBBZ Ponca City C 100w 1200kc FT 0.2
KGGF So. Coffeyville C 500w 1010kc ST 0.3
* KVOO Tulsa C 5kw 1140kc ST 3.75

S. Carolina Due 4.82 Has 1.7 Under 3.12
Educational Units 0.0 Com. Units 1.7
WCSC Charleston C 500w 1360kc FT 0.6
WIS Columbia C 500w 1kw 1010kc FT 0.8
WSPA Spartanbg C 100w 250w 1420kc FT 0.3

Tennessee Due 7.29 Has 13.0 Over 5.71
Educational Units 0.0 Com. Units 13.0
WOPI Bristol C 100w 1500kc FT 0.2
** WDDO Ch'n'ga C 1kw 2½kw 1820kc FT 1.25
WFBC Knoxville R 50w 1200kc FT 0.2
WNOX Knoxville C 1kw 2kw 560kc FT 1.25
WROL Knoxville C 100w 1310kc FT 0.2
WGRC Memphis C 500w 1430kc ST 0.3
WHBO Memphis C 100w 1370kc FT 0.2
* WMC Memphis C 500w 1kw 780kc FT 0.8
WNRB Memphis C 500w 1430kc ST 0.3
** WREC-WOAN Memphis C 500w 1kw 600kc FT 0.8
** WLAC Nashville C 5kw 1470kc FT 2.0
* WSM Nashville C 5kw 650kc FT 5.0
WSIX Springfield C 100w 1210kc FT 0.2
WORT Union City C 100w 250w 1310kc FT 0.3

Texas Due 16.22 Has 22.77 Over 6.55
Educational Units 0.3 Com. Units 22.47
KFYO Abilene C 100w 250w 1420kc FT 0.3
KGRS Amarillo C 1kw 1410kc ST 0.5
WDAG Amarillo C 1kw 1410kc ST 0.5
KUT Austin C 100w 1500kc FT 0.2
KFDM Beaumont C 500w 1kw 560kc FT 0.8
KWWG Brownsville C 500w 1260kc ST 0.3
KGBK Brownwood C 100w 1500kc FT 0.2
WTAW College Station E 500w 1120kc ST 0.3
KGFJ Cor. Christi C 100w 250w 1500kc FT 0.3
** KRLD Dallas C 10kw 1040kc ST 2.5
* WFAA Dallas C 50kw 800kc ST 2.5
** WRR Dallas C 500w 1280kc FT 0.6
KFPL Dublin C 100w 1310kc FT 0.2
KTSM El Paso C 100w 1310kc ST 0.1
WDAH El Paso C 100w 1310kc ST 0.1
KFJZ Fort Worth C 100w 1370kc FT 0.2
KTAZ Fort Worth C 1kw 1240kc ST 0.5
* WBAP Fort Worth C 50kw 800kc ST 2.5
KFLX Galveston C 100w 1370kc FT 0.2
KFUL Galveston C 500w 1290kc ST 0.3
KFPM Greenville C 15w 1310kc FT 0.2
KRGV Harlingen C 500w 1260kc ST 0.3
* KPRC Houston C 1kw 2½kw 920kc FT 1.25
KTLC Houston C 100w 1310kc FT 0.2
** KTRH Houston C 500w 1120kc ST 0.3
KXYZ Houston C 100w 1420kc FT 0.2
KGLZ San Angelo C 100w 1370kc FT 0.2
KMAC San Antonio C 100w 1370kc ST 0.1
KONO San Antonio C 100w 1370kc ST 0.1
KTAP San Antonio C 100w 1420kc FT 0.2
** K TSA San Antonio C 1kw 2kw 1290kc ST 0.62
* WOAI San Antonio C 50kw 1190kc FT 5.0
** WACO Waco C 1kw 1240kc ST 0.5
KGKO Wich. Falls C 250w 500w 570kc FT 0.5

ZONE IV Due 80.00 Has 101.61 Over 21.61

Illinois Due 22.50 Has 33.65 Over 11.11/15
Educational Units 0.12 Com. Units 33.53
WCAZ Carthage C 50w 1070kc DT 0.1
* KYW-KFKX Chicago C 10kw 1020kc FT 5.0
WAAF Chicago C 500w 920kc DT 0.3
** WBBM-WJRT Chicago C 25kw 770kc ST 3.92

WCFL Chicago F 1½kw 970kc LT 0.66
WCRW Chicago C 100w 1210kc ST 0.07
WEDC Chicago C 100w 1210kc ST 0.07
* WENR-WBCN Chicago C 50kw 870kc ST 2.5
WGES Chicago C 500w 1kw 1360kc ST 0.26
* WGN-WLIB Chicago C 25kw 720kc FT 5.0
* WIBO Chicago C 1kw 1½kw 560kc ST 0.43
* WKBI Chicago C 100w 1420kc ST 0.36
* WLS Chicago C 5kw 870kc ST 2.5
** WMAQ Chicago C 5kw 670kc FT 5.0
WMBI Chicago R 5kw 1080kc LT 0.85
WCHI Chicago C 5kw 1490kc ST 0.28
WPCC Chicago R 500w 560kc ST 0.26
WSRC Chicago C 100w 1210kc ST 0.06
WHFC Cicero C 100w 1420kc ST 0.07
WJBL Decatur C 100w 1200kc ST 0.1
WEIS Evanston C 100w 1420kc ST 0.07
WKBS Galesburg C 100w 1310kc FT 0.2
WEBQ Harrisburg C 100w 1210kc ST 0.1
WCLS Joliet C 100w 1310kc ST 0.1
WKBB Joliet C 100w 1310kc ST 0.1
WJBC LaSalle C 100w 1200kc ST 0.1
** WJJD Mooseheart F 20kw 1130kc LT 2.7
WJAZ Mount Prospect C 5kw 1490kc ST 0.3
WMBD Peoria Hts. C 500w 1kw 1440kc ST 0.4
WTAD Quincy C 500w 1440kc ST 0.3
WHBF Rock Island C 100w 1210kc FT 0.2
KFLV Rockford C 500w 1410kc ST 0.3
WCBS Springfield C 100w 1210kc ST 0.1
WTAX Springfield C 100w 1210kc ST 0.1
WDZ Tuscola C 100w 1070kc DT 0.1
WILL Urbana E 250w 500w 890kc ST 0.12
WCRD Zion C 5kw 1080kc LT 0.85

Indiana Due 9.53 Has 7.58 Under 1.95
Educational Units 0.12 Com. Units 7.46
WHRU Anderson C 100w 1210kc FT 0.2
WKBV Con'rsv'le C 100w 150w 1500kc FT 0.3
WCMA Culver C 500w 1400kc ST 0.17
WGBF Evansville C 500w 630kc ST 0.45
** WGL Fort Wayne C 100w 1370kc FT 0.2
** WOWO Fort Wayne C 10kw 1160kc ST 3.75
WJKS Gary C 1kw 1¼kw 1360kc ST 0.57
WVAE Hammond C 100w 1200kc ST 0.1
** WFBM Indianapolis C 1kw 1230kc ST 0.7
WKBF Indianapolis C 500w 1400kc ST 0.34
WRAF Ia Porte C 100w 1200kc ST 0.1
WJAK Marion C 50w 1310kc ST 0.1
WLBC Muncie C 50w 1310kc ST 0.1
WSBT South Bend C 500w 1230kc ST 0.18
WBOW Terre Haute C 100w 1310kc FT 0.2
WBAA W. Laf'ette E 500w 1kw 1400kc ST 0.12

Iowa Due 7.30 Has 13.00 Over 5.70
Educational Units 1.80 Com. Units 11.20
WOI Ames E 5kw 640kc DT 1.5
KFGQ Boone R 100w 1310kc ST 0.02
KWCR Cedar Rapids C 100w 1310kc ST 0.09
KSO Clarinda C 500w 1380kc ST 0.3
** KOIL Council Bluffs C 1kw 1260kc FT 1.0
* WOC Davenport C 5kw 1000kc 2.5
KGCA Decorah C 50w 1270kc DT 0.05
KWLC Decorah E 100w 1270kc DT 0.05
** WHO Des Moines C 5kw 1000kc 2.5
KFJY Fort Dodge C 100w 1310kc ST 0.09
WSUI Iowa City E 500w 880kc FT 0.25
KFJB Mar. T. C 100w 250w 1200kc FT 0.15
KTNT Muscatine C 5kw 1170 LT 1.7
WIAS Ottumwa C 100w 1420 FT 0.2
KICK Red Oak C 100w 1420 FT 0.2
KFNF Shenandoah C 500w 1kw 890kc ST 0.4
KMA Shenandoah C 500w 1kw 930kc ST 0.4
** KSCJ Sioux City C 1kw 2½kw 1330kc ST 1.0
** WMT Waterloo C 500w 600kc FT 0.6

Kansas Due 5.56 Has 4.91 Under 0.65
Educational Units 0.9 Com. Units 4.01
KGNQ Dodge City C 100w 1210kc FT 0.2
WLBK Kansas City C 100w 1420kc FT 0.2

KFKU Lawrence E 500w 1220kc ST 0.5
WREN Lawrence C 1kw 1220kc ST 0.5
KSAC Manhattan E 500w 1kw 580kc ST 0.4
KFKB Milford C 5kw 1050kc LT 1.9
** WIBW Topeka C 1kw 480kc ST 0.5
** KFH Wichita C 1kw 1300kc ST 0.71

Minnesota Due 7.59 Has 9.01 Over 1.42
Educational Units 0.85 Com. Units 8.16
KGDE Fergus F'ls C 100w 250w 1200kc FT 0.3
** WCCO Minneapolis C 7½kw 810kc FT 5.0
WDGY Minneapolis C 1kw 1180kc LT 0.41
WHDI Minneapolis E 500w 1250kc ST 0.10
WLB-WGMS Minneapolis E 1kw 1250kc ST 0.25
WRHM Minneapolis C 1kw 1250kc ST 0.25
KGFK Moorhead C 50w 1500kc FT 0.2
KPMX Northfield E 1kw 1250kc ST 0.25
WCAL Northfield E 1kw 1250kc ST 0.25
* KSTP St. Paul C 10kw 1460kc FT 2.0

Missouri Due 10.72 Has 12.15 Over 1.43
Educational Units 0.65 Com. Units 11.50
KFVS Cape Girardeau C 100w 1210kc ST 0.1
KPUO Clayton R 500w 1kw 550kc ST 0.4
KFRU Columbia E 500w 630kc ST 0.23
KGIZ Grant City C 50w 1500kc FT 0.2
WOS Jefferson City C 500w 630kc ST 0.22
WMBH Joplin C 100w 250w 1420kc FT 0.3
** KMBC Kansas City C 1kw 950kc FT 1.0
KWKC Kansas City C 100w 1370kc FT 0.1
* WDAF Kansas City C 1kw 610kc FT 1.0
WHB Kansas City C 500w 860kc DT 0.3
WOQ Kansas City R 1kw 1300kc ST 0.29
KFEQ St. Joseph C 2½kw 680kc DT 0.75
KGBX St. Joseph C 100w 1310kc FT 0.2
KFWF St. Louis R 100w 1200kc ST 0.06
** KMOX St. Louis C 50kw 1090kc FT 5.0
* KSD St. Louis C 500w 550kc ST 0.3
* KWK St. Louis C 1kw 1350kc FT 1.0
WEW St. Louis E 1kw 760kc DT 0.5
WIL St. Louis C 100w 250w 1200kc ST 0.1

Nebraska Due 4.08 Has 7.23 Over 3.15
Educational Units 0.06 Com. Units 7.17
KMMJ Clay Center C 1kw 740kc LT 0.5
KFOR Lincoln C 100w 250w 1210kc FT 0.3
* KFAB Lincoln C 5kw 770kc ST 3.58
WCAJ Lincoln E 500w 590kc ST 0.06
WJAG Norfolk C 1kw 1060kc LT 0.54
KGNF North Platte C 500w 1430kc DT 0.3
WAAW Omaha C 500w 660kc DT 0.3
* WOW Omaha C 1kw 590kc ST 0.85
KGFV Ravenna C 100w 1310kc FT 0.2
KGYK Scottsbluff C 100w 1500kc FT 0.2
KGBZ York C 500w 1kw 930kc ST 0.4

N. Dakota Due 2.02 Has 2.42 Over 0.40
Educational Units 0.2 Com. Units 2.22
* KFVY Bismarck C 1kw 2½kw 550kc ST 0.62
KDLR Devil's Lake C 100w 1210kc FT 0.2
* WDAY Fargo C 1kw 940kc FT 1.0
KFJM Grand Forks E 100w 1370kc FT 0.2
KGGU Mandan C 100w 1200kc FT 0.2
KLPM Minot C 100w 1420kc FT 0.2

S. Dakota Due 2.04 Has 3.41 Over 1.37
Educational Units 0.8 Com. Units 2.61
KFDY Brookings E 500w 1kw 550kc ST 0.4
KGDY Huron C 100w 1200kc FT 0.2
KGDA Mitchell C 100w 1370kc FT 0.2
KGFV Pierre C 200w 580kc DT 0.2
WCAT Rapid City E 100w 1200kc FT 0.2
KSOO Sioux Falls C 2kw 1110kc LT 0.81
KUSD Vermillion E 500w 750w 890kc ST 0.2
KCCR Watertown C 100w 1210kc FT 0.2
** WNAX Yankton C 1kw 570kc FT 1.0

Wisconsin Due 8.66 Has 8.25 Under 0.41
Educational Units 0.76 Com. Units 7.49
** WTAQ Eau Claire C 1kw 1330kc ST 0.75

KFIZ Fond du Lac c 100w 1420kc FT 0.2
 WHBY Green Bay E 100w 1200kc FT 0.2
 WCLO Janesville c 100w 1200kc FT 0.2
 WKBH La Crosse c 1kw 1380kc ST 0.75
 WHA Madison E 750w 940kc DT 0.5
 WIBA Madison C 500w 1280kc FT 0.6
 WOMT Manitowoc c 100w 1210kc FT 0.2
 WHAD Milwaukee E 250w 1120kc ST 0.06
 ** WISN Milwaukee c 250w 1120kc ST 0.34
 * WTMJ Milw'kee c 1kw 2½kw 620kc FT 1.25
 WIBU Poynette c 100w 1210kc FT 0.2
 WRJN Racine c 100w 1370kc FT 0.2
 WHBL Sheboygan c 500w 1410kc ST 0.3
 WISJ S. Madison c 250w 500w 780kc FT 0.5
 WLBL Steven's Point G 2kw 900kc DT 0.75
 * WEBC Superior c 1kw 2½kw 1290kc FT 1.25

ZONE V Due 80.00 Has 93.05 Over 13.05

Alaska Due 0.38 Has 1.0 Over 0.62
Educational Units 0.0 Com. Units 1.0
 KFQD Anchorage c 100w 1230kc FT 0.2
 KFIU Juneau c 10w 1310kc FT 0.2
 KGBU Ketchikan c 500w 900kc FT 0.6

Arizona Due 2.83 Has 2.6 Under 0.23
Educational Units 0.0 Com. Units 2.6
 KFXV Flagstaff c 100w 1420kc FT 0.2
 KCRJ Jerome c 100w 1310kc FT 0.2
 * KJAR Phœnix c 500w 1kw 620kc FT 0.8
 KOY Phœnix c 500w 1390kc FT 0.6
 KPJM Prescott c 100w 1500kc FT 0.2
 KVBA Tucson c 500w 1260kc DT 0.3
 KGAR Tucson c 100w 250w 1370kc FT 0.3

California Due 36.85 Has 38.53 Over 1.68
Educational Units 0.0 Com. Units 38.53

KRE Berkeley R 100w 1370kc ST 0.1
 KMPC Beverly Hills c 500w 710kc LT 0.38
 KELW Burbank c 500w 780kc ST 0.2
 KFVD Culver City c 250w 1000kc LT 0.23
 KXO El Centro c 100w 1500kc FT 0.2
 KMJ Fresno c 100w 1210kc FT 0.2
 KZM Hayward c 100w 1370kc ST 0.1
 KFWB Hollywood c 1kw 950kc FT 1.0
 KNX Hollywood c 5kw 1050kc FT 5.0
 KFQU Holy City c 100w 1420kc ST 0.1
 KMCS Inglewood c 500w 1120kc ST 0.4
 KGER Long Beach c 1kw 1360kc ST 0.75
 KFOX Long Beach c 1kw 1250kc FT 1.0
 * KFI Los Angeles c 5kw 640kc FT 5.0
 KFSG Los Angeles R 500w 1120kc ST 0.2
 KGEF Los Angeles R 1kw 1300kc ST 0.5
 KGPJ Los Angeles c 100w 1200kc FT 0.2
 ** KHJ Los Angeles c 1kw 900kc FT 1.0
 KTLB Los Angeles R 1kw 1300kc ST 0.5
 * KECA Los Angeles c 1kw 1430kc FT 1.0
 KTM Los Angeles c 500w 1kw 780kc ST 0.52
 KMTR Los Angeles c 500w 570kc FT 0.6
 KLS Oakland c 500w 880kc FT 0.6
 KXK Oakland c 250w 1440kc DT 0.2
 KROW Oakland c 500w 1kw 930kc ST 0.4

KPFC Pasadena R 50w 1210kc ST 0.1
 KPSN Pasadena c 1kw 1360kc ST 0.25
 KFBK Sacramento c 100w 1310kc FT 0.2
 KFXM San Bernardino c 100w 1210kc ST 0.1
 * KFSD San Diego c 500w 1kw 600kc FT 0.8
 KGB San Diego c 250w 1330kc FT 0.6
 * KGO San Francisco c 7½kw 790kc FT 4.0
 ** KFRG San Francisco c 1kw 610kc FT 1.0
 KGGC San Francisco c 100w 1420kc ST 0.1
 KFWI San Francisco c 500w 930kc ST 0.3
 KJBS San Francisco c 100w 1070kc FT 0.1
 * KFO San Francisco c 5kw 680kc FT 5.0
 KTAB San Francisco c 1kw 560kc FT 1.0
 KYA San Francisco c 1kw 1230kc FT 1.0
 KQW San Jose c 500w 1010kc FT 0.6
 KREG Santa Ana c 100w 1500kc FT 0.2
 KOB Santa Barbara c 100w 1500kc FT 0.2
 KSMR Santa Maria c 100w 1200kc FT 0.2
 KGDM Stockton c 250w 1100kc DT 0.2
 KWG Stockton c 100w 1200kc FT 0.2

Colorado Due 6.74 Has 9.42 Over 2.68

Educational Units 0.0 Com. Units 9.42
 KFUM Colorado Springs c 1kw 1270kc FT 1.0
 KPOF Denver R 500w 880kc ST 0.2
 KFUP Denver C 100w 1310kc ST 0.1
 KFEL Denver c 500w 920kc ST 0.3
 KFXF Denver c 500w 920kc ST 0.3
 * KOA Denver c 12½kw 830kc FT 5.0
 ** KLZ Denver c 1kw 560kc FT 1.0
 KFXJ Edgewater c 50w 1310kc ST 0.1
 KGEW Fort Morgan c 100w 1200kc ST 0.1
 KPKA Greeley c 500w 1kw 880kc ST 0.52
 KGHF Pueblo c 250w 500w 1320kc FT 0.5
 KGIW Trinidad c 100w 1420kc FT 0.2
 KGEK Yuma c 50w 1200kc ST 0.1

Hawaii Due 2.39 Has 1.6 Under 0.79

Educational Units 0.0 Com. Units 1.6
 KGU Honolulu c 1kw 940kc FT 1.0
 KGMB Honolulu c 500w 1320kc FT 0.6

Idaho Due 2.89 Has 2.60 Under 0.29

Educational Units 0.0 Com. Units 2.60
 KIDO Boise c 1kw 1250kc FT 1.0
 KID Idaho Falls c 250w 500w 1320kc ST 0.4
 KFND Nampa c 50w 1420kc FT 0.2
 KSEI Pocatello c 250w 900kc FT 0.4
 KGKX Sandpoint c 100w 1420kc FT 0.2
 KTFI Twin Falls c 250w 1320kc ST 0.4

Montana Due 3.48 Has 3.00 Under 0.48

Educational Units 0.0 Com. Units 3.00
 KGIL Billings c 1kw 950kc FT 1.0
 KGIR Butte c 500w 1360kc FT 0.3
 KFBB Grt. Falls c 1kw 2½kw 1280kc FT 1.25
 KGEZ Kalispell c 100w 1310kc FT 0.2
 KGVO Missoula c 100w 1420kc FT 0.1
 KGCC Wolf Pt. c 100w 250w 1310kc FT 0.15

N. Mexico Due 2.77 Has 2.37 Under 0.40

Educational Units 1.67 Com. Units 0.70

KGGM Alb'q'rque c 250w 500w 1230kc FT 0.5
 KGFL Raton c 50w 1370kc FT 0.2
 KOB State College E 20kw 1180kc ST 1.67

Nevada Due 0.59 Has 0.80 Over 0.21
Educational Units 0.0 Com. Units 0.8
 KGIX Las Vegas c 100w 1420kc FT 0.2
 KOH Reno c 500w 1380kc FT 0.6

Oregon Due 6.19 Has 8.41 Over 2.22
Educational Units 1.05 Com. Units 7.36

KFJI Astoria c 100w 1370kc FT 0.2
 KOAC Corvallis E 1kw 550kc FT 1.0
 KORE Eugene c 100w 1420kc FT 0.2
 KOOS Marshfield c 100w 1370kc FT 0.2
 KMED Medford c 50w 1310kc FT 0.2
 KBPS Portland E 100w 1420kc ST 0.05
 KEX Portland c 5kw 1180kc ST 3.33
 KPJR Portland c 500w 1300kc ST 0.3
 * KGW Portland c 1kw 620kc FT 1.0
 ** KOIN Portland c 1kw 940kc FT 1.0
 KTBR Portland c 500w 1300kc ST 0.3
 KWJJ Portland c 500w 1060kc FT 0.38
 KXL Portland c 100w 1420kc ST 0.15
Utah Due 3.27 Has 6.6 Over 3.33
Educational Units 0.0 Com. Units 6.6
 KLO Ogden c 500w 1400kc FT 0.6
 ** KDYL Salt Lake City c 1kw 1290kc FT 1.0
 * KSL Salt Lake City c 5kw 1130kc FT 5.0

Washington Due 10.16 Has 15.92 Over 5.76

Educational Units 1.45 Com. Units 14.47
 KXRO Aberdeen c 75w 1310kc FT 0.2
 KVOS Bellingham c 100w 1200kc FT 0.2
 KFBL Everett c 50w 1370kc ST 0.1
 KGY Lacey E 10w 1200kc FT 0.2
 KWSC Pullman E 1kw 2kw 1220kc FT 1.25
 KFQW Seattle c 100w 1420kc FT 0.2
 KJR Seattle c 5kw 970kc FT 5.0
 ** KOL Seattle c 1kw 1270kc ST 0.75
 * KOMO Seattle c 1kw 920kc FT 1.0
 KPCB Seattle c 100w 650kc LT 0.12
 KRSC Seattle c 50w 1120kc DT 0.1
 KTW Seattle R 1kw 1270kc ST 0.25
 KVL Seattle c 100w 1370kc ST 0.1
 KXA Seattle c 500w 570kc FT 0.6
 KFIO Spokane c 100w 1120kc DT 0.1
 ** KFPY Spokane c 1kw 1340kc FT 1.0
 KGA Spokane c 5kw 1470kc FT 2.0
 * KHQ Spokane c 1kw 2kw 590kc FT 1.25
 KMO Tacoma c 500w 860kc LT 0.38
 ** KVI Tacoma c 1kw 760kw LT 0.62
 KUJ Walla Walla c 100w 1370kc FT 0.1
 KPQ Wenatchee c 50w 1500kc FT 0.2
 KIT Yakima c 50w 1310kc FT 0.2

Wyoming Due 1.46 Has 0.20 Under 1.26

Educational Units 0.0 Com. Units 0.20
 KDPN Casper c 100w 1210kc FT 0.20

Stations associated with the N. B. C. networks are indicated by an asterisk [*]; stations associated with the C. B. S. networks are indicated by two asterisks [**].

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the groups with which they are associated are as follows:

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Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save these bulletins for reference or pass them on to your local library. Education by radio is a pioneering movement. These bulletins are, therefore, valuable.

Radio During March

SPIT IS ON THE AIR.—March came in like a lion for radio. The month brought notable developments all along the line. Most significant perhaps were the manifestations of public indignation at a radio advertising program sponsored by the American Tobacco Company which centered its theme around the distasteful word *spit*.

The advertiser's complete contempt of the sensibilities of the American radio listener was described by Martin Codel, nationally known radio authority, writing for the Washington Star, March 29.

"And now—*spit* goes on the air," Codel wrote. "Around that distasteful word, repeated nightly over a nationwide Columbia hookup as part of a radio advertising campaign of the American Tobacco Company, a storm of major proportions is brewing. Both the tobacco company, for the implications carried in its announcements, and the radio network, for allowing its facilities to be used for that type of advertising, will be involved.

"Not only are complaints being prepared by rival cigar manufacturers for filing with the Federal Trade Commission, alleging unfair trade practices, but the Federal Radio Commission, it is learned from reliable sources, will soon be asked to rule whether such advertising conforms with its official hallmark of *public interest, convenience and necessity*.

"It is just that sort of thing," declared Commissioner H. A. LaFount, of the Federal Radio Commission, "that will kill interest in radio broadcasting.

"To me those *spit* announcements are objectionable, and I believe they are objectionable also to the great mass of American listeners . . . Just as surely as fate, the continuance of broadcasting announcements that so obviously offend our ordinary sensibilities is going to lead to a revolt on the part of the listening public. Listeners can, of course, censor their own programs by turning the dial. But I'm afraid many of them will demand that the government take over the radio and operate it, as England does, as a government monopoly. I prefer the present system of private competition, but the broadcasters themselves, by permitting this sort of thing, are adding fuel to the fire of discontent that is already evident in many quarters against the out-

rageous practices of some advertisers.'

"Though the announcement itself contains only twenty words, considerably more verbiage is wasted in explaining

AMERICA has never needed adult education so greatly as now. Much of our unemployment is due to the higher requirements of industry and business and to changes in methods and processes. What a wonderful opportunity to train men and women for something better in work and life! A systematic nationwide program by radio in the hands of disinterested parties in whom the public had confidence could help immeasurably to improve conditions.—
Joy Elmer Morgan.

the announcement and introducing the speaker of those twenty words. Then, as if to carry the hoax still further, the rawest and most distasteful commercial announcement ever heard in network radio goes on the air.

"It was, of course, too attractive a commercial contract for the radio network to turn down, even though the youthful head of the Columbia system, William S. Paley, himself came to radio from the cigar business only a year or two ago. Mr. Paley should know whereof the announcer speaks and whether his implications against other cigar makers are justified. It was Mr. Paley who was quoted in recent interviews as saying that he believed the radio was elevating the public taste.

"The American Tobacco Company is paying Columbia \$1,611,000 for the six fifteen-minute periods it will use during the year in its provocative cigar advertising campaign. It is one of the fattest contracts ever let to radio. . . . Though they may not have the powers of censorship, the commissioners can exert tremendous moral force against the radio people. There are indications that they will do so again in the *spit* campaign."

Commission chairman may resign.—A report which persists in bobbing to the surface of radio news in

Washington sets forth that General Charles McK. Saltzman, chairman of the Federal Radio Commission, plans to resign because of recurring illness. Martin Codel reported the following story in the Washington Star of March twenty-seven.

"Illness may soon force the resignation of Major General Charles McK. Saltzman, as chairman of the Federal Radio Commission and commissioner from the fourth zone of Middle Western States.

"On doctor's orders, General Saltzman has left Washington for an indefinite vacation. Although he declined to disclose his destination, it is understood that he is on a motor trip in the south and spending some time in Florida. He did not indicate when he would return.

"Although no official statement of Chairman Saltzman's intentions has been given out from any source, the rumors of his desire to resign are believed to have arisen not only as a result of his recent recurring illness, but because of his own frequently expressed remarks to newspaper men and friends that he does not relish public life and would like to retire.

"Generally regarded as the administration's spokesman and contact man on the commission, General Saltzman was appointed by President Hoover in May 1929, along with Commissioner W. D. L. Starbuck, after the Senate had failed to confirm President Coolidge's appointments of Arthur Batchellor, formerly Department of Commerce radio supervisor at New York, and Professor C. M. Jansky, formerly of the engineering faculty of the University of Minnesota.

"The appointment grew out of President Hoover's confidence in the retired chief of the Army Signal Corps, who had served with him as the head of an important technical committee on the American delegation at the International Radiotelegraph Conference in Washington in 1927. Mr. Hoover, then Secretary of Commerce, was chairman of the American delegation and presiding officer of the conference, at which more than eighty nations adopted a convention governing the international uses of radio.

"Last year General Saltzman, by appointment of President Hoover, was chairman of the American delegation participating at the International Conference of Technical Experts, meeting at

The Hague in preparation for the next treaty-making conference to be held in Madrid in 1932.

"General Saltzman will be sixty on October eighteen next. In recent months he has undergone a series of operations which has curtailed his activity. An 1896 graduate of West Point, General Saltzman retired from the Army at his own request on January 8, 1928. He draws a major general's retirement pay and has a home in Washington. His son, a West Point graduate and former Rhodes scholar, recently left the Army to take a post with the Bell Laboratories, and will be married to the daughter of Secretary of Commerce Lamont in May."

The situation in Congress.—Summarizing Congressional activity in the radio field, Robert Mack, radio expert of the Consolidated Press, in the Washington Star for March twenty-three, said that "not a solitary measure having to do with radio regulation completed the legislative gauntlet during the third session of the Seventy-first Congress.

"As a matter of fact," Mack wrote, "only one bill relating to radio was passed and signed by the President. That provided the Bureau of Standards with authority to make more intensive studies of static and fading, and to set up a sharp-tuning service, by which broadcasting stations, and even technically inclined listeners, can calibrate their sets for close frequency adherence."

Violating radio rule.—Walter Birkenhead, radio writer of the New York Herald-Tribune, described an interesting and thought-provoking incident which occurred within the Federal Radio Commission during March.

In the March fifteen issue of that paper, Birkenhead reported a story of Elmer W. Pratt, commission examiner, finding that six stations were guilty of "failure to announce call letters, playing phonograph records and other mechanical reproductions without so designating, and frequency deviations."

Pratt recommended that the six stations be refused license renewals only to have his recommendations overruled by the Commission.

The stations were WWRL-New York, WKBQ-New York, WLTH-Brooklyn, WKBO - Jersey City, WBRE - Wilkesbarre, and WELL-Battle Creek.

Birkenhead said Mr. Pratt had found WLTH guilty of frequency deviations on *at least seven occasions.*

"Deviations of this kind result in interference to reception from other stations and thereby lower the standard of radio service to the general public," Pratt found. "On one of these occasions two signals were omitted, the two being about 800 cycles apart and wobbling and jumping around so as to make satisfactory reception quite impossible. Although these violations were shown to have resulted from mechanical defects which have since been corrected, they are of such a character as may recur at any time and so great a number as to negative any presumption or assurance that they will not be repeated. They indicate such negligent and careless operation of the applicant's station as to indicate a disregard of the requirements of the law and of the Commission's regulations and therefore warrant a finding that public interest, convenience or necessity will not be served by the continued operation of the applicant's station."

In spite of those words, the renewal license was granted. Elsewhere in this Bulletin there will be found a note by Armstrong Perry, service representative of the National Committee on Education by Radio, wherein he tells of Commission regulations which would deny a two-watt station to a Minnesota high school planning to broadcast educational programs.

Public discontent grows.—Whatever 1931 brings for radio it promises to be a year in which the protestations of the listener against cheap programs will cause commercial stations to eliminate

some of the stuff which now infests the broadcast band.

Already these protests of an irate public are beginning to be felt in the industry. Bearing evidence to the fact that the men behind the microphone have become alarmed at the falling off of listeners are the greater number of programs devoted to what commercial interests like to call education.

The first three months of 1931 have seen a sprouting of such programs all over the country. The broadcaster's conception of culture is a far cry from the definition of the word as it exists in the mind of the scholar.

The commercial broadcaster declares that he has offered the educator whatever sum he asks to come into the studio and direct and produce educational programs. He will say, too, that he has offered the educator time on the air, but he doesn't say what time. He doesn't tell that it was the time which couldn't be sold to advertisers. And as soon as he finds a customer, the educator goes off the air. Advertising hokum and true culture are incompatible.

The falling off of listeners.—Almost daily the New York Times publishes on its editorial page letters from citizens who are thoroughly impressed with the fact that radio programs, as they are broadcast today, present an indigestible diet. One such letter, in the March twenty issue of that paper, read as follows:

"The general answer to the symposium of radio advertising seems to be this: Stations are licensed to render a public service, but nine-tenths of them are out-and-out business enterprises. Those that try to do their full share for the public are hampered by the unwise insistence of those who sponsor programs, good or bad, in filling the ether with words that certainly fail of the purpose desired. The men who pioneered in radio, since sensing public reactions and having a proper conception of the right ways of achieving

A MINNESOTA HIGH SCHOOL applied to the Federal Radio Commission for a permit to erect a two-watt broadcasting station, to make its talent available to listeners within a radius of a few miles. Officials of the Commission brought out the fact, that according to rules formulated by them, a commercial station in the region could increase its power from 5000 watts to 50,000 watts without increasing the quota of the State or zone, but that the high school could not use two watts without increasing the quota. The commercial station can blanket a wide area with advertising, interfering with and possibly driving out other stations, but the citizens who support the public schools with their tax money cannot have the privilege of hearing its programs.—Armstrong Perry.

beneficial results even in ether propaganda, are ignored in favor of *yes men*.

"One-half of the stations are guilty of direct advertising, at all hours, in violation of the spirit if not the letter of their licenses.

"The result is a tremendous falling off in the number of regular listeners, except on occasions of special interest; chaos within the radio industry, and the need for a sounder background to the whole broadcasting structure."

Leading radio inventor issues warning.—A caption in the magazine *Radio Industries* for March indicates a feeling of unrest in the radio industry. "We Must Hold Our Radio Audience"—the heading reads. In words of alarm the article continues: "The radio listening audience has been on the decrease. There is less interest in radio programs. Something will have to be done about it."

In the same article suggestions are made relative to the best method of restoring the radio industry to prosperity.

"Dr. Lee DeForest, the genial and well-known father of radio, has some very definite ideas about *How Best to Restore Stability and Prosperity to the Radio Industry*," the magazine set forth. He asks a question, "Why should anyone want to buy a radio, or new tubes for an old set when nine-tenths of what one can hear is the continual drivel of second-rate jazz, sickening crooning by degenerate sax players [original or transcribed], interlarded with blatant sales-talk, meaningless but maddening station announcements—impudent commands to buy or try, actually superposed over a background of what alone might have been good music?"

"Get out into the sticks, away from your fine symphony orchestra pickups, and listen for twenty-four hours to what eighty percent of American listeners have to endure! Then you'll learn what is wrong with the radio industry. It isn't hard times. It's broadcaster's greed—which is worse, much—and like T. B. grows continually worse, until patient

radio public dies. *The radio public simply isn't listening in.* That's all the trouble. Simple, isn't it?"

Monopoly cases in the courts.—While the radio industry worried about losing its public, an Associated Press despatch in the Washington Star of March twenty-seven said that Attorney General Mitchell stated it "probable that two more radio manufacturing companies would be named in the federal suit against the Radio Corporation of America, Westinghouse, General Electric, and seven other associated and affiliated concerns.

"The suit is now pending in a Delaware court. Mitchell said it probably would not come to trial before next fall. The suit charges, among other things, that the defendants have obtained a monopoly in the manufacture of certain types of radio apparatus, and that they have operated a *pool of radio patents*.

"Warren Olney of San Francisco, a former California judge, has been appointed to act for the Justice Department in the suit. He would not disclose the names of the additional companies to be included."

Television to increase civic and moral hazards.—Television continues to grow alarmingly fast. As a future influence on the lives of American citizens, it seems to have no boundaries. Commissioner LaFount is quoted using superlatives by Robert Mack, writing for the Washington Star, March twenty-ninth.

"I believe that television is destined to become the greatest force in the world," Mack wrote, quoting Commissioner LaFount. "I believe that pictures must be censored. . . Personally, I should not like to see commercialization of television until Congress has had an opportunity to enact laws on the subject.

"If properly handled, it can be a great blessing and contribute greatly to the culture, happiness, education, refinement, better homes, more united families and

an intelligent and united nation.

"Vulgarity and lewdness must be kept off the air, and that danger impends unless television is strictly regulated. Advertising must be kept at a minimum in the 'radio talkies.' This subject is one that should be studied carefully by every thinking American," the Commissioner said.

Elsewhere in the same article, Commissioner LaFount said he believed existing broadcasting stations were the logical television broadcasters of the future to transmit sight synchronized with sound for home reception.

Who controls existing broadcasting stations? The most significant, the most strategically located, the foremost stations in the United States are members of one or the other of the two great commercial systems—National Broadcasting Company, Columbia Broadcasting System. Is it not almost axiomatic that these two, with great financial resources behind them, soon will begin the grab for television as they have for broadcasting? They have the opinion of a Federal Radio Commissioner that they are the logical television broadcasters of the future, although the same Commissioner decries commercialization of television.

Harmonizing the Air.—Synchronization, or the operation of two or more stations on the same channel at the same time without interference, promises to relieve crowded conditions on the broadcast band. Its practical application was explained by the New York Times in an article, March 22, describing experiments of the NBC with four of its stations: WTIC - Hartford, WBAL - Baltimore, WBZ and WEAf-New York.

"Heretofore, WTIC at Hartford and WBAL at Baltimore have shared a wavelength, the 1060 kilocycle channel," the Times article explained. "When the Connecticut station was on the air, Maryland had to be silent, and viceversa. WTIC, which is associated with the WEAf network, could handle only part of the network programs because time was limited.

SCHOOL TEACHING by radio became an accomplished fact in Norway recently when the pupils of some 150 schools listened to an instructor broadcasting from a central station in Oslo, according to advices received in the Commerce Department. This experiment was carried out after the matter had been discussed for some time between government, radio and school authorities and resulted in the Broadcasting Company of Oslo allowing 20,000 crowns [approximately \$5300] in its budget for future school broadcasting. It is believed by the originators of the plan that not only will this innovation provide a new medium of education but that it will also stimulate the use of radio sets in the home by those who wish to benefit from the instruction by air.

WBAL is associated with WJZ's network, but the time restriction cut down the number of programs it could take from the New York studio.

"Today these stations are giving full-time service. Radio engineering has made it possible. This is how it works: when WTIC is on its own 1060 kilocycle channel, WBAL instead of being silent is synchronized with WJZ. And when it comes time for WBAL to use the 1060 kilocycle channel, WTIC shifts over and is synchronized with WJZ.

"Under the new synchronization plan WJZ and WTIC will transmit simultaneously on WJZ's 660 kilocycle wave until four PM, sending out the same program. Stations WJZ and WBAL will broadcast in unison on WJZ's 760 kilocycle wave after four o'clock. At hours of the day when the synchronization plan is not in force, the Hartford and Baltimore stations will broadcast independently of WJZ and WBAL sharing time on their regular 1060 kilocycles."

Progress in synchronization.—

The Washington Star of March twenty-nine states that the Columbia System will attempt "network synchronization" in the near future. The article set forth that "four stations of moderate power will operate simultaneously on the regional channel of 1430 kilocycles.

"The stations to participate in the Columbia experiments are WHP-Harrisburg, Pennsylvania; WCAH-Columbus, Ohio; WHEC-Rochester, N. Y., and WOKO-Albany, N. Y., all of which carry Columbia programs. Each station is licensed for 500 watts during evening hours, and special equipment for frequency adherence costing \$1800 per station, will be installed. WHP and WCAH now are dividing time during evening hours on 1430, while WHEC and WOKO divide evening time on 1440 kilocycles. All four stations will operate on 1430 at the same time in all experiments."

The menace of international advertising.—Early in the month American commercial interests were repulsed by the Federal Radio Commission in their efforts to secure short wave channels to be used for advertising purposes in foreign countries.

A Washington despatch to the *Christian Science Monitor* for March second told the story in these words:

"Proposals of American radiocasting interests to stage special advertising programs for transmission via the short waves to foreign countries, there to be picked up either on shortwave receiving sets or retransmitted by local stations, received a setback today when Chief Examiner Ellis A. Yost recommended to the Federal Radio Commission that it deny the application of the Westinghouse Company for relay channels for that purpose.

"Westinghouse officials proposed utilizing Station W8XK, an auxiliary of its powerful KDKA Station at East Pittsburgh, to relay sponsored programs to other countries, especially in South America, with the object in view of advertising American products and stimulating their sale in those countries.

"Similar application has been made by the General Electric Company, which recently proposed the same plan for the same purpose, using a shortwave auxiliary of WGY, Schenectady. The chief American product both Westinghouse and General Electric hoped to exploit abroad was radio equipment, for which a large foreign market exists.

"Westinghouse asked that four of the experimental short waves now reserved for relay radiocasting be opened up for commercial purposes. Mr. Yost . . . declared he saw no necessity at this time for commercializing the few channels now available for that purpose.

"The number of relay channels, he pointed out, is limited by nature. The potential audience abroad is small because relatively few persons have short wave equipment. The waves should be

preserved for more necessary and economical purposes. Moreover, he added, the proposed service would violate the established regulations of the commission against such commercial uses.

"The necessity of assigning frequencies in such manner as to obtain the maximum use and advantage thereof in the public interest,' Mr. Yost said, 'is emphasized in this case by the international and world range reception possibilities of the frequencies involved.

"The assignment of any of the frequencies in the group involved to a particular license for commercial use would limit the field that may be devoted to experimental development, particularly so in view of the fact that the characteristics of the frequencies are such that several frequencies must be used by one station in order to work different distances at different hours and in different seasons.'"

United States has 605, rest of world 644 broadcasting stations—Just as the United States has more automobiles and electric refrigerators than all the rest of the world combined, it has more broadcasting stations. The *Washington Star* of March nineteen says that "the United States embraces within its borders nearly as many broadcasting stations as the rest of the world combined.

"Statistics compiled by the Commerce Department show there are 644 stations in the world exclusive of those in the United States. Latest available records show 605 stations, or thirty-nine less than in all other nations put together.

"This country, with a population of but 122,000,000, has nearly as many stations as the rest of the world with a population of some 1,175,000,000. Within the United States it is estimated that there are 13,500,000 receiving sets, while all other nations have about half that number."

The material in this bulletin has been prepared by Clyde C. Hall for the National Committee on Education by Radio.

E DUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the groups with which they are associated are as follows: •

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Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.

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H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.

Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

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Unscrambling the Ether

WILLIAM ORTON

TO STUDENTS OF PRESENTDAY SOCIETY—especially American society—few ideas are more significant than that of “cultural lag.” The idea, as presented by Professor William F. Ogburn, is roughly as follows. Different parts of a civilization develop at different speeds; and this difference of speed results sometimes in a serious loss of smoothness, of efficiency, in the working of the social system. In our own case, the chief source of friction arises from the rapid onrush of scientific technic in all the material aspects of our culture, and the failure of the non-material substructure of political and legal ideas to adapt itself fast enough.

We have shown no such inventiveness in this latter sphere as we have in the former. Almost every material aspect and activity of life is radically different from what it was fifty, even twenty years ago; but our outfit of concepts and technics for the ordering of our life as a society is still heavy with the dust of the eighteenth century. There is a terrific inertia in the latter sphere that does not exist in the former.

We reckon depreciation on our machines at an everincreasing rate; but who in the world thinks of reckoning the depreciation on our pet political or legal axioms? We put a premium on new notions in applied science and compete with one another to obtain them; but we distrust and systematically hamper originality in respect of individual or group relations in society. The result is that every now and then we find ourselves in a mess—confronted with a problem created by our own technical prowess for which we have failed to develop adequate ideal tools. Such problems are on the increase, in both number and gravity; and, of course, nowhere more rapidly than in those aspects of our collective doings which depend, one way or another, on electricity.

The case of radio is a very interesting example. It has already given us—about four years ago—one dramatic reminder of the inability of our nonmaterial culture to support the material advance we prize so highly. The resulting collapse was literally audible thru all the loud speakers of the country. What happened as listeners may recall was that the invisible foundation of law suddenly

cracked under the rising edifice of technic. It was old law—laws get old in less than fourteen years nowadays—by which the Department of Commerce was allotting broadcasting channels; and put to the test it was discovered to be without authority. Stations began broadcasting on any wave length they pleased. Out of that witches' Sabbath the present radio law was born.

Now that, too, is showing signs of strain. Once more the edifice of technic is cracking the foundation. Demands for more power are coming along faster than the public has any idea of. It is possible that the whole layout of broadcasting service may have to be revamped. Demands for facilities are pressing hard against the limits of the United States quota—limits set by international agreement. Within those limits as every listener knows there is severe congestion and not a little confusion. Inevitably the question of the exact status of government control over broadcasting is forced to the fore. During the winter of 1929-1930 the Commerce Committee of the Senate conducted exhaustive hearings on a proposal to put the whole business on a new basis under a Federal Communications Commission. Then the question of the use to which broadcasting is put has become urgent. The public is increasingly critical of what a recent writer calls “the vast cacophonous sales mart” of the air and organizations all over the country including the Federal Office of Education, are concerning themselves with the problem of program content. To what extent the present advertising basis of broadcasting either can or should survive is an open issue. . . .

[2] The “broadcasting band” available for general purposes in North America extends—as anyone can see from the dial of a receiving set—from 550 to 1500 kilocycles. Frequencies below and above this range are reserved by international agreement for special purposes, such as maritime, transoceanic, visual, and other types of broadcasting. Ten kilocycles is considered the very minimum degree of separation between channels; we thus have ninety-six possible channels, including both terminals.

And that is as far as we can get in the exposition without running into politics.

Radio, like most other technical bases of modern civilization, is ill adapted to the national divisions on which our political life is framed. But things being as they are, there had to be a sharing out of these ninety-six channels with our neighbors to the north and south. Strictly speaking, the sharing out is only to the north at present; Mexico has none, but is likely to be heard from in the near future. Canada has six channels exclusively and shares twelve more with the United States.

Here again the situation may not last forever. There is therefore strong reason for economy in the use of the ninety channels left.

On these ninety channels, or frequencies, or wave lengths, are crowded over 600 broadcasting stations. There were 732 when the Federal Radio Commission was formed in 1927—there had at one time been over 1000—and the Commission has had a hard time reducing the number even so far. But why should it want to reduce the number? Because from a technical point of view there are far too many stations for comfort. They get in each other's way all the time, and the endeavor to keep them from doing so is an intricate and interminable job involving constant checking and a good deal of legal wrangling. The ideal thing would be to have only one station on one channel in the entire area which might be affected by its operations. England keeps quite close to this ideal, even weak stations having channels to themselves.

But the United States is a big country: surely there is room for several stations on one channel in so large an area? Ah, but at this point nature plays a pretty little joke on the broadcasters. A broadcasting station, like a gossiping woman, can make itself a nuisance thru a much wider sphere than that in which it can be useful—can, and does. Mr. John Hogan, appearing as expert witness before the Radio Commission in 1928, gave some interesting illustrations of the fact. A moderate-sized station of 5000 watts can give good service, if free of interference, over a 100-mile radius [a somewhat liberal estimate if applied to existing conditions]. Its nuisance area, however, has a 3000-mile radius. A second station of the same power on the same channel 1500 miles away will cut down the good service radius of the first sta-

tion from 100 miles to fifteen miles, and the interference effect of even a weak station at the same distance is almost as great.

Obviously the nuisance effect of duplicating stations on the same channel mounts up much more quickly than the increase in the service facilities. Every duplication means some waste, from a technical point of view; much duplication, especially at high power, far more than offsets the gain to listeners in each locality. The listeners may, within a narrow range, get better reception from their local station; but the range of that service will be far narrower than that which the power of their station could render, and the chance of hearing anything else clearly will be tremendously restricted. Taking only a very moderate standard of radio reception as the criterion, Mr. Hogan estimated that all 5000-watt stations ought to have cleared channels; 1000-watt stations should be about 1400 miles apart—which would give four or five per channel; 500-watt stations from 900 to 1000 miles apart, giving about ten per channel; 100-watt stations about 450 miles apart, giving about twenty per channel on a geographically equal spacing.

What do we find in practice? Taking one channel absolutely at random—the 1200-kilocycle band,—there are at present forty-two stations operating on it, eight using less than 100 watts power, eight of them using more than 100 watts in the daytime. Their geographical spacing is far from even thruout the country. And that happens to be one of the channels that is also shared with Canada. How has this situation come about? In fact it is a legacy of preregulation days—days when anybody could set up a station and get a license on the strength of the *fait accompli*. It is a relic of individualism—which means, in matters of this sort, the practice of proceeding helter-skelter without any plan until an impossible situation has developed and all sorts of vested interests have been created, and then trying to impose a plan retrospectively in face of innumerable technical and legal obstacles. The theoretical defense of this multiplicity of stations is the desire for local service. But on the merits of the case it is very questionable whether what most of these small stations contribute to the repertory of the ether is a sufficient justification for the amount of nuisance they create. In the particular case selected—and, be it emphasized, this is a random sample—twenty of the forty-two stations are in

towns of less than 25,000 people. And it is stations of this sort that do the worst type of advertising and the greatest amount of mechanical record playing.

[3] In the attempt to impose some sort of plan on the chaos which had come into being by 1928, two events are of outstanding importance. One is the passage of the Davis Amendment to the Radio Act in March 1928. The other is the issuance by the Commission of General Order No. 40 in the following August.

The Radio Act of 1927 had divided the country into five zones, each of which sent one member to the Commission. These zones are not of equal size or of equal population. The smallest [Zone II, East Central] will contain a circle of 131 miles radius, the largest [Zone V, Western] one of 725 miles radius. In population the first four zones are not far apart, but the fifth has less than half that of any other. The Davis Amendment ordered the Commission to make an equal allocation of licenses, wave lengths, and power to each zone; and added that within each zone there should be an equitable distribution between states on the basis of population.

If population were evenly distributed thruout the entire country and there were no political questions involved, the engineers could—at least on paper—proceed to an optimum distribution of broadcasting stations on the sole basis of geographical considerations and technical efficiency. The Davis Amendment represents an attempt to compromise with the facts as they are. Its weakest feature—a feature which it may be necessary ultimately to abandon—is the acceptance of purely political subdivisions in the working out of a technical program.

The Commission was next faced with the job of reallocating the 700-odd stations then in existence in accordance with the general principles thus laid down. Its scheme, evolved after much technical study and considerable difference of opinion within as well as without the Commission, was announced in General Order No. 40. The problem was one of classifying not merely stations but wave-length assignments, and of doing so with as little interference as the general policy permitted. The whole 550-1500 kilocycle band had therefore to be studied. The result was the definition of three types of service—national, regional, local. For national service the Commission “cleared” forty channels, on each of which only one station was to operate at one time. Re-

gional channels, thirty-five in number, were to accommodate 125 stations of moderate power, widely spaced. Local channels, comprising the remainder, were to accommodate 150 low-power stations.

This scheme, for various reasons, some of which will be indicated below, has not been fully carried out. But even so far as it has been carried out—that is, in respect of the cleared channels—its operation leaves much to be desired. In the first place, there is still duplication of stations on the same wave in certain cases, which the Commission has been unable for legal reasons to abolish. That fact is necessary to explain the apparent paradox that there are about fifty stations operating full time on the forty cleared channels in addition to over thirty others operating on low power or limited time.

In the second place, there is still a good deal of “waste room” in the ether because many stations operating on cleared channels are using only low or very moderate power; while at the same time, since title to a cleared channel is the most valuable concession obtainable from a money-making point of view, these stations would strongly object to others being authorized on their channels even if the Commission were disposed [as part of it has been disposed] to take such a step. As a matter of fact some twenty of these cleared-channel stations applied to the Commission last November for permission to increase their power up to fifty kilowatts. A good many of them have been losing money, and from their point of view an increase in the service area would enable advertising rates to be increased. The smaller stations, however, have stoutly resisted the increase on the ground of interference, and the Commission has hitherto been very chary of granting high-power permits.

The gravest waste, however, is in connection with the chain hookups. A majority of these stations on cleared channels are associated with either the National Broadcasting Company or the Columbia system. For a very obvious reason. It is these cleared-channel stations that have the largest potential service area and therefore the greatest cash value as advertising agencies; and though only a small proportion of them are actually owned by the radio interests, almost all of them are in commercial or financial ownership, and almost all of them exist simply to sell wares or services and make money. The vast advertising networks in which they are associated are a natural development of that commercialization

of broadcasting which the Radio Commission has accepted as in conformity with "public interest, convenience or necessity." But the result entails a tremendous wastage of broadcasting facilities, for the reason that instead of forty cleared channels presenting, as they might, forty different programs, the same material comes every night over the air from the great majority of them. Irrespective of whether the program is good or bad, this involves a colossal waste of "air space"—a waste over which the Commission has apparently no control at all. In view of the congestion of broadcasting facilities, which has involved outright denial of facilities to many non-commercial stations, such a result of individualism is a deplorable piece of inefficiency.

[4] In the original scheme of the Davis Amendment and General Order No. Forty, it will be noticed that a total of 315 stations was originally provided for. There are in fact over 600 stations operating. The difference provides some measure of the various technical, political, and legal obstacles that have stood in the way.

Of the political obstacles perhaps the less said the better. Their general nature can be very well imagined. The legal ones, however, provide some points of vital interest. The Radio Act of 1927 laid down that the grant of a license was subject to "public interest, convenience or necessity"—leaving the interpretation of the phrase entirely to the Commission. All sorts of cases have been brought up by stations "ordered off the air" or contesting particular rulings of the Commission; but the outstanding issues may perhaps be briefly indicated as follows.

On the face of it, radio regulation must be entirely a federal matter. Even a weak station is not confined in its effects within the intra-state area. The courts have ruled that "radio communication in general" falls within the category of interstate commerce and that the constitutional power thus arising must be broadly interpreted—just how broadly is not yet fully explicit. Further, it has been quite definitely laid down that the grant of a license conveys no property right in a wave length, and that the regulatory power of the Commission is therefore not *ipso facto* in contravention of the Fifth Amendment. But apparently regulation can be successfully contested on the plea of arbitrary use of power by the Commission. A leading case was that of station WGY (Schenectady). The Commission, in its attempt to apply the Davis

Amendment on the lines of its General Order No. 40, had found it necessary to curtail this station's time on the air. The attempt failed, and the argument of the court suggested that, although the station had no vested interest in any particular wave length, it had acquired a property interest in its operations entitled to protection of the opportunity for their full continuance.

The question of vested interests is in fact by no means disposed of by the contention that there is no vested interest in a wave length as such. The power to curtail operations or order stations off the air may be contested on various grounds, and it is not too much to say that the exact nature of that power has never been finally settled. An extract from an important brief recently presented before the Supreme Court illustrates the basic confusion:

The property right of a broadcasting station to the use of the ether with the power upon which it is operated is, perhaps, best established by the doctrine of priority of appropriation as applied to water rights in non-navigable streams of the Western States. It is contended that rights to the use of the ether for broadcasting are similar in nature, the property right to the continued use of both media being acquired by priority of appropriation.

The case resolves itself into this: Shall a pioneer broadcaster who, at the risk of money and effort, contributed to the creation of broadcasting be deprived of the fruits of his labor?

[5] The same brief attacks the regulatory power on the ground that there are no previously established criteria of "public interest, convenience or necessity." And here a different and perhaps even more difficult phase of the problem arises. That phase concerns the nature of the service rendered. The Commission is explicitly denied the power of censorship by Section twenty-nine of the Radio Act, except that it may close stations permitting the use of "obscene, indecent or profane language." Some stations have been closed on this ground. On the other hand the Commission can hardly avoid—does not avoid in practice—taking into consideration the quality of the service given in deciding between competing stations where facilities are limited and a choice has to be made. Should it have power to go further?

First, there is widespread evidence of a public reaction against radio advertising. It is surprising how many people one meets who either do not own sets or scarcely use their sets because they will not tolerate it. Dr. Lee DeForest, in his presidential message to the Institute of Radio Engineers in January 1931, attributed the falling off in radio sales during 1930 largely to this factor, and went so far as to describe the present situation as "perilously menacing." In what is probably the gravest warning yet uttered by a person of high authority in the industry itself, he said:

"Unless these broadcasting conditions are very soon materially improved; unless the public is given the opportunity to listen to four or five hours each day of fine entertainment free from sales talk, I cannot see any way of restor-

ing its former prosperity to the radio industry.

As long as it seems hopeless to expect our Congress to authorize any censorship of radio programs or to levy a tax on receiving instruments for the support of fine programs, even if such measures were wise, I am forced to regard the plan of associated manufacturers collectively sponsoring high-class programs freed of all advertising as the surest and most practical means for remedying a situation which will, unless cured, certainly spell disaster for the radio industry.

Testimony of a different kind, though no less devastating, was forthcoming last December from the attorney to the Federal Radio Commission, Mr. Arthur W. Scharfeld: "The widespread and unthinking reliance of the public on broadcast advertising as a guide to purchases of every nature [including in certain cases security issues banned under state blue-sky laws] creates a potentiality for abuse upon which advertisers have not been slow to realize. Established remedies which cover the ordinary situation of false or misleading advertising have been but slight deterrents to fraudulent practices over the radio. Persuasive evidence that the evils exist is afforded by the continuing galaxy of complaints covering every conceivable subject matter."

There is another phase of this question. Apart altogether from the effect of advertising upon program content, there exists behind the scenes a good deal more skepticism than is allowed to leak out as to the actual sales value of the radio campaign. A large proportion, perhaps a majority, of station managers are professional advertising men; and although there is competition between radio advertising and other forms of the art, there is also cooperation, as evinced in the various "tie-ups" between radio and press or billboard publicity. No one branch is going to give the rest away by too much candor. But it is unlikely that broadcasting revenues will continue indefinitely increasing. It is not impossible that radio advertising has already passed its zenith. One wonders, in that event, whether the "unsponsored" programs which now account for most of the better features of American broadcasting will be continued on the increasing scale which cultural considerations demand. Such programs cost a lot of money, and the amount that can be spent on them—apart from its function in staving off criticism and the possibility of outside control—is closely connected with the size of the advertising revenue. If, as the Radio Commission has laid down, advertising must be accepted as the sole means of support for broadcasting, the outlook is not altogether reassuring.

The commercial basis raises yet another obstacle to cultural progress. Chain stations are paid for the advertising material they relay from the central studios of the system. On the other hand they pay for the "sustaining" or "unsponsored" programs they pick up and rebroadcast. They are not under obligation to take these latter, and as a rule do not if they can sell the same hours to an advertiser on their own account. The result is, of course, that *the only material which is certain of nationwide reception is the advertising*. The educational or cultural features offered by the central stations may or may not be distributed on the local or regional hookups. Perhaps that is a fair reflection of the scale of values obtaining in the average American mind. But it is

not encouraging to those who would like to see broadcasting made more worthy of a nation that claims to call itself civilized.

Mr. Hoover's views on this matter have apparently undergone a strange metamorphosis. A few years ago he said very frankly:

"Radio communication is not to be considered as merely a business carried on for private gain, for public advertisement, or for the entertainment of the curious. It is a public concern impressed with the public trust and to be considered primarily from the standpoint of public interest to the same extent and upon the basis of the same general principles as our other public utilities."

Last December in a letter to the vicepresident of the Westinghouse Company apropos of the tenth anniversary of commercial broadcasting, Mr. Hoover wrote as follows: "It has already begun to modify the character of American life and fortunately its tremendous influence is all on the side of progress. Today the high level of service and the wholesome character of programs should be a proper source of pride to all engaged in it." One wonders whether Mr. Hoover knew what happened to the Massachusetts University Extension program of radio education at the hands of the Westinghouse stations of New England. He can find the story on page 144 of the report on radio education issued by his own Secretary of the Interior.

[6] It is in connection with the educational use of radio that the question of program control is being most keenly discussed. The contribution that radio at present makes, or under existing conditions can make, to either juvenile or adult education in America is lamentably small in comparison with the opportunity or with what is being done elsewhere. Education cannot compete for "room on the air" with national advertisers. There are even people who hold it ought not to be compelled to. But all available channels are full, and more than full. What—if anything—can be done about it?

Three main proposals have so far been put forward for serious consideration by responsible groups in America. A conference summoned in Chicago by the Radio Education Division of the Federal Office of Education last October formulated a demand that the Radio Commission be instructed by Congress to clear fifteen percent of all channels for government and educational purposes. A proposal similar in principle is contained in a joint resolution now before Congress, calling for three cleared channels to be put at the disposal of the Departments of Labor, Agriculture, and the Interior.

An alternative suggestion which has met with some favor on the part of two members of the Radio Commission itself is that stations should be compelled, as a stipulation of their license, to hold a stated proportion of their time at the disposal of the public services. Commissioner Robinson has coupled this idea with the suggestion of a license fee, to be paid,

as it is in other cases, for the use of a public medium.

The legal obstacles in the way of either plan are undoubtedly serious, though less so in the second case than in the first. In view of the attitude of the courts, the Commission might well shrink from any attempt at a compulsory clearing of channels. The alternative would be to wait—indefinitely—for the release of existing channels by synchronization, on the by no means certain assumption that when that time came present holders of unrequired national channels would give them up without a struggle. But even so, to devote cleared channels to any restricted type of service would be poor economy in view of the improbability of such restricted service requiring fulltime use of the facilities.

The second proposal avoids this objection; but it is open to another that might prove no less serious. If the stations themselves are to be allowed to choose which hours they will devote to public-service programs, they will naturally choose the hours they cannot sell. If they are to be told by some outside authority what hours they shall surrender, much the same legal problems will be raised as would be involved in an attempt to put some of them "off the air" altogether.

A third proposal, which is now being acted upon thru the instrumentality of the National Advisory Council on Radio in Education [a non-government organization] avoids any element of coercion. In his recent report to the American Association for Adult Education "Education Tunes In" Mr. Levering Tyson drew attention to the following statement by the president of the National Broadcasting Company, Mr. Merlin H. Aylesworth:

"The pleasing progress that we have made in musical education leads us to hope that we shall soon undertake general educational work, but I feel very strongly that that should not be done until a carefully considered program is prepared by nationally recognized educators of outstanding ability. Such a program should be sponsored by some responsible organization of educators or perhaps a group of them. . . . When they are ready we will place our facilities at their disposal without charge."

Up to the present, it must be confessed, the National Broadcasting Company has had considerable justification for holding its hand. There have been very few examples of first-class educational broadcasting in America, and it may be said, taking the field as a whole, that educational opinion is divided and discouraged. Objectives are not yet defined and methods not generally agreed on. Nor is there convincing evidence of any widespread popular demand for education as such. Educators cannot see their way clear to getting untrammelled use of the "air," even if they knew what they wanted to do with it; on the other hand, they are skeptical of education sponsored by commercial firms—even in those cases where the

firms have made genuine efforts to promote it. The offer of facilities on the two national chain systems, though it is probably the best opportunity open at present, is subject to certain drawbacks. There is the difficulty, in an area as large as the United States, of local time variations; but, assuming that this can be got over, there is the larger question as to whether uniformity on a nationwide scale is a really promising road for education. The fact remains, however, that in very few cases have local stations either the resources or the initiative to command first-rate material.

An effort is therefore being made by the National Advisory Council to explore the educational demand on a nationwide scale with a view to action upon the lines suggested above by Mr. Aylesworth. The significance of any experiments so made will depend very largely on the amount of public response they evoke. But should the experiment succeed, we shall have another example of the American way of doing thru the instrumentality of—and within the limits imposed by—big business the things that other countries would naturally do by public enterprise. The distinction, however, is probably unimportant, since it would be folly to pretend that there is any vital difference in the ideals and the policies of the two agencies at present.

Big business has in fact come to occupy in America very much the position occupied by the Church in medieval Europe. It dominates politics and international relations, colors the administration of law and the concept of justice, controls popular aspiration, recreation, and a large part of education, moulds the forms and sets the standards of social intercourse permeates while it patronizes the national culture in a hundred ways. It rests on a widespread and uncritical faith which is carefully protected from the shocks that too much knowledge might impart; and it is served thru-out the lower ranks of its hierarchy with loyalty, sincerity, and devotion. To its highly centralized controls are drawn, as by magnetic attraction, the ablest men from every sphere that fits its grand design. And even at its core, cynicism and *Realpolitik* stand cheek by jowl with idealism and a sense of stewardship.

This is no caviling comment. After all, the attempt to establish the kingdom of God was not a conspicuous success. And, having decided to establish instead a kingdom of man, what more can one reasonably demand than to be made comfortable? The higher flights of culture have, as is well known, a tendency sometimes to disturb the mind, evoke quite inconvenient aspirations, diminish the measure of our content with things as they are, and even affect the working of the digestive organs. Let us be grateful we are spared the prospect of such a consummation.—From the *Atlantic Monthly* with courteous permission of the publishers.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee are: J. L. Clifton; Arthur G. Crane; R. C. Higgy; J. O. Keller; Charles N. Lischka; John Henry MacCracken; vicechairman, Charles A. Robinson; H. Umberger; and Joy Elmer Morgan; Chairman.

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The Seventy-Second Congress

OLD AND NEW LEGISLATORS convening December 7, 1931, for the first session of the Seventy-second Congress, will be asked to consider the merits of the *Fess bill* for education by radio. Its provisions are set forth within the panel at the bottom of this page. No one who has paused to look into the future—as Senator Fess has done—would be less solicitous than he to protect public rights in radio.

In the last analysis the people must look to Congress to make laws in their behalf. Although much legislation designed to regulate radio has been proposed on both the Senate and House floors, Congress seems to have forsaken the field since creating the Federal Radio Commission in 1927. The Commission was the flower of the field during its early life, but it has been stagnated by an overgrowth of commercial weeds. Advertisers, dissatisfied with the crudity of their handiwork in strewing billboards from the Atlantic to the Pacific, now fill the air with more unsightly billboards equally offensive to the sensibilities of American people.

Citizens of the United States long have been subjected to the exhortations of salesmen. One has but to stand on the corner of any main street from Podunk to New York City to realize the salesmen have been successful, as Smith, Jones, and Brown drive their respective cars to work. The emphasis on our material life amounts to overemphasis. Nowhere is this obvious fact more evident than on the radio.

THE SENATE

Terms of Senators end on
March fourth of year preceding
name.

Presiding Officer,
the Vicepresident

ALABAMA

1933 Hugo Black (D) Birmingham
1937 John H. Bankhead (D) Birmingham

ARIZONA

1935 Henry F. Ashurst (D) Prescott
1933 Carl Hayden (D) Phoenix

ARKANSAS

1933 Thad. H. Caraway (D) Jonesboro
1937 Joseph T. Robinson (D) Little Rock

CALIFORNIA

1935 Hiram W. Johnson (R) San Francisco
1933 Samuel M. Shortridge (R) Menlo Park

COLORADO

1933 Charles W. Waterman (R) Denver
1937 Edward T. Costigan (D) Denver

CONNECTICUT

1935 Frederick C. Walcott (R) Norfolk
1933 Hiram Bingham (R) New Haven

DELAWARE

1935 John G. Townsend (R) Selbyville
1937 Daniel O. Hastings (R) Wilmington

FLORIDA

1935 Park Trammell (D) Lakeland
1933 Duncan U. Fletcher (D) Jacksonville

GEORGIA

1933 Walter F. George (D) Vienna
1937 W. J. Harris (D) Cedartown

IDAHO

1933 John Thomas (R) Gooding
1937 William E. Borah (R) Boise

ILLINOIS

1933 Otis F. Glenn (R) Murphysboro
1937 J. Hamilton Lewis (D) Chicago

INDIANA

1935 Arthur R. Robinson (R) Indianapolis
1933 James E. Watson (R) Rushville

IOWA

1933 Smith W. Brookhart (R) Washington
1937 L. J. Dickinson (R) Algona

KANSAS

1933 George McGill (D) Wichita
1937 Arthur Capper (R) Topeka

KENTUCKY

1933 Alben W. Barkley (D) Paducah
1937 M. M. Logan (D) Bowling Green

LOUISIANA

1933 Edwin S. Broussard (D) New Iberia
1937 Huey P. Long (D) Shreveport

MAINE

1935 Frederick Hale (R) Portland
1937 Wallace H. White (R) Lewiston

MARYLAND

1935 P. L. Goldsborough (R) Baltimore
1933 Millard Tydings (D) Harve de Grace

MASSACHUSETTS

1935 David I. Walsh (D) Fitchburg
1937 Marcus A. Coolidge (D) Fitchburg

MICHIGAN

1935 A. H. Vandenberg (R) Grand Rapids
1937 James Couzens (R) Detroit

MINNESOTA

1935 Henrik Shipstead (F-L) Minneapolis
1937 Thomas D. Schall (R) Minneapolis

MISSISSIPPI

1935 Hubert D. Stephens (D) New Albany
1937 Pat Harrison (D) Gulfport

MISSOURI

1935 Roscoe C. Patterson (R) Springfield
1933 Henry B. Hawes (D) St. Louis

MONTANA

1937 Thomas J. Walsh (D) Helena
1935 Burton K. Wheeler (D) Butte

NEBRASKA

1937 George W. Norris (R) McCook
1935 Robert B. Howell (R) Omaha

NEVADA

1935 Key Pittman (D) Tonopah
1933 Tasker L. Oddie (R) Reno

NEW HAMPSHIRE

1937 Henry W. Keyes (R) N. Haverhill
1933 George H. Moses (R) Concord

BE IT ENACTED by the Senate and House of Representatives of the United States of America in Congress assembled, That the second paragraph of section 9 of the Radio Act of 1927, as amended by an Act entitled "An Act continuing for one year the powers and authority of the Federal Radio Commission, under the Radio Act of 1927, and for other purposes," approved March 28, 1928, is amended by adding at the end of said paragraph, as amended, the following:

"Not less than 15 per centum, reckoned with due weight to all factors determining effective service, of the radio-broadcasting facilities which are or may become subject to the control of and to allocation by the Federal Radio Commission, shall be reserved for educational broadcasting exclusively and allocating when and if applications are made therefor, to educational agencies of the Federal or State Governments and to educational institutions chartered by the United States or by the respective States or Territories."—From a bill to amend the Radio Act of 1927, by Senator Fess in the Senate, January 8, 1931.

NEW JERSEY

1935 Hamilton F. Kean (R) Elizabeth
1937 Dwight W. Morrow (R) Englewood

NEW MEXICO

1935 Bronson M. Cutting (R) Santa Fe
1937 Samuel G. Bratton (D) Albuquerque

NEW YORK

1935 Royal S. Copeland (D) New York City
1933 Robert F. Wagner (D) New York City

NORTH CAROLINA

1933 Cameron Morrison (D) Charlotte
1937 Josiah W. Bailey (D) Raleigh

NORTH DAKOTA

1935 Lynn J. Frazier (R) Hoople
1933 Gerald P. Nye (R) Cooperstown

OHIO

1935 Simeon D. Fess (R) Yellow Springs
1933 Robert J. Bulkley (D) Cleveland

OKLAHOMA

1933 Elmer Thomas (D) Medicine Pk.
1937 Thomas P. Gore (D) Lawton

OREGON

1937 Charles L. McNary (R) Salem
1933 Frederick I. Steiwer (R) Portland

PENNSYLVANIA

1935 David A. Reed (R) Pittsburgh
1933 James J. Davis (R) Pittsburgh

RHODE ISLAND

1935 Felix Hebert (R) West Warwick
1937 Jesse H. Metcalf (R) Providence

SOUTH CAROLINA

1933 E. D. Smith (D) Lynchburg
1937 James F. Byrnes (D) Aiken

SOUTH DAKOTA

1933 Peter Norbeck (R) Redfield
1937 W. J. Bulow (D) Pierre

TENNESSEE

1935 Kenneth McKellar (D) Memphis
1937 Cardell Hull (D) Carthage

TEXAS

1935 Thomas Connally (D) Marlin
1937 Morris Sheppard (D) Texarkana

UTAH

1935 William H. King (D) Salt Lake City
1933 Reed Smoot (R) Provo

VERMONT

1935 Warren Austin (R) Burlington
1933 Porter H. Dale (R) Island Pond

VIRGINIA

1935 Claude A. Swanson (D) Chatham
1937 Carter Glass (D) Lynchburg

WASHINGTON

1935 Clarence C. Dill (D) Spokane
1933 Wesley L. Jones (R) Seattle

WEST VIRGINIA

1935 Henry D. Hatfield (R) Huntington
1937 M. M. Neely (D) Fairmont

WISCONSIN

1935 Robert M. LaFollette (R) Madison
1933 John J. Blaine (R) Boscobel

WYOMING

1935 John B. Kendrick (D) Sheridan
1937 Robert D. Carey (R) Careyhurst

THE HOUSE OF REPRESENTATIVES

Elected November 4, 1930
Terms from March 4, 1931, to
March 4, 1933

ALABAMA

District	Representative	P. O. Address
1	John McDuffie (D)	Monroeville
2	Lister Hill (D)	Montgomery
3	Henry B. Steagall (D)	Ozark
4	Lamar Jeffers (D)	Anniston
5	L. L. Patterson (D)	Dadeville
6	William B. Oliver (D)	Tuscaloosa
7	Miles C. Allgood (D)	Allgood
8	Edward B. Almon (D)	Tuscumbia
9	George Huddleston (D)	Birmingham
10	William B. Bankhead (D)	Jasper

ARIZONA

At Large
Lewis W. Douglas (D) Phoenix

ARKANSAS

1	William J. Driver (D)	Osceola
2	John E. Miller (D)	Searcy
3	Claude A. Fuller (D)	Eureka Springs
4	Effegene Wingo (D)	De Queen
5	Heartsill Ragon (D)	Clarksville
6	D. D. Glover (D)	Malvern
7	Tilman B. Parks (D)	Camden

CALIFORNIA

1	Clarence F. Lea (D)	Santa Rosa
2	Harry L. Englebright (R)	Nevada City
3	Charles F. Curry, Jr. (R)	Sacramento
4	Florence P. Kahn (R)	San Francisco
5	Richard J. Welch (R)	San Francisco
6	Albert E. Carter (R)	Oakland
7	Henry E. Barbour (R)	Fresno
8	Arthur M. Free (R)	San Jose
9	William E. Evans (R)	Glendale
10	Joe Crail (R)	Los Angeles
11	Phil D. Swing (R)	El Centro

COLORADO

1	William R. Eaton (R)	Denver
2	Charles B. Timberlake (R)	Sterling
3	Guy U. Hardy (R)	Canon City
4	Edward T. Taylor (D)	Glenwood Springs

CONNECTICUT

1	Augustine Lonergan (D)	Hartford
2	Richard P. Freeman (R)	New London
3	John Q. Tilson (R)	New Haven
4	William L. Tierney (D)	Greenwich
5	Edward W. Goss (R)	Waterbury

DELAWARE

At Large
Robert G. Houston (R) Georgetown

FLORIDA

1	Herbert J. Drane (D)	Lakeland
2	Robert A. Green (D)	Starke
3	Thomas A. Yon (D)	Tallahassee
4	Ruth Bryan Owen (D)	Miami

GEORGIA

1	Charles G. Edwards (D)	Savannah
2	E. E. Cox (D)	Camilla
3	Charles R. Crisp (D)	Americus
4	William C. Wright (D)	Newman
5	Robert Ramspeck (D)	Decatur
6	Samuel Rutherford (D)	Forsyth
7	Malcolm C. Tarver (D)	Dalton
8	Charles H. Brand (D)	Athens
9	John S. Wood (D)	Canton
10	Carl Vinson (D)	Milledgeville
11	William C. Lankford (D)	Douglas
12	William W. Larsen (D)	Dublin

IDAHO

1	Burton L. French (R)	Moscow
2	Addison T. Smith (R)	Twin Falls

ILLINOIS

At Large
Richard Yates (R) Springfield
William H. Dieterich (D) Beardstown

1	Oscar De Priest (R)	Chicago
2	Morton D. Hull (R)	Chicago
3	Edward A. Kelley (D)	Chicago
4	Harry P. Beam (D)	Chicago
5	Adolph J. Sabath (D)	Chicago
6	James T. Igoe (D)	Chicago
7	Leonard W. Schuetz (D)	Chicago
8	Peter C. Granata (R)	Chicago
9	Fred A. Britten (R)	Chicago
10	Carl R. Chindblom (R)	Chicago
11	Frank R. Reid (R)	Aurora
12	John T. Buckbee (R)	Rockford
13	William R. Johnson (R)	Freeport
14	John C. Allen (R)	Monmouth
15	Burnett M. Chiperfield (R)	Canton
16	William Hull (R)	Peoria
17	Homer W. Hall (R)	Bloomington
18	William P. Holoday (R)	Georgetown
19	Charles Adkins (R)	Decatur
20	Henry T. Rainey (D)	Carrollton
21	J. Earl Major (D)	Hillsboro
22	Charles A. Karch (D)	East St. Louis
23	William W. Arnold (D)	Robinson
23	Claude V. Parsons (D)	Golconda
25	Kent E. Keller (D)	Ava

INDIANA

1	John W. Boehne, Jr. (D)	Evansville
2	Arthur H. Greenwood (D)	Washington
3	Eugene B. Crowe (D)	Bedford
4	Harry C. Canfield (D)	Batesville
5	Cortland C. Gillen (D)	Greencastle
6	William H. Larrabee (D)	New Palestine
7	Louis Ludlow (D)	Indianapolis
8	Albert H. Vestal (R)	Anderson
9	Fred S. Purnell (R)	Attica
10	William R. Wood (R)	LaFayette
11	Glenn Griswold (D)	Peru
12	David Hogg (R)	Fort Wayne
13	Samuel B. Pettingill (D)	South Bend

IOWA

- 1 William F. Kopp (R) Mt. Pleasant
- 2 B. M. Jacobsen (D) Clinton
- 3 Thomas J. B. Robinson (R) Hampton
- 4 Gilbert N. Haugen (R) Northwood
- 5 Cyrenus Cole (R) Cedar Rapids
- 6 C. Wm. Ramseyer (R) Bloomfield
- 7 Cassius C. Dowell (R) Des Moines
- 8 Lloyd Thurston (R) Osceola
- 9 Chas. E. Swanson (R) Council Bluffs
- 10 Fred C. Gilchrist (R) Laurens
- 11 Ed. H. Campbell (R) Battle Creek

KANSAS

- 1 W. P. Lambertson (R) Fairview
- 2 U. S. Guyer (R) Kansas City
- 3 Harold McGugin (R) Coffeyville
- 4 Homer Hoch (R) Marion
- 5 James G. Strong (R) Blue Rapids
- 6 Charles I. Sparks (R) Goodland
- 7 Clifford R. Hope (R) Garden City
- 8 W. A. Ayres (D) Wichita

KENTUCKY

- 1 William V. Gregory (D) Mayfield
- 2 Glover H. Cary (D) Owensboro
- 3 John W. Moore (D) Morgantown
- 4 Cap R. Carden (D) Munfordville
- 5 Maurice H. Thatcher (R) Louisville
- 6 Brent Spence (D) Fort Thomas
- 7 Virgil Chapman (D) Paris
- 8 Ralph Gilbert (D) Shelbyville
- 9 Fred M. Vinson (D) Ashland
- 10 A. J. May (D) Prestonsburg
- 11 Charles Finley (R) Williamsburg

LOUISIANA

- 1 Joseph O. Fernandez (D) New Orleans
- 2 Paul H. Maloney (D) New Orleans
- 3 Numa F. Montet (D) Thibodaux
- 4 John N. Sandlin (D) Minden
- 5 Riley J. Wilson (D) Ruston
- 6 Bolivar E. Kemp (D) Amite
- 7 Rene L. DeRouen (D) Ville Platte
- 8 Vacancy caused by death.

MAINE

- 1 Carroll L. Beedy (R) Portland
- 2 Donald B. Partridge (R) Norway
- 3 John E. Nelson (R) Augusta
- 4 Donald F. Snow (R) Bangor

MARYLAND

- 1 T. Alan Goldsborough (D) Denton
- 2 William P. Cole, Jr. (D) Towson
- 3 Vincent L. Palmisano (D) Baltimore
- 4 J. Chas. Linthicum (D) Baltimore
- 5 Stephen W. Gambrill (D) Laurel
- 6 David J. Lewis (D) Cumberland

MASSACHUSETTS

- 1 Allen T. Treadway (R) Stockbridge
- 2 William J. Grenfield (D) Longmeadow
- 3 Frank H. Foss (R) Fitchburg
- 4 Pehr G. Holmes (R) Worcester
- 5 Edith Nourse Rogers (R) Lowell
- 6 A. Piatt Andrew (R) Gloucester
- 7 William P. Connery, Jr. (D) Lynn
- 8 Frederick W. Dellinger (R) Cambridge
- 9 Charles L. Underhill (R) Winter Hill
- 10 John J. Douglass (D) Boston
- 11 George Holden Tinkham (R) Boston
- 12 John W. McCormack (D) Boston
- 13 Robert Luce (R) Waltham
- 14 Richard B. Wigglesworth (R) Milton

- 15 Joseph W. Martin, Jr. (R) North Attleboro
- 16 Charles L. Gifford (R) Cotuit

MICHIGAN

- 1 Robert H. Clancy (R) Detroit
- 2 Earl C. Michener (R) Adrian
- 3 Joseph L. Hooper (R) Battle Creek
- 4 John C. Ketcham (R) Hastings
- 5 Carl E. Mapes (R) Grand Rapids
- 6 Seymour H. Person (R) Lansing
- 7 Jesse P. Wolcott (R) Fort Huron
- 8 Dird J. Vincent (R) Saginaw
- 9 James C. McLaughlin (R) Muskegon
- 10 Roy O. Woodruff (R) Bay City
- 11 Frank P. Bohn (R) Newberry
- 12 W. Frank James (R) Hancock
- 13 Clarence J. McLeod (R) Detroit

MINNESOTA

- 1 Victor Christgau (R) Austin
- 2 Frank Clague (R) Redwood Falls
3. August H. Andresen (R) Red Wing
- 4 Melvin J. Maas (R) St. Paul
- 5 William I. Nolan (R) Minneapolis
- 6 Harold Knutson (R) St. Cloud
- 7 Paul J. Kvale (F-L) Benson
- 8 William A. Pittenger (R) Duluth
- 9 Conrad G. Selvig (R) Crookston
- 10 Godfrey G. Goodwin (R) Cambridge

MISSISSIPPI

- 1 John E. Rankin (D) Tupelo
- 2 Wall Doxey (D) Holly Springs
- 3 Wm. M. Whittington (D) Greenwood
- 4 Jeff Busby (D) Houston
- 5 Ross A. Collins (D) Meridian
- 6 Robert S. Hall (D) Hattiesburg
- 7 Percy E. Quin (D) McComb
- 8 James W. Collier (D) Vicksburg

MISSOURI

- 1 Milton A. Romjue (D) Macon
- 2 Ralph F. Lozier (D) Carrollton
- 3 Jacob L. Milligan (D) Richmond
- 4 David Hopkins (R) St. Joseph
- 5 Joseph B. Shannon (D) Kansas City
- 6 C. C. Dickinson (D) Clinton
- 7 Samuel C. Major (D) Fayette
- 8 William L. Nelson (D) Columbia
- 9 Clarence Cannan (D) Elsberry
- 10 Henry F. Niedringhaus (R) St. Louis
- 11 John J. Cochran (D) St. Louis
- 12 Leonidas C. Dyer (R) St. Louis
- 13 Clyde Williams (D) Hillsboro
- 14 James F. Fulbright (D) Doniphan
- 15 Joe J. Manlove (R) Joplin
- 16 William E. Barton (D) Houston

MONTANA

- 1 John M. Evans (D) Missoula
- 2 Scott Leavitt (R) Great Falls

NEBRASKA

- 1 John H. Morehead (D) Falls City
- 2 Malcolm B. Baldrige (R) Omaha
- 3 Edgar Howard (D) Columbus
- 4 J. N. Norton (D) Polk
- 5 A. C. Shallenberger (D) Alma
- 6 Robert G. Simmons (R) Scottsbluff

NEVADA

- At Large
- Samuel S. Arentz (R) Simpson

NEW HAMPSHIRE

- 1 Fletcher Hale (R) Laconia
- 2 Edward H. Wason (R) Nashua

NEW JERSEY

- 1 Charles A. Wolverton (R) Camden
- 2 Isaac Bacharach (R) Atlantic City
- 3 William W. Sutphin (D) Matawan
- 4 Charles A. Eaton (R) North Plainfield
- 5 Ernest R. Ackerman (R) Plainfield
- 6 Randolph Perkins (R) Woodcliff Lake
- 7 George N. Seger (R) Passaic
- 8 Fred A. Hartley, Jr. (R) Newark
- 9 Peter A. Cavicchia (R) Newark
- 10 Frederick R. Lehlbach (R) Newark
- 11 Oscar L. Auf der Heide (D) West N. Y.
- 12 Mary T. Norton (D) Jersey City

NEW MEXICO

- At Large
- Dennis Chavez (D) Albuquerque

NEW YORK

- 1 Robert L. Bacon (R) Westbury
- 2 William F. Brunner (D) Rockaway Park
- 3 George W. Lindsay (D) Brooklyn
- 4 Thomas H. Cullen (D) Brooklyn
- 5 Loring M. Black, Jr. (D) Brooklyn
- 6 Andrew L. Somers (D) Brooklyn
- 7 Mathew V. O'Malley (D) Brooklyn
- 8 Patrick J. Carley (D) Brooklyn
- 9 Stephen A. Rudd (D) Brooklyn
- 10 Emanuel Celler (D) Brooklyn
- 11 Anning S. Prall (D) West New Brighton
- 12 Samuel Dickstein (D) New York
- 13 C. D. Sullivan (D) New York City
- 14 Wm. I. Sirovich (D) New York City
- 15 John J. Boylan (D) New York City
- 16 John J. O'Connor (D) New York City
- 17 Ruth Pratt (R) New York City
- 18 Martin J. Kennedy (D) New York City
- 19 Sol Bloom (D) New York City
- 20 F. H. LaGuardia (R) New York City
- 21 Joseph A. Gavagan (D) New York City
- 22 Anthony J. Griffin (D) New York City
- 23 Frank Oliver (D) New York City
- 24 J. M. Fitzpatrick (D) New York City
- 25 Charles D. Millard (R) Tarrytown
- 26 Hamilton Fish, Jr (R) Garrison
- 27 Harcourt J. Pratt (R) Highland
- 28 Parker Corning (D) Albany
- 29 James S. Parker (R) Salem
- 30 Frank Crowther (R) Schenectady
- 31 Bertrand H. Snell (R) Potsdam
- 32 Francis D. Culkin (R) Oswego
- 33 Frederick M. Davenport (R) Clinton
- 34 John D. Clarke (R) Fraser
- 35 Clarence E. Hancock (R) Syracuse
- 36 John Taber (R) Auburn
- 37 Gale H. Stalker (R) Elmira
- 38 James L. Whitley (R) Rochester
- 39 Archie D. Sanders (R) Stafford
- 40 Walter G. Andrews (R) Buffalo
- 41 Edmund F. Cooke (R) Alden
- 42 James M. Mead (D) Buffalo
- 43 Daniel A. Reed (R) Dunkirk

NORTH CAROLINA

- 1 Lindsay C. Warren (D) Washington
- 2 John H. Kerr (D) Warrenton
- 3 Charles L. Abernethy (D) New Bern
- 4 Edward W. Pou (D) Smithfield
- 5 Frank Hancock (D) Oxford
- 6 J. Bayard Clark (D) Fayetteville
- 7 Walter Lambeth (D) Thomasville
- 8 Robert L. Doughton (D) Laurelsprings
- 9 Alfred L. Bulwinkle (D) Gastonia
- 10 Zebulon Weaver (D) Asheville

NORTH DAKOTA

- 1 Olger B. Burtress (R) Grand Forks
- 2 Thomas Hall (R) Bismarck
- 3 James H. Sinclair (R) Kenmare

OHIO

- 1 Vacancy caused by death
- 2 William E. Hess (R) Cincinnati
- 3 Byron B. Harlan (D) Dayton
- 4 John L. Cable (R) Lima
- 5 Frank C. Kniffin (D) Napoleon
- 6 James G. Polk (D) Highland
- 7 Charles Brand (R) Urbana
- 8 Grant E. Mouser, Jr. (R) Marion
- 9 Wilbur M. White (R) Toledo
- 10 Thomas A. Jenkins (R) Ironton
- 11 Mell G. Underwood (D) New Lexington
- 12 Arthur P. Lamneck (D) Columbus
- 13 William L. Fiesinger (D) Sandusky
- 14 Francis Seiberling (R) Akron
- 15 C. Ellis Moore (R) Cambridge
- 16 C. B. McClintock (R) Canton
- 17 Charles West (D) Granville
- 18 Frank Murphy (R) Steubenville
- 19 John G. Cooper (R) Youngstown
- 20 Charles A. Mooney (D) Cleveland
- 21 Robert Crosser (D) Cleveland
- 22 Chester C. Bolton (R) Cleveland

OKLAHOMA

- 1 Wesley E. Disney (D) Tulsa
- 2 William W. Hastings (D) Tahlequah
- 3 Wilburn Cartwright (D) McAlester
- 4 Tom D. McKeown (D) Ada
- 5 F. B. Swank (D) Norman
- 6 Jed Johnson (D) Anadarko
- 7 James V. McClintic (D) Snyder
- 8 Milton C. Garber (R) Enid

OREGON

- 1 Willis C. Hawley (R) Salem
- 2 Robert R. Butler (R) The Dalles
- 3 Charles H. Martin (D) Portland

PENNSYLVANIA

- 1 James M. Beck (R) Philadelphia
- 2 George S. Grabam (R) Philadelphia
- 3 Harry C. Ransley (R) Philadelphia
- 4 Benjamin M. Golder (R) Philadelphia
- 5 James J. Connolly (R) Philadelphia
- 6 George A. Welsh (R) Philadelphia
- 7 George P. Darrow (R) Philadelphia
- 8 James Wolfenden (R) Upper Darby
- 9 Henry W. Watson (R) Langhorne
- 10 J. Roland Kinzer (R) Lancaster
- 11 Parick J. Boland (D) Scranton
- 12 C. Murray Turpin (R) Kingston
- 13 George F. Brumm (R) Minersville
- 14 Norton Lichtenwalner (D) Allentown
- 15 Louis T. McFadden (R) Canton
- 16 Robert F. Rich (R) Woolrich
- 17 F. W. Magrady (R) Mount Carmel
- 18 Edward M. Beers (R) Mount Union
- 19 Isaac H. Doutrich (R) Harrisburg
- 20 J. Russell Leech (R) Ebensburg
- 21 J. Banks Kurtz (R) Altoona

- 22 Harry L. Haines (D) Red Lion
- 23 J. Mitchell Chase (R) Clearfield
- 24 Samuel A. Kendall (R) Meyersdale
- 25 Henry W. Temple (R) Washington
- 26 J. Howard Swick (R) Beaver Falls
- 27 Nathan L. Strong (R) Brookville
- 28 Thomas C. Cochran (R) Mercer
- 29 Milton W. Shreve (R) Erie
- 30 William R. Coyle (R) Bethlehem
- 31 Adam M. Wyant (R) Greensburg
- 32 Edmund F. Erk (R) Pittsburgh
- 33 Clyde Kelly (R) Edgewood
- 34 Patrick J. Sullivan (R) Pittsburgh
- 35 Harry A. Estep (R) Pittsburgh
- 36 Guy E. Campbell (R) Crafton

RHODE ISLAND

- 1 Clark Burdick (R) Newport
- 2 Richard S. Aldrich (R) Warwick
- 3 Francis B. Condon (D) Pawtucket

SOUTH CAROLINA

- 1 Thomas S. McMillan (D) Charleston
- 2 Butler B. Hare (D) Saluda
- 3 Fred H. Dominick (D) Newberry
- 4 John J. McSwain (D) Greenville
- 5 William F. Stevenson (D) Cheraw
- 6 Allard H. Gasque (D) Florence
- 7 Hampton P. Fulmer (D) Orangeburg

SOUTH DAKOTA

- 1 C. A. Christopherson (R) Sioux Falls
- 2 Royal C. Johnson (R) Aberdeen
- 3 William Williamson (R) Rapid City

TENNESSEE

- 1 O. B. Lovette (R) Greenville
- 2 J. Will Taylor (R) La Follette
- 3 Sam D. McReynolds (D) Chattanooga
- 4 J. R. Mitchell (D) Crossville
- 5 Edwin L. Davis (D) Tullahoma
- 6 Joseph W. Byrns (D) Nashville
- 7 Edward E. Eslick (D) Pulaski
- 8 Gordon Browning (D) Huntingdon
- 9 Jere Cooper (D) Dyersburg
- 10 E. H. Crump (D) Memphis

TEXAS

- 1 Wright Patman (D) Texarkana
- 2 Martin Dies, Jr (D) Orange
- 3 Morgan G. Sanders (D) Canton
- 4 Sam Rayburn (D) Bonham
- 5 Hatton W. Sumners (D) Dallas
- 6 Luther A. Johnson (D) Corsicana
- 7 Clay Stone Briggs (D) Galveston
- 8 Daniel E. Garrett (D) Houston
- 9 Joseph J. Mansfield (D) Columbus
- 10 James P. Buchanan (D) Brenham
- 11 O. H. Cross (D) Waco
- 12 Fritz G. Lanham (D) Fort Worth
- 13 Guinn Williams (D) Decatur
- 14 Harry M. Wurzbach (R) San Antonio
- 15 John N. Garner (D) Uvalde
- 16 R. Ewing Thomason (D) El Paso
- 17 Thomas L. Blanton (D) Abilene
- 18 Marvin Jones (D) Amarillo

UTAH

- 1 Don B. Colton (R) Vernal
- 2 F. C. Loofbourow (R) Salt Lake City

VERMONT

- 1 John E. Weeks (R) Middlebury
- 2 Ernest W. Gibson (R) Brattleboro

VIRGINIA

- 1 Schuyler Otis Bland (D) Newport News
- 2 Menalcus Lankford (R) Norfolk
- 3 Andrew J. Montague (D) Richmond
- 4 Patrick H. Drewry (D) Petersburg
- 5 Thomas G. Burch (D) Martinsville
- 6 Clifton A. Woodrum (D) Roanoke
- 7 John W. Fishbourne (D) Charlottesville
- 8 Howard W. Smith (D) Alexandria
- 9 John W. Flannagan, Jr. (D) Bristol
- 10 Henry St. George Tucker (D) Lexington

WASHINGTON

- 1 Ralph A. Horr (R) Seattle
- 2 Lindley H. Hadley (R) Bellingham
- 3 Albert Johnson (R) Hoquiam
- 4 John W. Summers (R) Walla Walla
- 5 Samuel B. Hill (D) Waterville

WEST VIRGINIA

- 1 Carl G. Bachman (R) Wheeling
- 2 Frank L. Bowman (R) Morgantown
- 3 Lynn S. Hornor (D) Clarksburg
- 4 Robert L. Hogg (R) Point Pleasant
- 5 Hugh Ike Shott (R) Bluefield
- 6 Joe L. Smith (D) Beckley

WISCONSIN

- 1 Vacancy caused by death
- 2 Charles A. Kading (R) Watertown
- 3 John M. Nelson (R) Madison
- 4 John C. Schafer (R) Milwaukee
- 5 William H. Stafford (R) Milwaukee
- 6 Michael K. Reilly (D) Fond du Lac
- 7 Gardner R. Withrow (R) La Crosse
- 8 Gerald J. Boileau (R) Wausau
- 9 George J. Schneider (R) Appleton
- 10 James A. Frear (R) Hudson
- 11 Hubert H. Peavey (R) Washburn

WYOMING

- At Large
- Vincent Carter (R) Kemmerer

ALASKA

- James Wickersham (R) Juneau

HAWAII

- Victor S. K. Houston (R) Honolulu

PHILIPPINE ISLANDS

- Camilo Osias (N) Balaoan
- Pedro Guevara (N) Santa Cruz

PORTO RICO

- Felix Cordova Davila (U) San Juan

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The School of the Air

WILLIAM C. BAGLEY

EVEN THE CASUAL STUDENT OF HISTORY can scarcely fail to be impressed by the fact that the great turning points in social evolution have been correlated with marked advances in the arts of communication. It is perhaps without exaggeration that the invention of writing has been characterized as the greatest single event in mankind's advance from the plane of savagery; it is probably something more than a mere coincidence that what we recognize as modern history dates from the development of the printing press in western Europe; and it is certainly more than a mere coincidence that the standards of contemporary civilization classify contemporary nations as advanced or backward in precise proportion to the degree of literacy or of illiteracy that their masses represent. If, in the past, inventions, improvements, and enlargements in the arts of communication have apparently influenced in so profound a way the course of human destiny, one has abundant reason to expect a similar, although perhaps not so profound an influence from the developments that have characterized these arts during the past decade and in the further developments that are clearly predictable in the near future.

Those of us who are associated with the work of education have, of course, a peculiar interest in these possibilities. Our art not only depends upon the arts of communication, its basic function is to conserve these arts and to expand them on a basis that will be as nearly universal as possible. What, then, is the indicated task or duty of education in respect of these new developments, and specifically in respect of radio?

Quite obviously, the possibilities of radio as a means of supplementing the work of the schools should be carefully explored. Radio now provides an agency for reaching vast numbers of people whose formal education has been limited. Many of these people read little if at all beyond the news columns of the daily and weekly press. Many of them will listen to discussions that they would not read. It can scarcely be doubted that radio is now bringing to many of these people an intellectual stimulus that has hitherto been lacking. It is true that programs broadcasting serious discussions

must compete with programs that are limited exclusively to entertainment, and it is true, also, that advertisers will not



WILLIAM C. BAGLEY who has been associated with the Columbia Broadcasting Company in the development of the American School of the Air.

finance educational programs as they will finance entertainment programs. The fact remains, however, that programs of an educational character are being broadcast and there is every reason to believe that they are listened to with profit by many persons who would be unlikely in other ways to receive the same stimulus.

During the past fall and early winter, for example, the Columbia Broadcasting System sent out a series of broadcasts dealing with the changes that have taken place in certain foreign countries during recent years. The programs were prepared with the cooperation of the Institute of International Education, of which Dr. Stephen P. Duggan is director. Changes in England were discussed under the caption, *The Passing of the Aristocratic Tradition*. *The Maintenance of the Bourgeois State* was the theme for France; Italy quite appropriately offered the text of a talk on *The Fascist Conception of Society* and the situation in Germany illustrated *The Conflict of Political and Social Ideals*. The series closed with two programs of a more general type: one on *The Future of Primitive Peoples*; the other a forecast of *The Civilization of Tomorrow*.

Thru the Columbia Broadcasting System, also, broadcasts from London brought to American homes the following discussions; *Women in Politics* by Mary Agnes Harding, *After Prohibition—What?* by Viscount Astor, *The World of Our Grandchildren* by H. G. Wells, *Science and Religion* by Sir Arthur Eddington, and *Peace and Anglo-Saxon Relations* by Norman Angell.

A recent development is a series of broadcasts on science, sponsored by Science Service of Washington. These programs are sent out each Friday from 3:45 to 4:00 PM. Of a more specific educational character are the French lessons of Dr. Thatcher Clark and Mr. Frederick William Wile's discussion each week of *The Political Situation in Washington*.

Measured by the criteria to which the broadcasting companies are largely limited in determining the success or failure of their efforts—namely, the number and character of the letters received from listeners—all of these serious programs have been encouragingly successful, and this phase of the Columbia System's service will be enlarged and extended next year.

That there are large possibilities in radio for the extension of adult education seems to be clearly demonstrated. People will listen to serious discussions if such discussions are well prepared and well delivered. When one remembers that several of the chapters of Sir James Jeans's *The Universe Around Us* were first prepared for, and broadcast to, radio audiences in England one may gain some idea of the caliber and scope of the instruction that radio can bring to the great masses of the people. It is, indeed, fortunate that a standard has been set by authorities so highly regarded as Wells, Eddington, Angell, and Jeans, and that the serious programs broadcast in this country are sponsored by such organizations as the Institute of International Education and Science Service.

Passing now to the radio programs designed especially for the schools, credit should first be given to the pioneer and highly successful work of Mr. Damrosch and the National Broadcasting Company in the field of music. It is impossible to estimate the influence that these programs have beyond doubt exerted in ad-

vancing the standards of musical appreciation in the coming generation. What these programs have already done is indicative of the vast possibilities of the radio in solving some of the far-reaching problems of mass-education and [if I may use a much abused term] of mass uplift.

The Columbia Broadcasting System has inaugurated two series of programs for schools—one addressed to the students of the higher institutions, the other to the boys and girls of the elementary and high schools.

The educational broadcasts to the university and college student bodies have been organized in cooperation with the National Student Federation. The effort in this particular field is to promote a spirit of cooperation among the students of the United States, to give consideration to questions affecting student interest, to develop an intelligent student opinion on questions of national and international importance, and to foster understanding among the students of the world in the furtherance of an enduring peace. The National Student Federation of America operates under a National Board of Advisers who take a very active part in this work. On the membership of this board are Dr. Donald J. Cowling, Mr. William G. Schram, Hon. John W. Davis, Dr. Stephen P. Duggan, Dean Virginia Gildersleeve, Dr. Robert A. Millikan, Dr. Paul Monroe, Dean Charles H. Rieber, and Dr. Stephen S. Wise.

Programs broadcast under the auspices of the National Student Federation have presented the following: Sir Rabin-dranath Tagore, speaking on *Youth Rebuilding the World*, Dr. Karl Becker, Minister of Education in Prussia for ten years, whose topic was *The Crisis in Learning*, Dr. Ray Lyman Wilbur, speaking on *American Students Responsibility for Citizenship in the Modern World*, Dr. Julius Klein on *Students and the Nation's Business*, Miss Agnes Mac-Phail, Canada's first woman member in Parliament and the League's first woman in the Disarmament Commission, who spoke on *Since We Got the Vote*. Other prominent speakers scheduled to address student bodies of the Nation are Herr Wolf von Dewall on *Naval Disarmament*, Dr. P. C. Chang on *The Student Movement in the Orient*, James G. MacDonald on *Russia Under the Five-Year Plan*. These programs are presented from 4:30-5:00 PM, eastern standard time.

The major efforts of the Columbia Broadcasting System in the field of school education are represented by a

series of programs initiated a little over a year ago under the name, *The American School of the Air*. Last year these programs were broadcast twice each week on a nationwide circuit. Topics from history, literature, art, and music were treated in various ways. Apparently the most effective technic thus far developed for educational programs addressed to school children is that which dramatizes historical events and scenes from literary masterpieces. Radio dramatization is a highly specialized technic but it has been worked out with gratifying success by Mr. Henry F. Carlton and Mr. William F. Manley.

At the close of the programs last May, a letter was sent by the Columbia Broadcasting System to the state superintendent of schools and commissioners of education asking whether, in their judgment, the programs should be continued for another year. Eighty percent of these officials replied and each of these urged a continuance. Plans were accordingly made for the current year. Programs are now given on each school day. They are differentiated for primary grades, intermediate grades, the junior high school, and the senior high school. History, literature, including story-telling, and music are included as in last year's programs, vocational guidance and current events have been added. The dramatic technic has been still further refined for the history and for some of the literature programs. The vocational guidance talks have taken the form of dialogues between wellknown leaders in industrial, business, and professional life and interviewers.

A word may be permitted as to the construction of the programs. From the outset every effort has been made to insure their accuracy and educational adequacy. A staff comprising recognized authorities in each of the fields included in the programs has been organized and every program must pass muster at the hands of a specialist in the field that the program represents. Beyond this, every continuity is scrutinized by a highly trained teacher of English, who has had a long experience in the elementary and secondary schools. Every effort is made and no expense is spared to insure accuracy and authenticity in the dramatic presentations of historical events and of literary masterpieces.

In order to make the programs of real educational value, a teachers' manual is sent to every teacher who asks for it. This manual provides an outline of each broadcast, with detailed suggestions for project and problem work suited to the

various grade-levels. Carefully prepared bibliographies are also included. By this means, the teacher may not only prepare a class for a program but also make full use of the stimulus provided by the program as a basis and incentive for school work of varied sorts in the subject-matter field that the program represents.

What is termed in radio parlance the *fan mail* is particularly revealing in connection with the programs of the American School of the Air. Letters, compositions, dramas, drawings, and other types of classwork stimulated by the programs are sent in literally by the thousands. Last year Edwin Markham read some of his poems as a part of one of the programs and suggested that the pupils themselves try their hands at writing poetry. How many acted upon this suggestion there is no means of knowing, but the central office received thru the mail over a thousand poems from school children.

Communications came not only from teachers and school children, but also from parents and particularly from mothers of shutin children who speak, sometimes in peculiarly touching tones, of the privilege of having at least a little bit of school life and school work brought to their crippled and invalid children. The following letter speaks for itself:

My boy and I heard your first broadcast this afternoon and I feel that it is going to be a wonderful success. Not only for the schools, teachers, and parents but for those who are shutin invalids. My boy is a shutin sixteen years old and he has been looking forward to this school of the air with keen interest, feeling that at last he, too, can go to school.

How much school means to children is appreciated most keenly, I think, by those whose own children are deprived of the companionship of schoolmates and the experience of school life. Modern civilization has its weaknesses and modern education is far from perfect but if you think that the modern universal school means little or nothing to modern life, get in touch with the parents whose children cannot go to school. They know that their children are missing something which, with all of its shortcomings and imperfections, is still precious and fine.

Letters come, too, from men and women long past their school days. Some of these find in the programs prepared for the schools a stimulus which meets a need in their own lives and which suggests again the very large possibilities of the radio in the field of adult education. The following letter is not at all typical of many that come to the Columbia Broadcasting System:

I am not a child or a teacher, but a new pupil of eighty-nine years of age with eyesight most gone.

By accident I tuned in my radio and heard you. I had said to a friend but an hour previous that I was so tired of cooking schools, beauty parlors, and so much playing and singing good, bad, and indifferent that I didn't see why something good and interesting could not come on the radio, so I welcome your school of the air.

At the present time, all of the educational programs of the Columbia Broadcasting System are financed by the system itself and carry no commercial advertising. The programs of the American School of the Air were formerly financed jointly by the Columbia Broadcasting System and the Grigsby-Grunow Company, manufacturers of radio sets. Each program, in conformity with the law, carried at that time an announcement of this joint sponsorship. The Columbia Broadcasting System is now providing educational broadcasts at an expense far in excess of a half-million dollars annually, the programs of the American School of the Air alone accounting for approximately this sum.

In the development of the radio in educational work, the support and con-

trol of the programs constitute a problem of far-reaching significance and fundamental import. In our country the radio is essentially a commercial enterprise. It derives its support and its profits from the commercial advertising that its broadcasts carry. Quite obviously advertisers will pay the largest amounts for programs that will be listened to by the largest number of people, and quite as obviously these will be amusement and entertainment programs rather than educational programs.

Ultimately substantial programs of an educational character may be provided, as they are in some other countries, at public expense and under the direct control of public education authorities. There are a few programs of this type in connection with state and city school systems but nothing as yet on a nationwide basis. National educational programs are being provided by the two great broadcasting systems that divide the national circuits between them. In the organization and administration of these, the educational profession is represented by advisory boards. It is not only to the advantage of the broadcasting companies that the educational broad-

casts be approved by the educational profession; it is of the utmost importance from the point of view of social welfare and progress.

I may say in conclusion, then, that the broadcasting system which I represent on this occasion will welcome not only criticisms of its programs but also suggestions for their improvement or enlargement. These programs are put forth frankly as experimental and, in the case of the school programs, as supplementary to the regular work of the school. If they are merely one more of the many innovations that tend to congest school programs and distract pupils and students from the serious work of the school, they should be changed or abandoned. The profession of education alone will be competent to pass judgment on this question. If, in a measure commensurate with the time that they consume, they can incite the learners to increased effort, if they can bring into the schools something that cannot be brought so effectively in other ways, both their cost to the sponsors and their use by the schools will be justified.—From an address delivered at the Annual Schoolmen's Week held at Phila., Penn.

The Enrichment of Adult Life

GOING TO SCHOOL and getting an education are two different things. We have seen people who went to school so much that they missed getting an education. There are many others who are intelligent beyond their schooling and not like some highbrows who are educated beyond their intelligence.

Some folks have the idea that they are sick of education, when as a matter of fact they had a youthful attack of schooling indigestion from which they have never fully recovered.

Yet these same adults show a real affection for adult education. If they didn't they would not turn radio dials and listen to educational, musical, political, theatrical, and economic programs. If folks were not interested in enriching their lives they would never travel, modernize their farms and homes, read newspapers and magazines, or learn to operate a new gear-shift.

In a very large way we adults have gone back to school—not to the little brick or wood schoolhouse but rather to the radio, newspaper, magazine, club, extension, correspondence, and movietone

school. My only point is that much of the education received so informally needs to be supplemented by definite and free public instruction. We who pay tax bills directly or indirectly are just as much entitled to a free opportunity for self-improvement as are the youngsters.

In fact, you and I know that we really have more use for education than many of our children seem to have. Some day our children are going to use their schooling. Well and good—that's all right. But meanwhile you and I, as adults, could use today an education which we never received.

So I, for one, have gone back to school. I go to a musical radio school and hear Walter Damrosch and symphony concerts. I have enrolled in a current-events class and hear Lowell Thomas, Floyd Gibbons, and H. V. Kaltenborn. I attend newsreel schools at movies. I have joined, for two cents a day, a newspaper reading school. My wife attends a parent-teacher association school where she learns about childhood and the practical cooperation between school and home. My secretary goes to a night high school for that academic diploma which she lost in the days

of her early schooling. My janitor is studying steam boiler practise by correspondence. Everybody in my personal and official family is going to school—except my dog. His education is finished.

Speaking about dogs. The old saying is, "You can't teach an old dog new tricks." Well, you can. I know because I have raised thirty dogs. But generally speaking you can't teach an old dog many new tricks, because he is no longer a student. He finished his education when he finished his schooling.

But adult humans are not dogs. Psychologists have proven that adults can be taught new tricks and that they learn nearly as well as young folks. That's encouraging, isn't it? This means that mother can study French or Spanish as profitably as her high-school daughter; that father, who is now bookkeeper, can study public accountancy and do as well, if not better, than his young son who is learning fractions. If adults could not be taught new tricks there would be no market for inventions, no field for investments, no travel, no radio, no movie, no new ideas. The whole world would be a flat tire.

We are living in a very complicated age. A complicated world involves a complicated man. And that's why some men have failed—they could not learn new tricks in the complications of modern life.

Many working men and women are always hovering on the edge of vocational failure. New processes of manufacturing, new ways of distributing products, and new systems of financing and accounting mean new workers. The old dog who will not learn new tricks must stand aside. It's only those who have the habit of learning, the habit of thinking, the habit of *growth*, who can keep in line with this complicated old world.

I know folks want to grow. Otherwise they would not subscribe for correspondence courses and pay out their own money for a thing which I think they should get for nothing thru the educational system. Surely a paved highway to adult learning is entitled to a bond issue.

I know people are ambitious or else they would not enrol in the "Fly-by-night" and "Hide-by-day" fake schools, which promise to make you a seat-warmer endorsing a thousand-dollars-a-month salary check at a mahogany desk. Why not public funds for selfimprovement of those who support the state by their industry? Instead of playing *upon* ambition for commercialized, selfish, and dishonest ends, let the community play *up* to ambition by helping those who would help themselves.

Why shouldn't mother go back an hour a day or a couple of hours a week to school to study home decoration, French, parliamentary law, care of babies, or whatnot?

Why shouldn't bookkeeper father, who sees himself soon out of a job because a youngster can run an adding machine, go to a free evening vocational school or take a university extension course which will prepare him to learn a new vocational trick in a world full of new tricks?

I like to hear an investment talk, or a

speech about economics, or listen to beautiful music over the radio. They stir my imagination and interest. They make

COLLEGE STATIONS EFFICIENT—
Five college broadcasting stations were among those commended for technical efficiency by W. D. Terrell, Director of the Radio Division of the U. S. Department of Commerce, in a press memorandum on March 21, 1931. The Division made 7934 measurements of the frequencies of 365 stations. Fifty-two of these stations showed a deviation of less than 100 cycles from their assigned frequencies. Among the 52 were: WHAD, Marquette University; WKAR, Michigan State College; WOI, Iowa State College of Agriculture and Mechanic Arts; WRUF, University of Florida; and WSUI, State University of Iowa.—Armstrong Perry.

me want to grow. I like this listening and seeing education which I am getting while sitting in a comfortable chair. But I need more. I want to attend a class in investments. I want to know the basic principles of economics. I want to learn to play an instrument. Listening and seeing are good but I want to be up and doing. I want a better job, more money, a richer life.

Quite frankly, my own educational requirements at my age are just as important to me as any school requirements of my ten-year-old boy are to him at his age.

I don't see why I shouldn't use the school or the public university for my own education. I don't see how I ever got into the habit of thinking that I was thru with education just because I pos-

sessed a diploma. The world has grown a great many new tricks since this old dog graduated.

Whenever I get philosophical I like to compare life with a tree. A tree starts small, just as I did. If its roots had been confined to the limits of an iron water pail it would have died, just as I would have died mentally and physically had I been confined to the limits of an iron pail schooling.

The tree wanted to grow. Its roots reached out and covered new ground. They drew new sources of nourishment. Every foot of new height meant new and longer roots. The tree reaches for the sky, even as you and I. The tight water pail couldn't hold its aspirations. Mere schooling of my younger days cannot hold the nourishment necessary for the growth of my own roots of human desires.

The tree roots cannot break thru an iron pail; that's why we plant tree seedlings in paper cups. You and I must look upon our early schooling as being merely of the paper-cup idea. It served a good purpose in starting our roots in a rich soil which gave us the desire to grow *outside of the paper cup*. Those who see no use for further education are existing with their educational roots in the root-bound pails of a childhood schooling.

Paper-cup education is all right for seedling youngsters. Make the soil rich. Help the children to get the habit of learning. Train them to be intellectually curious. Teach them to grow.

But we oldsters are educationally root-bound. We ask increased interest in the public education of adults that we, like our children, may live enriched lives which shall continue to grow.

We oldsters are old dogs but we'll show the world we can learn new tricks if given half a chance.—Arthur Dean.

In Great Britain the increase of radio receiving sets is greater than ever before. This shows the popularity of a radio program free from advertising.

EDUICATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the groups with which they are associated are as follows:

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Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.

R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.

J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.

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Superpower

WHEN AN ARMY has made a considerable advance all along the sector attacked, it digs in, entrenches, and prepares to hold the ground it has won. Thus have generals of war taught a lesson to captains of industry—a lesson learned thoroughly by commercial radio interests. However, the business of entrenchment—in the radio war—has been and is still a great deal more stimulating for the commercial radio strategists than was their pursuit of the listless battle for highpower station acquisition against the genial hosts of the Federal Radio Commission.

The battle began in the summer of 1928 soon after enactment of the Commission's General Order Number 40 on August 30 of that year. In the provisions of General Order Number 40, the Commission established channels or frequencies for the operation of broadcast stations.

Among other things, the order set up forty clear channels, eight per zone, on each one of which only one station might operate. In September of the same year the Commission's General Order Number 42 was promulgated for the purpose of establishing power for these stations. Regarding clear channels General Order Number 42 read:

That for the purpose of determining by experiment whether interference will result from the use of a greater amount of power, the Commission may authorize the use of not more than fifty kilowatts power by any of such broadcasting stations for the next license period beginning after the date of this Order.

Thereafter the battle was begun in earnest. On all fronts the commercial radio interests advanced their lines. The two powerful chains, NBC and CBS, trained their heaviest artillery, ruthlessly ignoring protestations of smaller stations, crushing educational stations under a broad heel, spiked with hobnails of commerce. A commercial radio giant was born, and, seemingly with some justification, became known as the *radio trust*. It patented its tools and machinery which henceforth were available to the opposition only at prohibitive prices. It sought, and in large measure obtained, increasingly greater power for its stations.

Driven back within its own miserable citadel, the opposing force held a council of war to determine the next move. As a result the Commission issued General Order Number 42 as amended. It

substituted for General Order Number 42 the following language:

That, until further order of the Commission, and not more than 4 of such frequencies from each zone shall be assigned for use of stations operating with 25 kilowatts regular, and 25 kilowatts experimental power.

Impartial observers detected a two-edged sword in the phrase *and 25 kilowatts experimental power*. Those stations granted 25 kilowatts regular and 25 kilowatts experimental power actually had been given 50 kilowatts power with which to spread the propaganda of their paying clients.

General Order Number 42 as amended was a wedge forcing a gate. Twelve positions on the broadcast band already were operated by stations granted high power licenses. Under General Order Number 42 as amended, eight more were available. Almost overnight twenty-four stations dropped arguments into the high-power grabbag to await the draw for eight.

Once again the commercial radio legion pulled up its big guns which would have laid siege to the Commission's fortress had not the attackers found a friend at court. In making his findings on the twenty-four applicants, Chief Examiner Ellis A. Yost asked the Commission to amend General Order Number 42 as amended to permit the use of 50 kilowatts power on all 40 clear channel positions!

The Commission winced. Mr. Yost had gone too far. The Commissioners declined to adopt his recommendation to amend General Order Number 42 as amended and, remanding his report, respectfully asked him to select eight stations for high-power in conformance with provisions of General Order Number 42 as amended.

Almost simultaneously with the date of the Commission's rejection of the examiner's report, the National Committee on Education by Radio was formed at Chicago on December 30, 1930. *Vox clamantis in deserto*, but voices which are being heard.

A supplemental report was prepared by Mr. Yost in which he selected eight stations for high-power, subject to the approval of the Commission. Checked for the first time in their steady march of acquisition, the commercial forces determined to dig in, entrench themselves on the ground already won. If court action became necessary, perhaps their

case would be strengthened by an exhibition of evidence to prove millions of dollars invested. Shrewd lawyers were retained as the Commission, on Monday, April 13, began hearings on behalf of the twenty-four applicants for high-power.

In the interim, the National Committee on Education by Radio sought and was granted permission to submit a dissenting argument. The Committee prepared the argument after having solicited the guidance and advice of educators in various states. On April 18 it was presented before the Commission by Dr. John Henry MacCracken, member of the Committee from the American Council on Education. The argument, which fully and adequately states the Committee's position regarding a selfish grab for high-power radio stations, is published herewith.

The National Committee on Education by Radio appreciates the privilege granted to it by the Federal Radio Commission of appearing at this hearing. The present situation of broadcasting leaves the Committee no other choice but to oppose these applications which are now under consideration.

This Committee, which has headquarters at 1201 16th Street, N. W., Washington, D. C., is composed of officially designated representatives of the following organizations:

- The National Council of State Superintendents of Public Instruction
- The National Association of State University Presidents
- The Association of College and University Broadcasting Stations
- The National Education Association
- The National University Extension Association
- The National Catholic Educational Association
- The American Council on Education
- The Jesuit Education Association
- The Association of Land Grant Colleges and Universities

This Committee does not represent any department or agency of the federal government, which, in accordance with the provisions of the Constitution of the United States, always has left to the individual states the control of public education within their respective boundaries.

The applications of twenty-four broadcasting stations for the privilege of using the maximum amount of power permitted by the Federal Radio Commission appears to our Committee to be a step

toward a commercial monopoly of all broadcasting channels. Such a monopoly would not serve the public interest, convenience or necessity, in the opinion of our Committee. On the contrary, it would deprive the several states, and the officials of public education, of rights guaranteed to them by the Constitution of the United States. It would deprive them of the opportunity to fully perform their official functions, so far as radio is concerned, and would place them under the control of commercial radio companies, because broadcasters claim and exercise the right to censor the programs which they broadcast. Broadcasting stations are not common carriers. They are not public utilities in the same sense that telegraph and telephone companies are. No state department of education, state college, or university, has established the legal right to use a commercial broadcasting station except at the invitation of, or by the consent of, the owner of that station. The only way in which the states can preserve the right to broadcast information and instruction to their citizens is by maintaining control of some broadcasting channels.

The belief of our Committee that the applications of these twenty-four broadcasting stations for licenses to use the maximum amount of power is a step toward a commercial monopoly of all broadcasting channels is based on evidence such as the following:

[1] According to the official lists of broadcasting stations published by the United States Department of Commerce and the Federal Radio Commission, the number of stations owned and operated by schools, colleges, universities, states, municipalities, or their agencies has decreased as follows:

Year	All Stations	Educational Stations	Percentage of Educational Stations
1926	537	105	19.5
1927	706	104	14.0
1928	711	98	13.7
1929	637	78	12.0
1930	640	65	10.1
1931	613	58	9.4

[2] A survey made by the Federal Radio Commission in 1931 shows that the total number of hours occupied by 522 of the 605 broadcasting stations in the United States between January 11 and January 17, 1931, was 34,811, whereas the number of hours occupied by 42 educational stations was 1027, or 2.95 percent of the total.

[3] The chief engineer of the Commission, in a tabulation of the educational radio stations of the United States published in *Education by Radio*, the bul-

letin of our Committee, February 26, 1931, showed that the total units allotted to these stations was 24.06, which is only 5.5 percent of the total, 433.32 units, shown in the Commission's report of March 3, 1931, as allotted to all stations.

[4] These applicants for maximum power have been favored by the assignment of national clear channels for their exclusive use. Forty clear channels are allotted to approximately the same number of stations while more than 550 stations, some of which have applied for clear channels without success, have been crowded into the remaining fifty channels available in the United States.

[5] Some of the rules of this Commission favor commercial stations and work hardship on educational institutions. For example, at a hearing before this Commission on March 23, Docket No. 1134, it was revealed that the applicant, an association representing a public high school, could not be granted the privilege of operating a 2-watt station without increasing the number of units assigned to the state and zone, whereas a commercial station in the same state, with the permission of this Commission, could increase its power from 10,000 to 50,000 watts without increasing the number of units assigned to the state and zone. This commercial station already recommended by the chief examiner for maximum power could increase its power 400 percent, giving it more than three times the power of all other stations in the state combined, without changing the status of the state with respect to its quota of radio facilities, but the high school could not have four ten-thousandths of that amount of power without changing the status of the state materially. Such a condition is unfair to all the smaller stations, and to the public, and encourages monopoly. In this state, the station which the chief examiner has recommended for power more than three times that of all other stations in the state combined, exercised its power of censorship so obnoxiously, and so contrary to the interests of the farmers in its service area, that the State University withdrew its cooperation from the station, according to a statement by the President of the University.

[6] In another hearing before this Commission the examiner, because of the rules of the Commission, refused to accept in evidence letters and affidavits from the Governor and other officials of a state whose only educational station was defending its rights against an attack by a commercial station. Ignoring the appeals of the state officials to the

Commission for the protection of the state's only radio outlet that was not subject to commercial control and censorship, the examiner recommended that the commercial station be permitted to deprive the educational station of its channel.

[7] In the report of its Legislative Committee, adopted by the National Association of Broadcasters in November, 1930, it is stated, in referring to a suggestion that the educators might ask Congress to reserve some radio channels for educational purposes: *Such action appears to your Committee to be based on a totally false conception of the proper function of broadcasting stations.*

This Association took steps at this meeting to oppose any legislation directed toward the reservation of radio channels for other than commercial purposes. The proper function of broadcasting stations as seen by commercial broadcasters is, then, as one expressed it, *to build up audiences that can be sold to advertisers.* And in trying to secure all of the radio channels for this purpose they are attacking the stations owned and operated by states, and by educational institutions owned or chartered by states, and the dominant stations and groups are attacking all others by means of these applications for maximum power.

It has been stated that the high power stations would not interfere with the reception of weaker stations, but the chief examiner, in his report on the high power hearings [No. 3590, p. 85, par. 25] has pointed out the danger. He says, "If all clear channel stations should operate with a power output of 50 KW, they would not interfere with the successful operation of local and regional stations nor prevent their increase in number, except on local and regional channels adjacent to the clear channels, and then only in the geographical vicinity of the clear channel stations." He has not explained how forty clear channels can be distributed among the seventy-nine channels used exclusively by stations in the United States without making every other channel adjacent to a clear channel, nor how any other station can avoid being in the geographical vicinity of one or more clear channel stations. Nor has he explained what the effect would be if, after the favored stations were granted high power and became well entrenched thru large investments, Canada, Mexico and Cuba should demand larger shares of the North American channels.

[8] An analysis of the list of stations having, or applying for, maximum power, shows that twenty-nine out of forty sta-

tions are owned or operated by, or associated with, the largest chain broadcasting companies, and that the amount of power that these stations are seeking would give them ten times as much as all the independent stations in the United States.

[9] A member of the Federal Radio Commission has stated, in a public address:

. . . it cannot be denied that a monopoly of radio is now insistently claimed by a group, and that its power and influence are so subtle and effective as to portend the greatest danger to the fundamentals of our government. No greater issue presents itself to the citizenry. A monopoly of mere property may not be so bad, but a monopoly of the voice and expression of the people is quite a different thing. The doctrine of free speech must be preserved. The use of the air for all, not for the few, must be protected. Shall the big business interests have the air, and the average man be denied it? It does not in reason suffice that he may hear what others say to him; he also has the natural right to speak.

. . . Shall one group or any individual say what shall be said at such long range to millions of listeners? If so, there is a clear violation of the guaranty of free speech.

[10] In May, 1930, our federal government brought charges against the dominant commercial radio group for:

. . . an unlawful combination and conspiracy in restraint of trade and commerce among the several States, and with foreign nations in radio communication and apparatus, and the defendants are parties to contracts, agreements and understandings in restraint of said commerce . . .

The United States Circuit Court of Appeals for the Third Circuit, in an opinion on a case in which the same group was a defendant (No. 4354, October term, 1930) stated:

The exclusive making of tube sales, obviously the purpose of the contract, was to effect a monopoly . . .

The radio law says:

Sec. 13. The licensing authority is hereby directed to refuse a station license and/or the permit hereinafter required for the construction of a station to any person, firm, company, or corporation, or any subsidiary thereof, which has been finally adjudged guilty by a Federal court of unlawfully monopolizing or attempting unlawfully to monopolize, after this Act takes effect, radio communication, directly or indirectly, through the control of the manufacture or sale of radio apparatus, through exclusive traffic arrangements, or by any other means or to have been using unfair methods of competition.

The situation, therefore, which places the National Committee on Education by Radio under obligation to protest against the granting of the applications of these

stations for maximum power is as follows: A commercial monopoly of broadcasting channels is almost an accomplished fact, and it threatens freedom of speech, intellectual liberty, and the right of the individual states to exercise their educational functions.

Stations under the control of the officials of public education and operated in the public welfare are attacked so often by commercial stations, whose main objective is, and must be, to produce profits for their owners, that they are rapidly being driven from the air.

Rules of this Commission place at a disadvantage stations, operating on budgets fixed for periods of one or two years, which cannot so quickly comply with regulations requiring increased expense.

Commercial broadcasters have classified broadcasting as *show business*. The educational needs of their radio audiences are subordinated to this idea, and to the demands of commercial advertisers and advertising agencies. Commercial broadcasters attempt to usurp the radio facilities of states, and educational institutions chartered by states. They seek to become the exclusive radio outlets for public officials and, when they broadcast addresses by such officials, sometimes make those addresses serve the purpose of commercial advertisers, as when a tobacco company was thanked by radio announcers for granting the President of the United States the opportunity for addressing the citizens of our country on Lincoln's birthday.

The National Association of Broadcasters and the Radio Manufacturers Association, two leading organizations in the radio industry, have plainly revealed its desire for commercial monopoly of the air by going on record as opposed to the reservation of any broadcasting channel or channels for the use of public schools, colleges, universities, states or government officials or agencies.

The National Committee on Education by Radio respectfully submits for the consideration of the Federal Radio Commission that it would not be in the public interest, convenience or necessity to grant increased power to stations owned or operated by, or associated with, a corporation or corporations now being proceeded against by the federal government for violations of law, and in fact already adjudged guilty of violations of the laws concerning monopoly, as the majority of the applicants before the Commission in this hearing are.

The Committee respectfully submits that this Commission already has recognized the right of the individual states to

the reservation of radio channels for police broadcasting stations, and that the states have an equal right, under the Constitution, to radio facilities for use in exercising their educational functions.

The Committee respectfully submits that the Commission will serve the public interest better if it will protect the educational stations, and defer the granting of these applications for maximum power at least until Congress considers, and acts upon, proposed radio legislation intended to preserve the rights of the public in radio, and if it will refuse to encourage monopolistic commercial corporations to become so firmly entrenched in the public domain of the air that it will require a constitutional amendment to recapture the rights of the public.

Our Committee respectfully reminds this Commission that Hon. Herbert Hoover, now President of the United States, declared, while he was Secretary of the Department of Commerce:

The question of monopoly in radio communication must be squarely met. It is inconceivable that the American people will allow this newborn system of communication to fall exclusively into the power of any individual, group, or combination.

Radio communication is not to be considered as merely a business carried on for private gain, for private advertisement, or for entertainment of the curious. It is a public concern impressed with the public trust and to be considered primarily from the standpoint of public interest to the same extent and upon the basis of the same general principles as our other public utilities.

The National Committee on Education by Radio respectfully declares that it is in entire accord with these statements of the President, and therefore must protest against the interpretations of the radio law, and the practices, which have resulted in the present trend toward commercial monopoly of the broadcasting channels, and must protest against the granting of these applications for maximum power, which are so clearly and unmistakably a step toward the complete commercial monopoly of radio broadcasting channels.

Thus the National Committee on Education by Radio, for the first time, stepped into a public hearing of the Federal Radio Commission, fearlessly asserting a position founded on truth no better expressed than in the words of Abraham Lincoln that "You can fool some of the people all of the time and all of the people some of the time, but you can't fool all of the people all of the time."

Why Educational Broadcasting Stations?

UNIMPORTANT as they now are, the educational broadcasting stations represent the only considerable portion of the broadcasting facilities of this country which have not come under big business control. Undeveloped as they still are, programs for radio education represent the only considerable part of the radio fare which is not yet fully under commercial auspices. It is altogether likely that unless the educators can be rallied to demand from the government a permanent allocation of a reasonable portion of the broadcasting facilities of the country, to be used without any reference to the desires of commercial interests, the organization of the industry in rigid forms—soon to occur—will find the dream of Mr. Owen D. Young realized, with the broadcasting of any material to a national audience dependent upon the goodwill of a commercial despotism.—Paul Hutchinson in the *Christian Century* for April 15, 1931.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the groups with which they are associated are as follows:

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Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.
R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
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Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts.

The Future of Radio

H. V. KALTENBORN

SINCE THE 1928 CAMPAIGN, IN WHICH radio was widely used for political controversy, there has been steady growth in the tolerance of the radio audience and in the courage of the broadcasters. Opinion and propaganda find their way over the air more easily with every passing year.

At future international meetings radio will rival the press. By next year important addresses at the League of Nations meetings in Geneva and big events in the European world will be routine features of American radio programs. Already we receive regularly several weekly international programs from Europe.

All politicians, from the President down, welcome the opportunity to *sell themselves* to the radio public. Some even refuse to speak at banquets unless assured that the occasion will be broadcast. After you have talked to millions *on the air* a roomful of food-stuffed celebrants means nothing.

From the public point of view competition between leading radio systems is most important in preserving *freedom of the air*. Monopoly would be disastrous. Yet the danger of monopoly is ever present. It could come thru a secret understanding or open alliance between the two dominant radio chains. It already exists in patent control, as anyone who enters the broadcasting field will soon learn.

The chief reproach against American broadcasting as against the American press is that its dominant purpose is commercial. Just as most newspapers are published to make money for those who buy and sell advertising, most radio stations are operated to bring financial returns to those who buy and sell time. Radio stations do those things which help them to make money and leave undone whatever interferes with immediate business success. Practically all the more important stations are trying to find out what the public wants and to satisfy that want whenever this can be done with profit. Raising the standard of public taste or catering to more discriminating listeners is no part of a broadcaster's function.

I have been called a missionary to the radio morons because I broadcast regularly on important problems of current history. But it is disillusioning to

inquire too closely why people tune me in. Often the answer is "I love the way you talk," "Your voice sounds so nice,"



H. V. Kaltenborn, editor of the Newspaper of the Air, a radio feature which is highly valued by discriminating listeners.

"I adore your accent; you are English, aren't you?" "I am a stenographer and need practice," "You save me the trouble of reading the newspapers."

Radio stations squeeze the greatest possible amount of publicity value out of everything they do, which has, or seems to have, a beneficent public purpose. The publicity departments regularly launch *Air Colleges*, *Radio Forums* and *Educational Hours*, which usually sound far more important in published announcements than they ever become on the air. Merlin H. Aylesworth, of the Radio Corporation, is a veritable Merlin in this publicity game. He is a past-master in the subtle art of public relations.

The publicity connected with the creation of the so-called Radio City in the heart of New York City is an excellent illustration of Aylesworth's skill.

To anyone who reads the Radio City story with some knowledge of the facts, it seemed that there was a shrewd use of the Rockefeller name to give public-service glamour to the establishment of a high-grade amusement centre which would

house and unify the varied commercial undertakings of the Radio Corporation. I wrote to Mr. Rockefeller and voiced my disappointment that his first important contribution to radio should be made thru such a purely commercial undertaking. I expressed the hope that the Aylesworth publicity had not given a true or complete picture of his contribution to radio.

Mr. Rockefeller was about to leave for the west and asked his associate, Mr. Thomas M. Debevoise, to reply to my letter. Here is what he wrote me under date of June 24: "The publicity was unfortunate. Mr. Rockefeller is not making any contribution to radio. The company which he caused to be incorporated for the purpose of taking over the lease of the Columbia tract [Columbia University owns most of the land] is only subletting portions of the tract to the Radio Corporation of America and affiliated companies. The transaction is purely a commercial one, made necessary because of the failure of the opera house plan, on the basis of which Mr. Rockefeller was drawn into the lease. Something must be done with the property and it was fortunate to find a group of such desirable tenants willing to take over so large and important a part of it." Mr. Rockefeller's denial will never catch up with the original story.

Mr. Aylesworth is similarly skillful in making it appear that radical speakers are not barred by the National Broadcasting Company. His organization is extremely conservative. Yet every now and then he takes particular care to allot radio time to some wellbehaved liberal or radical speaker like Norman Thomas, and then advertises this concession widely and vigorously. The National Broadcasting Company has practically no more time for sale during the valuable evening hours, which run from eight to eleven. This provides a convenient excuse for excluding undesired or undesirable features.

Until recently the Federal Radio Commission favored commercial broadcasters at the expense of all others. Almost every decision went against special groups seeking to serve some part of the listening public. "There is no place for a station catering to any group," the Commission declared, in denying a license to the Chicago Federa-

tion of Labor. "All stations should cater to the general public."

Applied to the newspaper field such a decision would rule out everything except the tabloids, and this was the practical effect of the Radio Commission's attitude.

Newspapers are supposed to be very much alive to the significance of new developments, but many of them have been lamentably slow in realizing the close relation between the informing, entertainment, and commercial aspects of radio and the press. Half the newspapers that began operating stations when radio was still a toy closed them up or sold them because of the expense. Today several newspapers are making more money out of broadcasting than out of publishing, and scores of publishers rue the day when they missed their radio opportunity. The conviction is growing that a newspaper and a broadcasting station are both more profitable and more effective when they unite their efforts under the same management.

Restriction went much further in the early days of radio. In 1924 station WEAJ, in New York City, ruled me off the air because of my expression of liberal opinions. This station was then owned and operated by the American Telephone and Telegraph Company. Each time I criticized a federal judge [who might have to pass on telephone rates] a labor leader [who supervised the company's labor contracts] or a Washington official [whose influence counted in the issue of a broadcasting license] one of the vicepresidents became frightened and protested. Finally, the much-harrassed vicepresident in charge of broadcasting decided that he would be happier without my spoken editorials, even though the radio audience continued to enjoy them. The policy adopted at that time was to bar all controversial material. This is still the rule at many minor stations. Station WHEC, at Rochester, N. Y., recently barred a *wet speech* by ex-Senator James W. Wadsworth on this ground.

Since 1924 there has been steady development in *freedom of the air*. New York City officials once brought indirect pressure to bear on station WOR, over which I was speaking, in an effort to modify adverse comments on Mayor Walker's frequent vacations. The method used was to suggest that the municipality might be willing to cooperate more freely in granting station WOR broadcast facilities on important public occasions if I were more charitable toward the Mayor. The station took no

steps beyond transmitting the suggestion and I paid no attention to it.

During the Wall Street panic of 1929, when I described conditions in the mar-

The Centralization of Power Control

THIS TABLE, prepared by H. S. Raushenbush for the Committee on Coal and Power, shows that seventeen holding companies control 85 percent of the nation's power. The first two combinations, which together control 34 percent of national production, work in such close cooperation that they could be classed as one.

Rank	Name	Thousands of kwh	Per cent of total
1	United and affiliates..	15,084,925	18.80
	Share	12,245,572	15.26
2	Electric Bond and		
3	Insull	8,347,894	10.40
4	North American	5,720,291	7.13
5	Consolidated Gas	3,835,037	4.78
6	Standard Gas and Electric	3,624,310	4.51
7	Southern California Edison	2,421,357	3.00
8	Pacific Gas and Electric	2,322,015	2.89
9	Stone and Webster	2,273,470	2.82
10	Detroit Edison	2,142,549	2.66
11	Associated Gas and Electric	1,917,055	2.40
12	Duke Power	1,745,776	2.17
13	American Waterworks and Electric	1,727,565	2.14
14	Cities Service	1,426,122	1.77
15	Con. Gas (Balt.)—Penn Water	1,418,650	1.76
16	International Paper-Power	1,325,660	1.65
17	United Light and Power	1,203,068	1.50
		68,781,316	85.76
	Next 15 groups ...	5,399,535	6.75
		—The Nation.	

ket without mincing words, there was a good deal of protest by brokers who felt in a time of crisis such comments should not be allowed. The officers of the Columbia Broadcasting System were appealed to and asked me to submit the text of my speech, to see just what I had said. This was impossible, since all my news talks are extemporaneous, and the matter was dropped without further comment. A few months ago Claudius Huston, exchairman of the Republican National Committee, got very angry when I cited some of his activities as revealed before the Senate Investigation Committee. He instructed his lawyer to take the matter up, and it looked like a libel suit. Good judgment or sound legal advice seems to have intervened, since no further steps have been taken. Perhaps the threat of legal intervention was intended to forestall further comment. If so, it failed in its purpose.

Except for speakers with known radical opinions or where the talk is on a highly controversial topic, the old rule about submitting copy in advance has been abandoned by some stations. The wellknown astrologer, whose nightly reading of the stars stimulates the sale of a certain toothpaste, must submit her copy to three separate censorships. But since the stars are more reckless in predicting unhappy events than advertisers or radio stations, this precaution is only natural. One astrologer told me that she was not permitted to broadcast President Hoover's horoscope because of the dire events which it foretold.

Before long our Senate chamber and House of Representatives, our State legislative halls, and even our aldermanic chambers will be wired so that selected proceedings can be carried to the radio audience. Thanks to the microphone and loud speaker, interest in government is growing among millions of citizens. Radio has done more than any other agency to make women realize what it means to have the vote. Intelligent women voters are often shocked to hear the uncultivated voices, the bad grammar, and the poor logic of the men they have chosen to represent them in public office.

Radio is a magic instrument of unity and power destined to link nations, to enlarge knowledge, to remove misunderstanding, and to promote truth. But it will not achieve these things unless we keep a more watchful eye on those who use it and those who control it. We must stir in them a greater sense of their responsibility for the proper employment of this modern miracle.

Today radio's chief purpose is to make money for those who control and use its mechanical devices. It threatens to prove as great a disappointment as the moving-picture for those who sense its undeveloped power as an agency of education, culture, and international goodwill. There is a great opportunity thru endowment to divorce a few first-class stations from commercial control. Federal supervision must also receive a different emphasis. The public is entitled to a more ideal interpretation of that "public interest, necessary, and convenience" which broadcasting is supposed to serve under the radio law. We can and should avoid the crippling restrictions of complete government control and the unhappy alternative of abject subservience to the profit motive.—*Reprinted from Scribner's Magazine.*

The Power Trust in the Public Schools

GEORGE W. NORRIS

THE DIFFERENCE between barbarism and civilization is education. Tyrants cannot permanently rule an educated people. Ignorance is the mother of superstition and superstition is the domain of despots. Intelligence is the foundation of democratic government.

In America we have the public school system. It is essential to the perpetuity of our institutions. If our public schools are perverted and defiled, our governmental institutions are weakened and will eventually be destroyed. A new crop of rulers must take control every generation and a government which would prosper and a people who would retain and increase their happiness must prepare the oncoming generations for new governmental responsibilities which are continually falling upon their shoulders.

We are living in the dawn of an electric age. Nature has not only supplied us with electricity, this necessity of human happiness, but she has likewise furnished the means by which it can be made. Every drop of flowing water, coming from the snows, the springs, and the rain, as it travels its downward course, possesses the power of converting, out of nothing, as it were, this wonderful element of modern civilization. This is a property which belongs to all of us, a source of human happiness. It has become a necessity of modern life. Therefore it should never become the subject of private profiteering. Its utilization in the homes of America and in the factories of commerce, for practical purposes, depends to a very great extent upon the elimination of private profit from its generation and distribution. Like water, it should be supplied to our people at actual cost.

For several years a contest has been going on between those who believe this work should be done as a governmental function and those who believe that the right to use our public streams for this purpose should be turned over to private corporations for private profit. It was supposed for some time that this was a fair and open contest between the believers in two separate and distinct doctrines of government. If this were true, then the contest would be just. Intelligent, educated people would decide the question the same as they would decide any other governmental question, after full debate and fair consideration.

In the course of the debate in the Senate on the Muscle Shoals question, it was frequently alleged that there was a



UNITED STATES Senator George W. Norris of Nebraska, whose fight in the House of Representatives for the overthrow of "Cannonism" led to his election to the Senate, where he has served since 1913.

Power Trust in this country; that it was nationwide in its control. Indeed, it was charged that this trust reached out into foreign countries and was, in fact, international in its operation. These charges were scoffed at. They were ridiculed. The men making them were denounced as enemies to human progress.

As a result of this discussion the Federal Trade Commission was directed to make an investigation. And what has been the result? It has been ascertained that there exists in this country a combination, the most powerful that has ever been put together by human ingenuity. These power magnates have divided the country into districts and put a ruler of their own in each district. These managers are assisted by assistant managers, by division superintendents, and by almost an unlimited number of specialists, lawyers, and hired men and women in all walks of life. It has been shown that millions of dollars have been spent to keep this machinery in operation. It has been shown that \$400,000 was raised by

this trust to control the action of the federal Congress. In the main, this particular attempt was to defeat the Muscle Shoals bill, the Boulder Dam bill, and the Senate resolution directing an investigation of the subject. Untold sums have been spent to control the press, usually by methods which were indirect, but unfair and disgraceful, nevertheless. Armies of emissaries secretly representing this trust have gone into every community. They have undertaken to control legislatures, public-service commissions, members of the national Congress, public educators, school boards, municipal authorities, commercial clubs, secret societies, women's clubs, boy-scout organizations. They have not forgotten the preacher in the pulpit. They have sent lecturers, ostensibly traveling upon the business of state universities, to lecture to farmers' clubs and social organizations. They have sent women into the field to speak at women's teas and various similar organizations. They have organized committees of inspection to examine the textbooks used in the public schools. They have issued thousands of pamphlets to be used in the classroom. They have entered the universities of the country and subsidized professors and leaders in educational lines.

The trust has done all this secretly. No one would have any right to object and no one would object if these private corporations would advocate openly their viewpoint and their method of supplying electricity to the people. No one would find fault if this discussion and these influences were operating in public. But these emissaries were not known by the people who heard them or the people to be influenced by them to be in the pay of this monopoly. The propaganda which was fed to the press was, in the main, published as editorial or news matter and the readers had no knowledge that this material was supplied from some central headquarters of the trust. In order to conceal their activities from public view it was necessary that they sail under false colors. We ought to ask at this point where they secured the money with which to carry on this warfare. Where did they get the funds which they used so lavishly to fool the people? It must be remembered that the Power Trust has only one source of revenue and that is the money contributed by the people

who buy their product. They were using our money to deceive us and our children.

The evidence before the Federal Trade Commission discloses the sending of a catechism into the public schools of some of our states. In this catechism are questions and answers which it was intended the children should memorize. The answer to one of these questions reads as follows:

In every case in which a community has attempted to operate a public service utility which is subject to great change and development, it has been found that the costs of the service are higher than when the service is furnished by a private corporation.

This statement is not only misleading but it is absolutely false. It undertakes to put into the minds of our children a falsehood and it does this under the guise of education.

Another answer to one of the questions in this catechism stated in effect that statistics have proved that the cost of living in cities operating their own utilities is much higher than where the service is entrusted to private enterprise.

It is shown in this same catechism that the power magnates were trying to prevent criticism of their own activities. They were trying to instil in the minds of the children the idea that such criticism was unpatriotic and should never be indulged in by good citizens. For example:

QUESTION: What is the effect of adverse criticism upon utility service?

ANSWER: When people in any community criticize adversely public utilities in their city they are advertising their own city to outsiders as a poor place in which to live and are thereby retarding its growth.

Down in Alabama a college professor was hired by the power companies to carry on their work. He traveled over the state, talking to church gatherings, farmers' organizations, Rotary clubs, Kiwanis clubs, etc., and somewhere in every speech he made he had carefully tucked away misleading statements praising the private power interests and condemning municipally-owned electric-light plants. He was introduced as a director of extension of the university, a man interested in the industrial development of the state, but it now develops from the investigation that he was paid

regularly by the Power Trust over \$600 a month.

One of the representatives of the trust, in writing to a trust representative in a different state, after describing how he had succeeded in outlining the public-utility courses in two universities, wound up by saying:

We laid the groundwork circumspectly and with great care, so that the actual suggestion that such courses be started came from the faculties of the institutions themselves. The rest was routine.

The evidence shows that in some states the trust was successful in bringing about a complete revision of the textbooks of the public schools of the state. The methods pursued depended upon the conditions that had to be overcome. In one state where the power companies were undertaking to have the textbooks of the schools edited so as to give their viewpoint to the student, one of the letters on the subject contained the following language:

Of course, all of the business must needs be transacted with exceeding tact and diplomacy. Local conditions and prejudices will have to be taken into account when the educators are approached. Also it may be well to note what appropriation the school superintendent may have at his disposal for the purchase of textbooks. It may well be that avenues of proper assistance in a small way will present themselves. It may be well worth a utility's while to help in that regard. Such aid, unfortunately, is subject to misinterpretations and would therefore have to be rendered in a manner well safeguarded from suspicion.

I am not undertaking to give a complete résumé of the evidence. To do that would fill volumes. I am only trying to give a few illustrations of what is going on in free America. All of it has been done in the name of private ownership of public utilities. Has not the time come when those who love our public schools, who want to guard them with honesty and to preserve them in purity, should raise their voices in condemnation of this unrighteous and unpatriotic attempt to utilize the public school system to control public sentiment for private gain?—Reprinted from *The Nation* by courteous permission of the editors.

Just when educators and the public were beginning to appreciate the contribution of the commercial broadcast-

ers to education and the enjoyment of life, the leaders of the industry brought about the following results:

The owners of the smaller and more independent broadcasting stations became so suspicious of the dominant group that many of them ceased to depend on the trade organization dominated by it and formed another association.

The just grievances of college and university broadcasting stations, most of them supported by state taxes, caused the organization of a national committee thru which they could seek protective legislation and develop their work.

Radio listeners began to complain of the amount and character of the sales talks which took the pleasure out of radio programs, or stopped listening, or both.

Newspapers thruout the country, which had built up public interest in broadcasting at the start, turned against the broadcasters.

Philanthropic money which was intended to arouse public interest in educational programs from commercial as well as educational stations was withheld or devoted to other uses. A considerable amount was made available for the protection of the public against commercial monopoly of broadcasting channels and commercial control of information and instruction.

Certain members of the Federal Radio Commission fell under the suspicion of being improperly influenced by the dominant radio group and a Congressional investigation began to be suggested. One State governor defied the commission and dispelled all doubt as to the right of states to use radio channels in exercising their police powers. Other states, not yet having been goaded quite to open defiance, began to consider whether it were not the only way to prevent the usurpation of their right to control public education. An international movement started which possibly has made it impossible for commercial broadcasters ever to use any long-distance shortwave channel for broadcasting or relaying American advertising to other countries. Are these results due to "business intelligence"—or to something else?—Armstrong Perry.

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Radio During April

APRIL'S DOOR swung wide to admit radio, which entered with a smile on its young face, remained a month, and departed with the smile now stretching from ear to ear.

The smile which radio wore on April first was imported from Calais, France, as a result of the discovery of microrays for broadcasting; the broader smile it wore on April 30, was of domestic origin caused by a decision of the Supreme Court of the United States which virtually held the Radio Corporation of America a violator of the Clayton Anti-trust Act.

Because events which inspired the broad smile on the last day are more important than those which provoked the smile on the first day of the month, and because he is a national authority on radio, let Sol Taishoff of the *United States Daily* [Robert Mack of the *Consolidated Press*] tell the story. Writing in the *Daily* for April 28, he said:

The Supreme Court of the United States denied, on April 27, the petition of the Radio Corporation of America to review the decision holding illegal a provision of its patent licensing arrangements covering radio receiving sets. Following the usual practice, Chief Justice Hughes in announcing the denial of review did not state the reasons for the Court's action.

The provision, known as Clause 9 in patent licenses granted 25 manufacturers, reserved to the Radio Corporation the right to supply vacuum tubes to make the radio receiving sets manufactured under the licenses initially operative. The corporation, at the same time, agreed that it would supply the tubes required by the set makers.

Review and reversal was sought of a decision of the United States Circuit Court of Appeals for the Third Circuit. That court affirmed a ruling of the District Court for the District of Delaware that the provision in question was violative of section 3 of the Clayton Antitrust Act and therefore null and void, in a suit brought by the DeForest Radio Company and four other tube manufacturers, the latter later withdrawing. Section 3 of the Clayton Act makes it unlawful for one engaged in interstate commerce to enter into a contract for the lease or sale of goods, whether patented or unpatented, on the condition, understanding or agreement that the lessee or purchaser shall not use or deal in the goods of a competitor, where the effect may be to substantially lessen competition or to create a monopoly.

Counsel for the Radio Corporation, in their petition for a writ of certiorari, contended that the corporation could grant licenses of its patents in their entirety, or only in part, or with the right in the licensee to make all the elements of a set covered by the patents, except the tubes, indispensable parts of the patented circuits. In opposing the petition for review,

counsel for the DeForest Company argued that the patent licenses created "an admitted monopoly of 88.35 percent of the vacuum tube market" and deprived independent tube manufacturers of their only tube market. The Supreme Court had previously denied its review of the decision granting a preliminary injunction in the case. Thereafter the injunction

DODGE CITY, Kansas, April 21: A result of the blizzard, in which five Colorado school children froze to death, probably will be that every schoolhouse in this part of the country will have a telephone and many of them radio sets. Colorado has passed a law requiring telephones in schools. In hundreds of Kansas school districts last week trustees voted for telephones and radios. Warnings of the blizzard broadcast by the Dodge City *Globe* and the Denver station, traveling salesmen say, saved hundreds of lives.—Special correspondence of the *New York Times*.

restraining the enforcement of the provision in the license contracts was made permanent, and the Supreme Court has now denied consideration of this ruling.

Robert Mack discussed the situation for the *Consolidated Press*, April 29.

With the last hope for legal redress gone, the RCA stands before the Federal Radio Commission with an adverse opinion of the lower courts, holding it had undertaken unlawfully to monopolize the manufacture and sale of radio tubes in violation of the Anti-trust laws. The Commission for the first time has squarely before it the question of whether that company and its subsidiaries like the National Broadcasting Co., RCA Communications, Inc., and Radio-Marine Corporation of America, must forfeit their 1405 licenses for radio communication. An analysis of Commission records shows that RCA and its associated and affiliated companies hold 1405 radio licenses from the Commission, out of approximately 6000 issued for all commercial and experimental purposes, with the exception of amateurs. All told, about 25,000 licenses are outstanding, but more than 19,000 of these are held by amateurs for purely noncommercial and experimental operation.

Taking judicial notice of the final judgment that the RCA had violated the antimonopoly laws in requiring its licensed receiving set manufacturers initially to equip their sets with RCA tubes, the Federal Radio Commission instructed its legal division to draft an opinion on the case. This opinion will inform the Com-

mission, whether, under the provisions of the radio law, it must divest the RCA and its subsidiaries of their more than 1400 radio licenses—one fourth of all outstanding in the United States—covering broadcasting, all types of communication, experimental television and the like.

Meanwhile, the decision has had the effect of holding up Commission action in many fields, because of the indefinite status of the company and its adjuncts. The highly important "Superpower" case in broadcasting, involving 24 of the nation's leading stations, according to Commission spokesmen, may be held up a year as a result of the action, since National Broadcasting Co., 100-percent owned subsidiary of the RCA, is applying for the maximum power in behalf of three of its licensed stations.

The first of the "trust-busting" attacks against the RCA, as an aftermath of the Supreme Court's refusal to review the tube litigation, has been made with an effort to wrest from NBC the channel occupied by stations WENR and WLS, both in Chicago. Station WTMJ of Milwaukee, which has waged a vigorous battle for the 870 kilocycle channel now occupied by the Chicago stations, claims that the action of the Supreme Court makes it incumbent upon the Commission to rescind existing licenses to the NBC. It asks that this channel, with the maximum power of 50,000 watts, be given WTMJ, which now uses 1000 watts evening power on the regional channel of 620 kilocycles.

Elisha Hanson, counsel for WTMJ, contends that WENR is owned by NBC, and that WLS, formerly "an independent station," has sold its transmitter "and has surrendered to the NBC all but two hours daily of its time which formerly it used on the air for its own purposes, in return for the privilege of using the transmitter of station WENR." Both stations are licensed for the maximum 50,000 watts power.

Arguing the law, Hanson contends that in the tube case the RCA "now has been finally adjudged guilty of an unlawful restraint and attempt to monopoly under the laws of the United States." The action of the Supreme Court "makes illegal the further operation of station WENR by the NBC under license from the Federal Radio Commission," he holds.

RCA has not announced its defense in the pending litigation. In the past, when the same question has arisen, it has argued first, that section 13 of the Radio Act of 1927, under which the steps for cancellation of licenses have been taken by its opponents, does not apply to the tube case. This is on the ground that the section provides that licenses shall be refused only when there is a final judgment of guilt in an antimonopoly case, and that such a judgment can only be had in a criminal case. The tube litigation, it has emphasized, was a civil suit between the DeForest Radio Company, and the RCA. Secondly, RCA has maintained that the provision is unconstitutional.

Microrays—The story of radio's April first smile, though of more immediate interest to the engineer, should be understood by the layman who would

keep himself posted on the general development of radio.

From Calais, France, came news of a successful demonstration of ultra-short radio waves sent across the English Channel to Dover from an aerial less than one inch long. The tiny waves, seven inches long and employing only enough power to light a flashlight bulb, carried voices heard distinctly on the opposite shore. Microrays, the waves were called.

In the April 1 issue of the *New York Times* representatives of the International Telephone and Telegraph Company declared that the invention cleared the way for additional radio accommodations in space where the ether lanes now are congested; that microray radio waves are not subject to fading, and are not absorbed by rain or fog.

Frank Page, a New York representative of the International Telephone and Telegraph Company, was enthusiastic. He said:

Apart from obvious applications in a worldwide communication network such as that of the International system, the use of a ray which is not affected by weather conditions such as fog and rain will very greatly extend the usefulness of lighthouses, especially at times when they are now least effective and most needed, due to poor visibility. For maintaining secret communication between aircraft and land and between various ships of a fleet at sea, the microray offers fruitful possibilities.

Another valuable application will be the landing of aircraft in darkness or fog. It also seems to offer a sure means for ships to locate each other accurately in foggy weather. In the field of television microrays should permit developments which are not practicable with the wavelengths hitherto available.

Engineers declared the transchannel conversation was "as clear as a bell and surpassed the most sanguine imagination," and compared it with the standard of the best telephone communication.

The *Times* article continued, in part, as follows:

As compared with the high-powered installation used for trans-Atlantic communication on ether waves that are several miles long, the new set requires only one-half a watt to send out a message on a seven-inch wave.

In radio broadcasting, one-half a watt is considered extremely feeble power. Station WEAF is rated at 50,000 watts. Therefore, the announcement said, the engineers are proud of their accomplishment in isolating such a minute amount of electric energy for communication purposes.

New York engineers of the company estimated that 250,000 microray transmitters could be made available, even if each transmitter differed in wavelength to the same degree as is now necessary with ordinary trans-

mitters. They said that if it were physically possible to group such a vast number of stations together in the same locality, they would still operate perfectly without interference. Such concentration, they pointed out, shows that there is no prospect of ether congestion for years to come. Moreover, it is calculated that the range of frequencies or wavelengths available with the microray working in the micrometric wave band, as low as eighteen centimeters, is nine times as great as in the entire radio field. Mr. Page said further refinements are being made to prepare the new development for everyday commercial application.

Speaking of the shortwave, the Marquis Marconi was quoted as follows in the *New York Times* of April 8:

The shortwave is the most important thing in wireless. It has revolutionized everything. If we can probe the secrets of the ultra-short waves the possibilities will be extremely interesting. But we have not done so yet.

I have been experimenting with them more than thirty years. I applied my attention to them at the outset and some years ago went back to them with fresh vigor. The beam system that has been developed over great distances is an indication of the importance of shortwave transmission, but if we can use still shorter waves the beam will be narrower and therefore more exclusive and secret, with all the advantages that implies.

Unfortunately, when you work on less than six meters the signal travels only a limited distance, which does not extend beyond the horizon and maybe less. The signals are restricted to places practically in sight of one another, and if a big hill or obstacle is in the way there is trouble. The signal cannot get around.

From some points of view this may be useful. In war, for instance, instead of broadcasting a message you desire to restrict to your own army you might find this screening of greatest utility. But for long-distance messages the barrier is serious. The trouble arises because, unlike what happens in regard to all other transmissions, the ray does not shoot up to the heavy side layer above the earth, to be reflected to earth again.

On the beam system to India we use a wavelength of fifteen meters and to Australia twenty-six meters, but the shortest commercial wavelength in use is from Italy to Sardinia, $9\frac{1}{2}$ meters. Below that wavelength you may not be able to transmit over twenty, thirty or forty miles and the final limitation that arises from the earth's curvature. How to overcome this disadvantage is the problem I am at present studying.

Mackerel Skies—While the early part of April brought with it encouraging news of the development of microrays which promised to open up more room on the air, loud and foreboding grumblings were heard on this side of the Atlantic presaging a storm of major proportions.

Even the most casual observer might have foretold the advent of the storm. A threatening rain had been falling for

some time and billowing clouds in the distance were ominous. Lightning struck at the annual meeting of the American Newspaper Publishers' Association held in New York City, April 20 to 24. The subsequent tornado was described by the Associated Press in the *Washington Star* of April 22:

Radio was labeled a *formidable competitor* of newspapers by a committee of the American Newspaper Publishers' Association today. A report was submitted by the Radio Committee for action by the association.

Citing statistics to show the ratio of radio advertising to newspaper advertising had increased from nothing in 1926 to 59.2 percent in the first quarter of 1931 and that 107 leading radio advertisers had cut their newspaper lineage from 200,000,000 lines in 1929 to 175,000,000 in 1930, the report said:

The conclusion is inescapable that a large part of the 25,000,000 lineage loss of newspapers is the price paid by them for the privilege of overexploiting radio.

The fine irony of the quotation is perhaps the most poignant indication of a nationwide reaction against the unrestrained growth of the radio industry. Gradual, regulated growth is a requisite to the success of any business, but unrestrained, rampant growth, like the disease of elephantiasis, stifles healthy development. The radio industry, like a grammar schoolboy, has grown fast and strong. But, overproud of its size and strength, the boy has become a bully, assuming a dictatorship of schoolroom and playground.

The analogy might be continued by comparing the other schoolchildren to the A. N. P. A., now united to overthrow the bully. The method to be pursued was outlined by the A. N. P. A.'s radio committee and reported by the Associated Press in the same article:

In considering future radio competition we must look at it in two ways: First, radio continuing to develop unregulated, unrestrained, nurtured by the press, assisted with free publicity, receiving free news for which we pay vast sums of money and otherwise aided in its growth in every conceivable manner by newspapers.

Second, radio properly regulated, subject to the same laws of lottery and other federal restrictions as newspapers, subject to the same restrictions in plainly labeling advertising as such, radio bearing its own burden of the news-gathering expense, and radio recognized by the newspapers for what it is, namely, a formidable competitor in news, entertainment, editorials, features and advertising.

If radio of the future is to develop under the first plan, then it will probably compete with newspapers in about the way that busses and trucks are now competing with railroads. The railroads ridiculed this new competition in its early stages, and today it presents their greatest problem.

During the early years when radio was a novel thing it was perhaps right to exploit it and tell about it in every detail. Today, however, radio has taken its place as a major industry, and there is no more reason for newspapers to exploit it than for radio to exploit newspapers.

An interested public applauds the good intentions of the A.N.P.A., and hopes sincerely its members will act individually as they have acted collectively. But away from the group the children fear the bully. Should the publisher decline to recognize radio in his news columns, such restraint would be reflected by a drop in advertising lineage from radio set manufacturers. No matter what the publishers do when they go back home, the report of the radio committee of the A.N.P.A. has pushed ahead a little snowball of dissatisfaction with the dictatorship of commercialized radio which will gain weight as it rolls along.

A Senator Speaks—A bulletin on superpower is mailed with this issue. Arguments for higher-powered broadcasting stations occupied the attention of the Federal Radio Commission for an entire week. The subject is of such far-reaching importance to educational stations that the case has been presented in one complete issue of *Education by Radio*.

Senator William H. King of Utah appeared before the Commission during the high-power hearing to support the case of station KSL, Salt Lake City. Two or three times during the week Senator King appeared at the hearings, listening to arguments of attorneys representing stations seeking high-power. What he heard at those hearings may have prompted the story which appeared a few days later in the *United States Daily*. He was quoted by that paper as follows:

I have been devoting attention to monopolies in general, and there seems to be a matter embracing monopoly in radio broadcasting. Whether action should be taken by federal authorities is a matter to be determined, and for that reason I am in favor of a study by the Congress into the general situation.

It might be considered that the ownership or operation of groups or networks of stations is not actually a deterrent to the development of broadcasting, but anything bordering on violation of the antimonopoly laws or tending to restrain trade in an industry should be subjected to scrutiny.

Broadcasting has become an integral part of American life today. People everywhere depend on radio for much of their entertainment and diversion. This is particularly true in the West, and in my country, the Intermountain empire, radio is depended upon by the farmers and rural folk for weather information, mar-

ket commodity quotations, and other important news in addition to entertainment.

Television is so new and so important in its public aspects as to stagger the imagination. Few are aware of its potentialities, and for that reason Congress should become acquainted

THE following letter was received on or about April first by Mr. B. H. Darrow, director of the Ohio School of the Air, from Mr. F. J. Prout, Superintendent of Schools, Sandusky, Ohio: "We are very happy over our results from the second year of the Ohio School of the Air. There is a real stimulation from these programs. You may be interested to know that the pupil's interest is being transferred to the homes. A recent survey indicates that these School of the Air programs are being received in over thirteen hundred homes. In the evenings parents and pupils are checking each other on the programs of the afternoon. This looks like a genuine case of adult education."

with it so as to safeguard and protect its development in the interest of the people.

I am not prepared at this time to say whether there should be censorship of television, just as the motion pictures are censored. That, too, is a matter to be considered from all angles.

Difficult problems are involved in the distribution of facilities under the existing law. This law, enacted in 1927 and subsequently amended, specifies that there shall be an equal distribution of radio facilities, both as to stations, power and wavelengths, among the five radio zones into which the country is divided, and an equitable distribution among the States in each zone according to population.

This law was enacted when there was not the great interest in radio that is now manifest in Congress, and, with the exception of a few of its members, Congressional knowledge of broadcasting was meager. Naturally, there appear examples of the injustices of this equalization method of distribution, because geographical factors are not taken into consideration.

I am told by radio authorities of the government, that were it not for the provisions of this equalization law, great areas in the West now underserved by radio would be permitted to accommodate more broadcasting stations. This can be done under the laws of nature, but not under the laws of Congress, which now apparently need remodeling. In other words, the State of New York, with its great center of population, is entitled to, and has more radio facilities than a half dozen of the sparsely populated states of the West. In the New York area, therefore, the congestion is reported to be so great that interference re-

sults with reception, while out in the Intermountain empire many barely can receive one station.

I have not mapped out definite plans for amendment of the law, but believe a thorough study should be made by Congress to find its shortcomings and inequalities. Such an inquiry can do no harm, but on the other hand is sure to result in benefits for the people, and preserve for them the best possible use of the ether.

Radio Talkies—Two New York stations combined on April 26 to inaugurate daily television-sound programs for public reception. The field of television opens up new problems of the air which must be examined closely by educators who would prevent this visual system of communication from being gobbled up by commercial interests. If, as we believe to be true, radio can be used effectively as an adjunct to the mechanics of disseminating education, it seems that sound-television, appealing as well to the eye as the ear, offers even greater possibilities.

The April 27 issue of the *New York Times* described the sound-sight broadcast as follows:

Radio talkies were inaugurated officially last night in New York by the union of the microphone of WGBS and the television "eye" of W2XCR, an image transmitter at 655 Fifth Avenue, and glimpses of a host of Broadway stars were seen dancing thru space in synchronism with the sound of their voices. The program began at 6 o'clock and lasted well thru the evening. It was the first of a regular program of combined visual and aural presentations to be given by performers who are to appear from time to time before the microphone and electric eye at the two stations.

W2XCR-WGBS television-sound programs will be on the air today, tomorrow and subsequent weekdays between 3 and 5 PM and 6 and 8 PM and on Sundays from 6 to 8 o'clock. Films will be the basis of the broadcasts during the first hour of each afternoon. Otherwise the combined sight and sound programs will be derived from the performances of living entertainers.

At the receiving depots the images of the performers appeared in an opening about twelve inches square. As one looked thru the lens of the receiver the images appeared to be about six inches square.

The audible program goes out on the 254-meter wave of WGBS, while the visual part of the radio talkies is transmitted on W2XCR's 147-meter channel. Two receivers are required to interpret the presentation simultaneously on their respective waves, after which they are combined as a sound picture by placing the loudspeaker near the screen on which the images are seen.

The visual transmissions are of the sixty-line, twenty pictures-per-second type. About 500 watts of radio energy was used last night to project the images into space, but soon the full 5,000 watts of power allowed W2XCR by the Federal Radio Commission is to be used. This increase in power is expected to add

largely to the area over which the images are capable of being received. However, the engineers in charge of the station said that even with the present power everyone in the New York area should be able to intercept the program.

In Spite of the Market Crash—

Business was good for wholesale radio dealers during the fourth quarter of 1930. Statistics made available by the Department of Commerce on April 15 showed a gross volume of business of \$25,473,825, as compared with \$21,574,122 for the third quarter, an increase of \$3,899,703, or 18.08 percent.

The *New York Times*, April 16, reported retail sales in the city area as follows:

Reports from 110 retail radio dealers in New York City shows a gross volume of business for the fourth quarter of 1930 of \$1,179,178, as compared with \$709,077 for the third quarter, an increase of 66.3 percent, the Department of Commerce announced today. The average volume of business for each dealer was \$10,720, against \$6446, an increase of \$4274. The increase occurred in all types of receiving sets. The number of battery sets sold was 246, compared with 99 in the third quarter; combination radio-phonograph sets, 714, against 442; electrically operated console and midget types, 6819, against 4421.

No Dumping—By order of the Federal Radio Commission made during the month, issuance of broadcasting station licenses hereafter will be staggered. All licenses expire April 30. These will be renewed for periods of three, four, five, six, seven, and eight months. Thereafter licenses will be renewed for a period of six months. The order was enacted to prevent all 600 license renewals being "dumped" on the Commission at one time. The new arrangement will do away with a tremendous bookkeeping burden carried by Commission personnel when the license renewal tide sweeps in.

The Commission's order provides that stations operating on the following fre-

quencies be licensed for three months ending at 3 AM, EST, August 1:

640	760	970	1090
650	770	980	1100
660	790	990	1110
670	800	1000	1130
680	810	1020	1140
700	820	1040	1150
710	830	1050	1160
720	850	1060	1170
740	860	1070	1180
750	870	1080	1190

Stations operating on the following frequencies will be licensed for four months ending at 3 AM, EST, Sept. 1:

			780
550	580	610	880
560	590	620	900
570	600	630	920

Stations operating on the following frequencies will be licensed for five months ending at 3 AM, EST, Oct. 1:

930	1120	1240	1270
950	1220	1250	1280
1010	1230	1260	1290

Stations operating on the following frequencies will be licensed for six months ending at 3 AM, EST, Nov. 1:

1300	1350	1400	1450
1320	1360	1410	1460
1330	1380	1430	1480
1340	1390	1440	1490

Stations operating on the frequencies 1200, 1210, and 1310 kilocycles will be licensed for seven months expiring at 3 AM, EST, December 1.

Stations operating on the frequencies 1370, 1420 and 1500 kilocycles will be licensed for eight months ending at 3 AM, EST, January 1, 1932.

Lay Opinion—Editorial page letters continue to express public dissatisfaction with trash which clutters up the ether. The *New York Times* pursues its policy of printing such lay opinion. One

E.H.B. found his letter published in the issue of April 29. It read:

To the Editor of the *New York Times*: Apropos of radio advertising from another [the moral] angle, what must be the effect of the various crime and detective hours that cater to the most morbid emotions, as well as giving detailed suggestions for ways of committing the most horrible crimes? It's all very well to assume that the "tired business man" needs the relaxation of mystery stories, but how do these affect the unbalanced youth who may also be listening in?

A wellworked-out mystery story is one thing, but the cheap wallowing in crime that passes for such nowadays is quite another.

University of the Air—Oglethorpe University in Florida has taken a bold step forward educationally in announcing the establishment of a true radio university. On April 17 the Federal Radio Commission granted a license to station WJTL which will broadcast instruction to students enrolled within a radius of 15 to 25 miles. The Associated Press described this unique experiment in the *Washington Star*, April 19:

A "radio university," with the usual collegiate degrees as rewards for those who pass examinations in the higher learning broadcast, will be dedicated here on May 23. The air institution will operate over radio station WJTL, license for which was granted yesterday by the Radio Commission in Washington. The station will have a range of fifteen to twenty-five miles.

We are going to do something we believe to be new in America, said Dr. Thornwell Jacobs, president of Oglethorpe. Of course, until television is perfected it will not be possible to conduct mathematical classes so efficiently as in the personal contact method, but in all other respects the procedure will be on the same general lines as now obtain in universities.

Students will enrol, pay tuition, select their courses, take notes on lectures, submit these notes to professors for correction, and stand examination, just as they do now. Personal conferences between the professor and his students will be held at regular intervals of a month or six weeks, and students, upon passing the work in a given course, will receive full college credit. Several professors will devote their full time to radio teaching.

E DUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

- J. L. Clifton, director of education, Columbus, Ohio, National Council of State Superintendents.
- Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.
- R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
- J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
- Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
- H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean!

The Americanization of Amusement

BEHIND the amalgamation of the Gramophone [H. M. V.] and Columbia Graphophone Companies, a matter which at first sight appears to be of interest only to the shareholders directly concerned, is a further development in the Americanization of the entertainment industry thruout the world. This Americanization, which is a relatively modern growth, has been so accelerated in recent years that it not only controls the world's screens but is also securing a dominant position in wireless. And radio and the film are the two most powerful engines of propaganda that the world has ever known.

The story is too long to tell here save in the briefest outline. Two immensely powerful concerns dominate the situation, the General Electric Company and the American Telephone and Telegraph Company. Each of these is an immense undertaking in itself, while their innumerable ramifications represent a greater degree of rationalization than has yet been reached in any other industry.

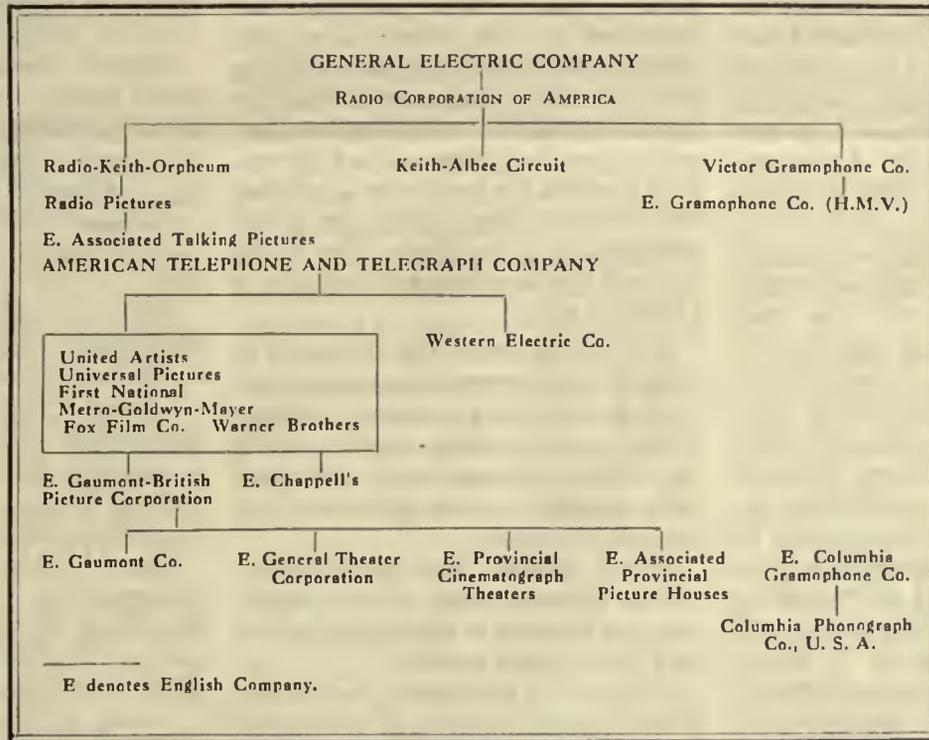
The diagram which accompanies this brief article is largely self-explanatory, but some amplification is necessary. The Radio Corporation of America is the most important wireless manufacturing organization in the world. It has incidentally acquired manufacturing rights from the General Electric and Westinghouse Electric and Manufacturing Companies, and among its most recent developments is the planning of a gigantic *Radio City*, whose equipment is to include no fewer than twenty-seven broadcasting studios. In the field of wireless the Corporation is also associated with the Columbia Gramophone Company.

The Keith-Albee Circuit owns and controls picture theaters thruout the United States. The Radio Keith-Orpheum Corporation is a new concern which was not

launched until after the birth of talkies, and has already become one of the most important of the American film producing concerns. It is, in fact, said to be the second largest. Its new English subsidiary, Radio Pictures, was established last year for the marketing both of the RKO films and those of Associated Talking Pictures, some of whose films it has largely financed. So far as can be ascertained, the English firm is not under

of the numerous publishers of light music in various countries that has been bought up by Warner Brothers; an increasingly important part of the business both of music publishers and gramophone record makers is concerned with talkie song successes, and by control of the record and music publishing business the film producers thus secure an additional and important source of profits.

The Gaumont-British Picture Corporation, which makes and distributes films and exhibits them thruout the country at a chain of theaters which it owns or controls, is the largest entertainment undertaking in the British Empire. Indeed, for size and importance it has no rival outside the United States. Technically, the control is British; but in fact, control is exercised thru a private syndicate in which the Fox Film Company holds a large interest. Only a few of the Gaumont-British ramifications are shown in the chart.



American control, but as a result of a five-year plan for which the agreement has just been concluded, it will to all intents and purposes represent the British side of the American organization. The Gramophone Company has for some years been controlled by the [American] Victor Gramophone Company thru share ownership, while the Victor Company is in turn one of the many subsidiaries of the General Electric-Radio Corporation group.

The American Telephone and Telegraph Company is of course the largest concern of its kind in the world, owning more telephones than are in the combined ownership of all other governments and private telephone companies.

The American film-making companies which it controls, shown on the left of the diagram, control in turn at least two-thirds of the film-exhibiting industry in the United States. Chappell's is only one

The facts that we have briefly outlined above are of much greater significance than appears on the surface. This is not merely the case of a vast interlocking trust whose coffers are enriched by the whole world's tribute. The Americans have invented a new proverb, "Trade follows the film," and declare that every foot of Hollywood celluloid sells a dollar's worth of American merchandise. More than that, the American film has until quite recently shouldered the British product out of the British Empire, and secured such a monopoly in Canada that the position has led to government intervention. If we must resign ourselves to the prospect of the world's films and broadcasting being controlled by a handful of men in the United States, the public should know the facts. The ultimate issue is not merely control of entertainment but control of propaganda.—*Saturday Review*, London, Eng., Apr. 11, 1931.

Radio in the Schools of England

EARL Y. POORE

MANY persons apparently would like to know something of the scope of the English radio educational program, what response the lessons have aroused in the schools themselves, and what conclusions have been reached as to the proper method of meeting the various problems inherent in radio instruction.

This discussion represents an attempt at presenting a few pertinent facts on this subject, in the hope that such a presentation may serve the two-fold purpose of informing those of the profession not acquainted with British conditions, and of casting some light on the proper evaluation and utilization of our own scattered efforts in the field of educational broadcasting.

At the outset it should be observed that all broadcasting in England is under strict governmental control. The same statement might be made regarding the United States but with an entirely different meaning. Our Federal Radio Commission is a governmental bureau which exercises a licensing and supervisory authority over private organizations engaged in the business of broadcasting. In Great Britain, all broadcasting is done by the British Broadcasting Corporation, a monopoly owned by the government and supported, in the main, by license fees levied against the owners of receiving sets. Hence, the radio educational activities of England represent strictly a governmental function, and every lesson or program reaches the entire country.

The actual machinery for educational broadcasting is headed by the Central Council for School Broadcasting, the membership of which includes representatives of The National Board of Education, The Association of Local Educational Authorities, The National Union of Teachers, The Joint Committee of Four Secondary Associations, The Independent Schools Association, The Association of Preparatory Schools, The Training College Association, The Joint Committee of Three Technical and Art Associations, The Scottish Educational Department, The Association of Scottish Educational Authorities, The Educational Institute of Scotland, and the Ministry of Education for Northern Ireland, together with several "nominated" members.

This Central Council operates thru

a series of subcommittees, charged with the responsibility of developing their particular respective portions of the entire program. It is significant that each subcommittee includes at least three teachers from schools actually taking the radio lessons. These subcommittees choose the broadcasting teachers and edit the supplementary material published in pamphlet form by the British Broadcasting Corporation for use in preparatory and follow-up work. These pamphlets are illustrated in most cases and are designed for the double purpose of bringing about a feeling of intimacy between the listening pupils and the broadcast teacher, and of providing diagrams and illustrations to which the pupils can be referred from time to time during the actual presentation of the lesson. The pupils purchase this supplementary material at a nominal cost.

It is impractical in this discussion to make detailed comments concerning each of the courses, but it is proper to indicate briefly the outstanding aims actuating the subject subcommittees and their radio teachers in their presentation of the various courses.

French Readings and Dialogues—To provide advanced pupils with the opportunity of listening to French spoken and read by educated natives.

History—To supplement the ordinary school lessons by giving a picturesque background to historical facts, and by comparing as often as possible the life of the child of the past with that of boys and girls today.

Mythology and Folklore—To provide a series of simple stories from the mythology of many lands, such stories as are essential to an appreciation of literature and art.

Nature Study—To stimulate the interest of the children in the natural phenomena which they observe in the parks, woods, and fields.

Music—To increase in pupils the knowledge and love of rhythmic melody, to accustom them to the idea of melody as a natural language, to enable them to read a simple melody at sight, and to release and develop their powers of tune writing.

Early Stages in French—To provide practise in recognition of sounds, comprehension of the spoken word, listening to more than one French voice, and

avoidance of the common errors which English-speaking people make in speaking French.

Careers—To give practical advice in the choice of a vocation.

Modern Scientific Achievement—To give pupils some idea of the scientific achievements that lie behind the romance of everyday modern life.

Biology and Hygiene—To give children an intelligent idea of the way their bodies are built up and to carry out the necessary functions.

English Literature—To incite the pupils to read part of the whole of a series of carefully-selected books, chosen by the broadcast teachers to represent the high lights of English literature.

German Readings and Dialogues—Same aim as in the case of French readings.

English Speech—To aid the pupils in the practical difficulties of English speech and pronunciation.

General Knowledge Talks—To familiarize pupils with the accomplishments of leaders in various lines of activity.

Rural Science—To give practical instruction in various phases of farming.

Travel Talks—To provide a vivid background for the geography course of the school, by means of effective travel talks by travelers with firsthand knowledge of the countries described.

Friday Afternoon Stories and Talks—To aid in developing programs illustrative of the lighter side of school work.

Concerts and Dramatic Readings—To enable pupils to hear an artistic presentation of great music and classic drama.

The Central Council estimates that more than 5,000 schools are taking these radio courses, and that at least 1,000 new schools will join during 1931.

As shedding light on the English attitude toward various phases of the radio educational problem, a few excerpts from the correspondence between the Central Council and the writer are here given.

It is difficult to say at present how far school broadcasting has progressed towards its final place in our educational system. Any close investigation on scientific lines can hardly be attempted at the moment. As broadcast lessons are intended to supplement the class teacher's work, no comparison is possible with ordinary teaching. Again, their usefulness depends so largely upon the cooperation of the class teacher that the teaching skill of the latter must neces-

sarily be taken into account when any attempt is made to gauge success or failure. The personality of the broadcaster is another important factor not yet sufficiently analyzed.

We do not make broadcast lessons compulsory, nor do we suggest that they can be used to replace personal instruction by competent teachers. But after careful inquiry we are convinced that broadcasting may be brought in to furnish forms of stimulus and firsthand information such as are beyond the resources of any school.

Unless good reception is secured, school broadcasting is admittedly of little use as an educational medium. The Central Council feels that any school experimenting with a set which does not reproduce the voice as clearly as if the broadcast speaker were actually in the room is likely to waste both school time and money. There are certain types of sets on the market, which, for a variety of reasons, are not suitable for classroom use, although excellent for use in private houses. Unfortunately, many schools, for lack of expert guidance, spend the money that they have laboriously collected upon such unsuitable apparatus that their trial of the broadcast lessons is prejudiced by bad conditions at the outset—conditions which for financial reasons they may find it impossible to better later on.

The Council is doing everything in their power to promote the conditions necessary for successful school broadcasting. Chief among these are good reception and the cooperation of the class teacher. Unless good reception is secured, and unless the class teacher is willing to collaborate with his colleague at the microphone, school broadcasting may well prove to be merely a waste of school time and money.

The Central Council has formulated what it calls "fourteen points about school broadcasting." Portions of these are of a general character and applicable as fully to school people using radio lessons in the United States as to the schools of England.

1. Take all necessary pains to obtain good reception. A broadcast lesson cannot succeed if it is not clearly heard. The attention of pupils must not be burdened with the effort to pick out words from a blur of sound.

2. Place the loudspeaker in a position which will insure that every pupil shall hear the lesson in comfort. This may call for some change in the usual arrangement for seating the class, but all should be able to see the blackboard and to write notes or consult maps while the lesson is proceeding.

3. The broadcast lesson is a supplement to the efforts of the teacher, justified only insofar as it supplies information and mental stimulus beyond the ordinary resources of the school. Therefore do not attempt to use indiscriminately the whole of the program of broadcast lessons.

4. Consider the curriculum and timetable of the school, its general character and special needs, before deciding which

parts of the broadcast program you will use.

5. Study the aims of each broadcast course as outlined by the appropriate subject subcommittee in the preface to the pamphlet issued in connection with the course.

6. See that the arrangements are made for the provision of maps, and specimens, indicated in the pamphlets accompanying the courses, and that, when blackboard notes or lists of difficult words are given, these are written upon the blackboard beforehand.

7. Practise in auditory perception is one of the results of a wellconducted broadcast lesson. Remember that a child's power of sustained attention, particularly to words coming from an instrument and unsupported by the presence of the speaker, is not likely to be very great at first. Children must learn to listen and to cultivate the habit of disregarding extraneous noise.

8. A broadcast lesson is a cooperation between a teacher in the classroom and a teacher at the microphone. Do all within your power to collaborate in sustaining the attention of the children. In some lessons the broadcaster will give oral exercises or lead the class in the singing of songs. Encourage the children to take part in these exercises. Where questions are asked, encourage the children to reply aloud either in chorus or individually as the conditions require.

9. See that each child uses his pamphlet as directed during the lesson, referring to the pictures and diagrams at the instance of the broadcast teacher.

10. Children, particularly young children, can seldom make continuous or very neat notes during the broadcast lesson. What little note-taking is necessary should be done by setting down such words and phrases as will serve to recall what has been said. Care should be taken to avoid noisy movement of the papers.

11. Revision is essential to all good teaching, and this maxim applies with special force to broadcast lessons where transient auditory impressions are the chief element. These will need to be recalled and revived by the class teacher, with the aid of illustrations and other explanatory matter.

12. Questions and exercises play an important part in the revision of broadcast lessons. The questions should serve not only to recall the information given, but also to suggest applications and deductions. Wherever possible, the pupils should be encouraged to write answers, to draw diagrams or maps, or even to

make illustrations and models embodying their own ideas of what has been said in the broadcast lessons. There is no learning without activity.

13. Remember that the broadcast teacher regards you as a colleague and will be glad to be consulted freely on any point of difficulty connected with the course.

14. Considered criticisms, both of the lessons and of the pamphlets, and suggestions for improvement will be greatly valued.

A comprehensive general impression of the present attitude of British school people is obtained from the following paragraph, taken from a recent bulletin to the schools:

The Central Council ventures to hope that schools will experiment and seek the best conditions for school broadcasting on a scale far larger than at present, for only by widespread experiment can a full knowledge be gained of the possibilities of any new educational method. That school broadcasting has many possibilities is already evident, but they cannot be realized in full until the cooperation of the schools is assured.

It is hoped that this sketchy review of British radio educational activities may assist in stimulating an attitude on the part of the entire profession, not only of appreciation of the accomplishments of the English in this field of effort, but also of openminded investigation toward the various American efforts at instruction by radio, regardless of eventual approval or condemnation.—From *School Executives Magazine*, April, 1931.

With all respect and sympathy for our harassed and bedeviled Federal Radio Commission, I venture the opinion that we can learn something from the conduct of radio abroad. There, almost from its beginning, it has been under government regulation which is, perhaps, as much too strict as our own has been too loose, but which at least has enabled it to avoid some of our more obvious mistakes. In this country most of radio's troubles are traceable to the multiplication of broadcasting stations continuously and confusedly competing with each other for a limited number of air channels and for advertising revenues as a means of subsistence. In the absence of a definite code of regulations, only now beginning to take shape and coherence, it is small wonder that competition has run wild and that radio has thereby suffered, undeservedly, in the estimation of the public. In England this frantic scramble for the air has been avoided by rigid limitation of the number of stations—less than a dozen altogether and

with but two main transmitters—and by the interdiction of all forms of commercial exploitation of radio. Advertising is barred and operating expenses come from a moderate tax upon radio receiving sets, about two dollars and fifty cents a year each. Half of the \$8,000,000 annual total of this tax goes to the government and the other half to the British Broadcasting Company.

Such a semi-paternalistic monopoly of an important educational and entertainment medium would hardly conform to American ideas, but its collateral advantages are quite apparent. There is ground for hope that some degree of these advantages may ultimately be reached in this country thru the different route of evolution, elimination and experiment. In time, radio advertising seems to me likely to work itself down into the rather limited field to which it is peculiarly adapted, yielding to the printed page that major portion of the business in which the latter's superiority is manifest.—Harry Chandler, President of the American Newspaper Publishers' Association. Reprinted from the April 18 issue of *Editor and Publisher*.

A complete and almost unquestioned monopoly is enjoyed by the British Broadcasting Corporation. Within its own sphere it is a despotism, ordaining by absolute decree what 3,250,000 wireless license holders and their households may listen in to every day and every night of the year. But in the main it may be described as a "benevolent despotism." It has no competitors, no rival claimants to authority, nothing to gain for itself by any abuse of its favor, and no function to serve save that of either giving the public what it wants, or, alternating, what it supposes that it ought to want. These two ends are not necessarily the same. Private corporations, working in commercial competition with others, will always be tempted to do their best to give the public what it wants—neither more nor less. Thus it is with popular

newspapers and moving picture corporations. They are always studying the tastes of an imaginary man whom they suppose to be representative of 10,000,000 men; and it is obvious that they often form a very low opinion of him. In other words, they are inclined to "underestimate the public intelligence."

The BBC is free from this temptation. It has wisely resisted the opposite temptation—that of letting the sense of its responsibilities sit so heavily on it as to lead to extreme aloofness from popular taste. So alternative programs minister first to the lighter and then to the more serious moods.

But it must not be supposed that the decisions of this benevolent body always pass without criticism. Indeed, there is an evergrowing discordance of criticism directed by an appreciative or an inappreciative public at the efforts of their entertainers to entertain. We are given to understand that the Central Council is very sensitive to this criticism, and it is reported that its members have been known to figuratively tear their hair in desperation in the effort to reconcile conflicting advice offered by the public. To put their choice of programs on a more scientific basis they have now decided to make a statistical survey of listeners' tastes, habits, and requirements with regard to education.

Here, in fact, the BBC finds itself confronted with the main problem of democracy—that of discovering and giving effect to the real will of the people. It has no national machinery for taking a vote. But its efforts to make a genuine test of opinion are unquestionably sincere.—Recent London correspondence to the *Christian Science Monitor*.

United States please copy—An indication of the manner in which radio in England is contributing to the educational growth of the people may be obtained from these two brief paragraphs, excerpts from *The Listener*, publication of the British Broadcasting Company.

This week Commander Stephen King-Hall begins his experiment in trying to teach history backwards in the form of broadcasts to schools. The idea itself is not a new one; it has often been discussed among groups of teachers and sometimes written about, but few attempts have been made to put it into practise. There is on the surface an obvious advantage to be gained in starting from the known and working backwards to the unknown in studying history. A good many people, grownups as well as children, have a natural distaste for delving into the past without having some connecting link with the living present. Yet few current events or contemporary institutions can be explained without reference to their history. Commander King-Hall, with the guidance of the History Subcommittee of the Central Council for School Broadcasting, is to take such subjects as the budget, unemployment, the British Empire and disarmament, and, starting from the present position, will suggest to his audience events in the history of the past which seem to be definitely connected with each topic. Naturally the boys and girls who follow these lessons will be assumed to have some chronological knowledge of the history of their own country; for the purpose of Commander King-Hall's course is to focus their attention upon themes rather than periods. The pupils will be encouraged to do their own historical research in filling in the tracks back into the past which Commander King-Hall will mark out. A pamphlet is published by the BBC which includes guidance on these points.

It is a tribute to the soundness of the work of the BBC Advisory Committee on Broadcast English that the second edition of its recommendations to announcers should show so few recantations from the original decisions. The word *garage*, it is proposed, should now be rhymed with *marriage* and *carriage*, and *iodine* would part company with *turpentine* and go over to the fellowship of *chlorine*.

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- J. L. Clifton, director of education, Columbus, Ohio, National Council of State Superintendents.
- Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.
- R. C. Higgy, director, radio station WEOO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
- J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
- Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
- H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean!

Business Defeatism and Economic Recovery

BY GLENN FRANK

President, University of Wisconsin, Madison, Wisconsin

THE FRENCH have a word "défaitiste" to describe the man who in spirit or policy or procedure makes for his country defeat in time of war, and in wartime a nation's defeatists are kept under strict observation. I suggest that America has just now a growing body of business defeatists upon whom the nation could profitably keep a weather eye.

The supreme battle of this generation is on just now in business circles between the deflationists and the consumptionists. The deflationists are those business leaders who think that the way out of the current economic muddle lies in reducing the standards of living. The consumptionists are those business leaders who think that the way out of the current economic muddle lies in raising the standards of living.

This is, I know, an oversimplified definition alike of deflationism and of consumptionism, but it does have the merit of cutting thru a thousand and one details to the heart of the difference between these two major camps of business leadership that today confront one another.

The deflationists of today are blood brothers of the inflationists of yesterday, and they are just as bat blind to economic and social realities. The inflationists of yesterday brought the stock market to collapse. The deflationists of today will bring our entire business system to collapse if they succeed in seducing the majority of American business men, bankers and industrialists to their point of view. To speak with brutal frankness—and the times call for that sort of speaking—in my judgment the deflationists are little men riding in big saddles, seeking to lead a business army to which they have nothing to bring except the strategy of their fear. They are big business men who have fallen short of being *big* business men.

It is of this problem of the conflict between the deflationists and the consumptionists in relation to the current economic depression that I want now to speak.

Several possibilities—Along the entire frontier of Western civilization the forces that have made for the collapse of markets, the retardation of economic enterprise, and the unsettlement of mass confidence in current leadership are to-

day challenging the worth and the workability of the Western economic order. In the midst of this worldwide economic depression the forces of education and the forces of industry are occupying the two most heavily shelled sectors of the Western world's social battle-line. We do not yet know what the outcome of this challenge and of this contest will be. The forces of education and the forces of industry may be beaten into panic retreat by the disintegrative forces of revolution or by the integrative forces of dictatorship. The captains of education and the captains of industry may rest content with defensive tactics, dig themselves more deeply in, and do no more than hold their own for some time to come. Or they may evolve a fresh strategy of advance and move forward to new conquests of economic prosperity and social good.

I am not foolhardy enough to venture a prophet's guess among these three possibilities. I am content to say that I think the third outcome is possible, and that it lies very largely with the leadership of education and the leadership of industry to say whether or not it shall be realized.

Most serious economic crisis in history—The United States is, at the moment, in the midst of the most serious economic crisis in its history. Even with markets tumbling about our ears and with salesmen reluctantly reporting their quotas unfilled, there is, save for the breadlines in our congested centers, a bright delusive air of wellbeing among our people that tends to hide from the average American the deeper significance of the depression thru which we are passing. We have known phases of slowing down in which the American people, as a whole, were on a lower level of living than now, but in its basic character the current depression is unlike and more serious than any depression that has preceded it. It is the first general crisis that has befallen us since our machine economy has come to measurable maturity. It is not a matter of momentary maladjustment in any one section of the world. It is not a matter of momentary speculative mania disrupting an otherwise statesmanlike and stable economic program. There is nothing to be gained by beating about the bush. The entire economic order of the Western world has

reached an impasse from which only the most clear-headed, creative, and courageous educational, industrial, and political leadership can extricate it.

That this is not the facile generalization of a frightened academician is proved, I think, by four obvious but all-too-generally overlooked aspects of this depression, viz:

World situation—First, the current economic depression is not simply American; it is worldwide. . . . The Americas, Europe, Asia, Africa, and the Antipodes—all stand today as if some subtle spell of economic witchcraft had been put upon them.

Industrial as well as financial—Second, the current economic depression is not simply a financial depression; it is industrial as well. We should today be wrestling with forces of economic retardation even if there had been no black October in the 1929 operations of the Stock Exchange. The market debacle was but an eddy in a major current of economic tendency. In the United States, significant sections of industry, such as the automobile industry, had been reaping the easy harvest of a first-sale market, and were beginning to reach the point at which, by and large, the market was settling down to a matter of replacements and of meeting the new needs created by normal growth of population, or by radically new departures in design, quality, and price. American business and industry were catching up on the postponed building and buying that had kept the air electric with enterprise in the immediate post-war decade.

Various artificial stimuli to business, such as installment buying and the mania for annual models, were rounding out their pioneer push and settling down to a normal pace of development. Thruout the world the potential energies of the machine age were beginning to feel the irrational restrictions of tariffs and trade policies that had been created by an obsolete political leadership, tariffs and trade policies that stood and still stand in utter violation of the clear conclusions of common sense and of all the canons of constructive statesmanship.

The current depression is more than a faux pas of the financiers; it is a kind of judgment day for industrial leadership. We might reform the Stock Exchange

and still the ghost of this depression would not down, for it sinks its roots in all the policies and processes of our industrial order.

It is agricultural also—Third, the current depression is not simply financial and industrial in its scope; it is agricultural as well. I need not, I am sure, argue this assertion. Alongside the worldwide industrial depression there is a worldwide agricultural depression, again emphasizing the fact that the phenomenon we are facing goes to the very foundations of the economic order of the West, in particular, and of the world, in general. The agricultural aspect of the current depression strikes, with utter impartiality, exporting and importing countries alike. Such exporting countries as the United States, Canada, and Australia are hit by an agricultural depression due primarily to economic and secondarily to political causes. Such importing countries as Germany and England are hit by an agricultural depression due primarily to political and secondarily to economic causes.

For every existing agricultural surplus in any part of the world there are somewhere in another part of the world undernourished bodies enough to absorb it. But we seem not to be able to muster a statesmanship that can lift the peoples of these areas of under-consumption to the level of paying customers and bring the supply into contact with the need. And so we must admit a bankruptcy of leadership and shame ourselves by confessing a worldwide agricultural depression that would be unthinkable to a really intelligent race.

Over-production of raw materials—Fourth, the current economic depression is not marked by an over-production of manufactured goods alone; it is marked by an over-production of raw materials as well. In the last decade or two there has been a staggering increase in the production of raw materials and foodstuffs. From 1909 to 1914, the average world production of sugar was 19,363,000 short tons. By 1929, it had jumped to 29,970,000 tons, or, roughly, a fifty percent increase. In less than two decades the United States increased its wheat acreage from 47,000,000 to 61,000,000 acres, while Australia and Canada more than doubled theirs. The world had a full year's supply of coffee on hand when this year's crop was ready for harvest. The world output of tea jumped, in four years, from 856,000,000 to 945,000,000 pounds. Rubber jumped from 51,000 to 68,000 long tons. From 1926 to 1929, the

world output of tin jumped from 145,000 to 195,000 metric tons, lead from 1,606,000 to 1,775,000 metric tons, zinc from 1,245,000 to 1,470,000 metric tons, and copper from 1,485,000 to 1,908,000 metric tons. This expansive output of raw materials is, again, a worldwide phenomenon. From 1910 to 1914 Australia's average wheat production was 90,497,000 bushels. Twelve years later it had jumped to 160,762,000 bushels. In 1913, Australia's wool production was 711,500,000 pounds. In 1927, it had jumped to 883,304,000 pounds. In 1913, Chile's output of copper was 93,147,000 pounds. In 1928, it had jumped to 528,487,000 pounds. And even in the face of the rapid development of synthetic nitrates in Germany, England, and the United States, the output of Chilean nitrates jumped from 2,772,000 metric tons in 1913 to 3,163,000 metric tons in 1928. I take these figures, more or less at random, and with no attempt to paint a complete picture, in order to emphasize the fact that the current glut of manufactured goods is not the whole story of the current depression. We are face to face, then, with a phase of economic depression that is worldwide in scope, financial, industrial, and agricultural in character, and marked by a sluggish surplus alike of manufactured goods and of raw materials. But I want to do no more than suggest a point of view respecting the industrial depression in the United States and say what I think it implies by way of challenge to the leadership of education and the leadership of industry.

The machine order swamps the economic order—As the United States swung into the closing months of 1929, our machine order was never more efficient from the point of view of potential productive capacity, but our economic order found itself swamped rather than served by the efficiency of the machine order. [I use these terms—"machine order" and "economic order"—in a more severely separate and limited sense than the technical economist uses them. By the machine order I mean the whole array of processes by which we make goods and produce wealth; by the economic order I mean the whole array of policies by which we use goods and distribute wealth.] Never was there less defensible excuse for economic depression than in the closing months of 1929. There was no shortage of money. There was no shortage of basic resources. There was no lack of willing hands to work. There was no lack of productive efficiency. There was no plague-like adver-

sity of wind or weather. There was no insect pest, either nationwide in its ravages or seriously out of hand. There was no invader hammering at our gates to terrify our spirits and to disrupt the normal processes of our enterprise.

On the contrary! There was an ample money supply. There was a surplus of nearly all basic resources. There were millions of workers ready to work. The productive efficiency of the nation was such that the needs of its people and much besides could have been easily supplied with shorter working days and a shorter working week. At no moment in human history had a people found itself in possession of so nearly all of the material essentials for a great and glowing civilization. It was at such a moment that the United States found the shadow of a serious economic depression falling athwart its life.

At the very moment when the market collapse and economic retardation befell it, the United States was basically at the point towards which the dreams of prophets and seers have pointed thru the centuries. As we reread the literature of Utopian thought and list the things that the social seers have, with striking unanimity, set down as elementary requirements of an ideal society, we find that the United States was in position to provide them all in the closing months of 1929. It had invented machines enough to emancipate its people from drudgery. It had achieved a productive efficiency that made possible the production of everything its people needed without their slaving from dawn to dusk. Leisure in which to laugh, and love, and adventure among things of the mind and spirit was within the nation's grasp.

And yet, just when we had reached the point at which emancipation from drudgery, the capacity to produce all the essentials of material wellbeing without the slavery of inhuman hours, and the potential achievement of prosperity and leisure for all were at hand, we found ourselves victimized by a financial debacle, an economic recession, and a vast social unsettlement, in which men walked hungry in the midst of plenty. What must the gods have thought as they watched this tragi-comedy!

Leadership in distributing and using goods is inferior—I do not want to join the oversimplifiers, and bring a false clarity to a situation that is admittedly complex. The cause of the current economic situation cannot be captured in a phrase nor its cure distilled in an epigram. But

one thing is, I think, sun-clear: The leadership that has developed our policies for using goods and distributing wealth has proved inferior to the leadership that has developed our processes for making goods and producing wealth. We cannot, of course, tear the machine order and the economic order apart in our thinking. They are too intimately interlocked. But, in the deepest sense, I think it is accurate to say that the current depression is, in essence, an indictment, not of the machine order, but of the economic order. Let me translate these abstract observations into concrete terms. It is by now a threadbare platitude—even if a young platitude—to say that our machine economy is in trouble because our capacity to purchase has not kept pace with our capacity to produce. Following the war, some of the more far-sighted leaders of American business and industry adopted a new credo that said a stable and widely distributed prosperity and healthy industrial development requires high wages, short hours, and low prices. This ran contrary to the naive business thinking of earlier generations that said low wages, long hours, and high prices made for maximum profit. But outstanding industries thruout the United States proved by their balance sheets that high wages, short hours, and low prices were not only good for the masses but good for the manufacturers. And we are in the grip of depression now, not because we followed this new credo of business, but because we did not follow it generally enough or apply it far enough.

The simple fact is that a machine economy must, along with the making of commodities, see to it that the consuming millions have money with which to buy and leisure in which to enjoy the products the machine economy creates. And that means higher wages than we have yet paid, shorter hours than we have yet set, and lower prices than we have yet fixed. Our machine economy is today sinking us in a sea of surplus production that we have not yet proved statesmanlike to use to the advantage of ourselves and of the world. I decline to concur with the observers who insist that we are producing too many goods. There are 120,000,000 of us in this nation, and, as a people, we have far from satisfied the legitimate demands of a healthy and civilized folk. There is a whole world outside our frontiers in which millions upon millions of men and women are living far below the consumption level we have known and that health and civilized

values dictate. If we are at all sensitive to the physical and spiritual needs of humanity, to say that we are now or shall be for generations to come at a point where humanity is surfeited with goods and services it does not need for better living is, to me, too incredible to consider seriously.

To reduce production would be social retreat—But that we are producing more goods than the consuming millions are able to purchase is obvious. Production and consumption are seriously out of balance. There are two obvious ways to deal with this disturbed balance between production and consumption. We can slow down production by deliberate policy or we can speed up consumption by deliberate policy. I shall not attempt to disguise my conviction that to throw the brakes on our productive capacity would be a coward's policy and a social retreat. We have evolved a machine economy that can, if we will but bring a far-sighted statesmanship to its direction, emancipate the race from drudgery, lift the standard of physical wellbeing thruout the world, and give mankind at last leisure in which to cultivate values that lie beyond economics. But the machine economy will never do these things unless and until the leadership of industry sees to it that a larger share of the national income is shifted into the pockets of the consuming millions, and until the margin of leisure for the millions is markedly increased. And if and when the leadership of industry assumes as one of its major duties increasing the incomes and the leisure of the millions, it will discover that, as a byproduct of this statesmanlike social ministry, it has made greater profits than ever before.

A simple and single challenge lies coiled at the heart of this depression: Will the leadership of industry prove as capable in producing civilized consumers as it has proved itself capable in producing consumable commodities? Unless it does, industrial leadership must resign itself to the certainty that our machine economy will slump into chronic depression and ultimate collapse.

Best policies for labor are best for capital—The logic of events is at last proving that the basic policies that will prove best for labor are the policies that will prove best for capital and vice versa. It is at last evident that it is to the best interests of business that a larger share of the national income shall find its way into the hands of the masses who buy consumable commodities. It is obviously self-defeating for business to get itself

into the position to produce vast quantities of goods, unless, at the same time, it sees to it that there are vast masses of potential consumers ready with money to buy and leisure in which to use the goods that business produces. In the entire history of business-America, every general reduction of hours and every general rise in wages, however bitterly fought by business and industrial leadership at the time, has been followed by a fresh accession of business activity and general prosperity. It is one of the ironies of history that the very things for which labor and liberalism have pleaded thru the generations, on the ground of simple social justice, namely, high wages, short hours, low prices, are now seen to be the only things that can, in the interest of the solvency of capitalism, keep our industrial order a going concern.

In the field of education, the specialist has broken down in the face of a crisis that only the broadly-educated man, who can see things steadily and see them whole, could master.

In the field of industry, the machine order—which makes goods and produces wealth—has been astonishingly successful, only to find its success turned into defeat because the economic order—which has to do with using goods and distributing wealth—has not been able to make wise use of the marvelous efficiency of the machine order for the benefit of all.

Leaders fell down in preventing economic depression—By a thousand superficial tests our captains of education and our captains of industry have been successful during the decade just closed, but in the deeper sense, they failed when faced with the crucial test of their careers, namely, the prevention of the current economic depression. And before they can again lay claim to success they must help us do two things, viz.:

First, they must help us make our universities once more educational institutions as well as training stations for narrow specialists.

Second, they must help us make our economic order as socially efficient in its policies for using goods and distributing wealth as they have made our machine order technologically efficient in its processes for making goods and producing wealth.

During the last three months, before two significant bodies of business and industrial leaders, I have made the statement, the essence of which is: If we are to insure the solvency and success of our industrial system, we must see to it that

a larger share of the national income is shifted into the pockets of the consuming millions and that the margin of leisure for the millions is markedly increased, in order that the masses may have money with which to buy and leisure in which to enjoy the vast flood of goods and services our magnificent machine economy is able to produce.

Twenty years ago, or less, this statement would have been set down as the envious and irresponsible raving of a disinherited radical. But experience—the experience of the last year—has taught many men many things. This statement has brought to my desk a flood of letters, many of them from the undisputed leaders of American business, industry, and finance, and to date the file of these letters contains but three dissenting opinions, and not one of these was from a great business leader.

What is it that has led the best brains of the business and industrial world to agree that a contention, considered dangerously radical twenty years ago, is today the soundest of sound business policy? It is surely not because the big business man has turned bolshevik!

Let me try to state the case briefly: When various important industries began to slow down production in 1929, it was not because there was a lack of purchasing power in the country, but only because there was a lack of purchasing. Here is the great paradox of our industrial civilization: At the very moment when a slump in purchasing left industries with excess products, there existed in the country far more than enough purchasing power to absorb all of these excess products and to call for still greater production. Why, then, did not this purchasing power come into play? Not until we know the right answer to this question, will we be in position to devise workable ways and means of bringing this adequate purchasing power back into play. To me, one of the important parts of the answer is unclear. The reason that this surplus purchasing power was kept out of active circulation was that it existed, in large part, as a social surplus that was not, from a broad national and even business point of view, properly distributed. This inactive surplus purchasing power was, in large part, in the hands of a small minority who, for personal and family consumption, neither needed nor desired to buy more, while the large majority who, for personal and family consumption, both needed and

desired to buy more did not have much if any excess purchasing power.

During the last six months, I have talked with a score of conservative big business men who agree that this is, as far as the factors under our immediate control are concerned, the root fact of our current economic situation. And they say frankly that the biggest job confronting the leadership of American business and industry is what to do about the wiser distribution of this social surplus of purchasing power.

The key to national prosperity is the release of the present inactive social surplus of buying power. And a score of America's outstanding business men, bankers, and industrialists have, as I have already suggested, told me that if a larger share of this social surplus could be wisely routed into the pockets of the consuming millions who, for personal and family consumption, both need and desire to buy more, the wheels of industry and the marts of trade would quickly begin to hum with new activity, economic depression would become a memory thruout the United States, and that, in the long run, the minority now owning this surplus buying power would actually be better off as far as total wealth is concerned.

Key to the problem is a wise redistribution of social buying power—The key problem of the United States is, if I may repeat, the problem of a wise and businesslike redistribution of social buying power. Large scale charity does a little of this redistributing. Unemployment insurance does a little more. A gigantic program of public works, financed by government bonds, bought by those who now have a large part of our inactive surplus buying power, and the interest and retirement of these bonds financed by taxation of this inactive surplus of buying power, would go still further in this essential redistribution of surplus buying power. A dozen governmental devices come readily to mind.

But I should like to think that we can effect this imperative redistribution of social buying power thru farsighted business, industrial, and financial leadership, without resorting to political force. And never, since I have had personal contact with representative leaders of American business and industry, have so many of them been giving so much serious thought to this key problem as they are today.

A statesmanlike administration of the

triple problem of wages, hours, and prices can go far towards resolving the economic dilemma that now confronts industrial and business America. If business and industrial and financial leadership faces fresh problems with fresh minds and becomes really convinced that only prosperous consumers make profitable customers, we can create on this continent a contented and prosperous people immune to the allurements of reckless radicalisms. But if business, industrial, and financial leadership misses this appointment with destiny, our economic order will smash and sooner or later the inarticulate millions of America will seek to achieve through political means what our economic order has failed to achieve for them thru its normal leadership.

The gist of what I have tried to say is that our panicky present is the result of our planless past. If we isolate any section of economic America, we find that it has been managed admirably, but if we look for general economic statesmanship, we look in vain. If we permit the present to be as planless as the past has been, if we content ourselves with hastily improvised policies to jack up morale or hastily improvised protests to provide stump-speech copy for the next campaign, we shall find ourselves citizens of a fear-ridden future in which we shall be dragged at the heels of forces and fears over which we shall be able to exert no more control than we exerted over the forces that brought a bloated market to explosion in the fall of 1929.

Every card in the deck is in our hands—This fear-ridden and uncontrolled future need not be. There is genius enough in America to evolve and to execute political and economic policies that will give us a future that will, in point of material wellbeing and social enrichment, far outstrip the very real, if somewhat spotty, prosperity of the last decade. If America does not realize this finer and more fruitful future, and begin her realization of it with decent promptness, it will be either because at the top we suffer a breakdown of industrial, political, and educational statesmanship or because at the bottom the people, in a moment of leaderless confusion, fanatically follow some false prophet from either the ultrareactionary or the ultraradical camp. It will not be because the cards of destiny are stacked against us. They are not. Every card in the deck is in our hands. It is a matter of playing them expertly.—*The Kiwanis Magazine.*

The Ohio School of the Air

TO THE OHIO STATE legislature belongs the honor of being the first state legislative body to provide thru public appropriation for a school of the air under the direction of the educational authorities. This pioneer step will assume increasing significance thru the years. Already it has brought Ohio to the attention of the entire educational world.

The curtain was raised January 7, 1929, on the first broadcast of the Ohio School of the Air. The audience which listened in to that program little realized it heard a new drama in education destined to be put on the air every schoolday of the year. Though other experiments in air schools had been tried, this Ohio School of the Air was to rise to heights of significance as a factor in education.

The school's broadcasts are sent out from station WEAO of the Ohio State University, and WLW, the 50-kilowatt station of the Crosley Radio Corporation which offered its voice without charge and without advertising. Each year these stations have given their facilities that the work of the school might be continued under the sympathetic guidance of Dr. J. L. Clifton, director of education in Ohio, and the able administration of B. H. Darrow, director of the Ohio School of the Air.

Successful programs of educational content could be assured only thru the cooperation of experienced educators who knew best how to engage the attention of an audience whose ages ranged from five to eighteen. Ohio's educators were not slow in answering the appeal. The State Department of Education, the Ohio State University, the University of Cincinnati, and many school systems of the state—all loaned their talent to the success of the air school.

Material for the programs was gathered and assimilated. Broadcasters, equipped with definite knowledge of the best manner of approach to the classroom via the air, were enroled on the staff of the school. Dr. W. R. McConnell, of Miami University, was engaged to present geography for upper grades; Harrison Sayre, of the American Education Press, graded current events. A new character on the air was brought to the microphone in the person of Alma Ruhmschussel, director of physical education for the Dayton, Ohio, schools, who broadcasts stories, plays,

and rhythmic. History dramalogs were presented by the Crosley Players.

Broadcasts went on the air every schoolday of the year between the hours of two and three o'clock. A telephone connection with a microphone at Washington, D. C., was installed in the headquarters office of the National Education Association, and students in Ohio and other states heard the voices of cabinet members, congressmen, and other government officials.

A literature series by living writers stimulated interest in reading and composition. Botany, physics, chemistry, health talks, citizenship, art appreciation, and modern adventure lectures supplemented the work of the teacher. Every schoolday brought a new incentive to youngsters soon to take their places in the ranks of American citizens.

A popular program was broadcast by Professor Harry E. Eswine under the caption, *Out to Old Aunt Mary's*. As the Pied Piper of the fields, he conducted the listening children over nature's paths to Aunt Mary's. On the way he told the story of the ant, the bee, the toad and frog, bird's nest, locusts—all the birds, beasts, and flowers. The joy and excitement of a romp over hill and down dale were carried into the schoolroom, while at the same time the children were instructed in naturelore.

The state department of education keeps a careful check on the progress of the air school. Reports are returned to headquarters at Columbus following each broadcast, setting forth the teacher's candid impression of the merit of the program. Notation also is made of pupil attentiveness. This close cooperation between the agencies of transmission and reception enables the school constantly to build better programs.

Commendatory correspondence soon filled the files of the Ohio School of the Air. Radio knows no man-made boundaries, and the broadcasts had passed the borders of Ohio into Kentucky, Indiana, Pennsylvania, and surrounding states. After six months on the air, it was estimated the programs were being received by approximately 300,000 pupils in twenty-seven states. Today, a year later, it is not an exaggeration to state the broadcasts are heard by upwards of a half-million persons.

The school's influence spread beyond

the classroom. Blind children, cripples, and shut-ins have found a new friend on the air. Now emerged from the experimental stage, the school has become another force in the advancement of adult education. A survey made in the vicinity of Sandusky, Ohio, indicated that the programs were reaching 1300 homes; that both parents and children listened; that each checked back with the other in a kind of intellectual game.

Within four months after the first broadcast, there occurred an event which assured continuation of the school of the air. Without a dissenting voice, the Ohio state legislature appropriated \$40,000 to carry the administrative cost for a two-year period. With no intention of overstating its significance, it is not unlikely that history was made as this state legislature took cognizance of the value of radio as an adjunct to the process of education.

At one of the early sessions of the school, pupils of the state were invited to listen to the inauguration of the governor. Newspapers cooperated generously in spreading news of the event, unique in the history of broadcasting. The educational value of the inaugural ceremony was recognized immediately by heads of school systems thruout the state who quickly devised ways and means for providing schools with radio receivers.

For the first time in their lives, many of the pupils participated in the affairs of their state government. Under supervision of their teachers, and away from the tom-tom jazz, students indulged a vital contact with leaders of the state. "The school of the air had bridged the gulf between the confines of the schoolroom and the great world outside for which school life is, in the minds of many pupils, a long and irksome preparation."

Ohio's project in education by radio has graduated from the experimental state and now presents the most successful undertaking of its kind in the United States. It has brought to the young students of Ohio and surrounding states personalities of national and international significance whose messages cannot but make for better citizens of the future. It has done much to make these youngsters realize there is something more worthwhile on the air than monotonous jazz and commercial advertising sales talks. The influence of these young people will mean a better tomorrow.

Pennsylvania's Proposed School of the Air

PENNSYLVANIA always has been proud of its schools. With Ohio and California, Pennsylvania leads all others of the United States in the number of teachers enrolled in the National Education Association. The fact bespeaks an active desire on the part of the teachers of Pennsylvania to keep abreast of presentday trends.

Education by radio is here. Its value has been proved. It is spreading rapidly in other countries and is now beginning to develop in the United States. It is quite natural that Pennsylvania should aspire to be the second state to institute a school of the air.

Pennsylvania's proposed school of the air is another step away from the necessity which now confronts educational institutions of applying to commercial stations for broadcast time and receiving only unsaleable time. The new air school will mean that true cultural programs may be received by those thousands of sets which long have gathered dust in a corner because their owners have wearied of sales talks and jazz.

The Pennsylvania project is an indication of what may be expected in radio with the coming years. Education by radio is inevitable.

The following act was introduced into the House of Representatives of the State of Pennsylvania on April 20, 1931:

An act creating the Pennsylvania School of the Air as an independent administrative board, providing for its organization by the Governor, prescribing its powers, and making an appropriation

Section 1—Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met and it is hereby enacted by the authority of the same That the Governor of the Commonwealth is hereby authorized to organize as an independent administrative board with power to adopt by-laws and other necessary administrative procedures an educational institution to be known as the Pennsylvania School of the Air Such board shall be composed of one representative from each of the following the Pennsylvania State College the Pennsylvania State Education Association [if such institutions or associations so desire] the Department of Public Instruction the Department of Forests and

Waters the Department of Highways the State Police and one representative from each such other educational institution association department and/or bureau as the Governor may desire Such represent-

RECENTLY we have had offered to the schools lessons on public utilities prepared and proffered with the bait of no cost by the corporations which own the franchises and which presumably would profit by the impartation of the data presented. The New York Stock Exchange employs a skilled and charming agent who speaks without charge to high-school assemblies, explaining the organization and activities of the Exchange, presumably to break down the public hostility that long existed.—From *The Great Investment* by Thomas H. Briggs.

atives shall be appointed by the Governor for terms of four years Vacancies shall be filled by the Governor for full terms

Section 2—The said Pennsylvania School of the Air shall be organized for the purpose of broadcasting by means of radio and/or television educational programs of various grades and characters and by such means to

[a] Serve the rural schools of the State as well as all other schools interested by supplementing their educational methods and materials

[b] Serve the agricultural interests of the State by furnishing technical and market information

[c] Serve the industrial commercial and professional interests of the State by furnishing technical and professional information

[d] Serve the adult citizenry of the State by furnishing educational opportunities for continued learning

[e] Serve the households of the State by furnishing technical counsel on the construction care and conduct of the efficient home

[f] Serve the government and public

interests by providing channels for Statewide public information

[g] Serve the interests of an informed public opinion by providing a Statewide forum for the pro and con discussion of the problems of public policy

[h] Serve the public interests by providing music literature and other art of high standards

Section 3—In order to carry out the purposes hereinbefore set forth the said Pennsylvania School of the Air shall arrange for the use of broadcasting stations WPSC at State College and WBAK the station of the State Police located at the State Arsenal at Harrisburg and any other broadcasting stations within the Commonwealth that may be made available for the use of the said Pennsylvania School of the Air

Section 4—The said Pennsylvania School of the Air is hereby authorized to connect the various broadcasting stations used by it in broadcasting its programs by telephonic transmission lines and with the approval of the Federal Radio Commission to further equip and improve the broadcasting facilities of stations WPSC and WBAK so as to make them more useful and better able to carry out the purposes of this act

Section 5—The said Pennsylvania School of the Air is hereby authorized to provide the proper studio installation purchase the necessary apparatus and contract for the erection of the necessary transmission lines to connect such studios and/or broadcasting stations

Section 6—The said Pennsylvania School of the Air shall employ and fix the salaries of such directors announcers operators artists lecturers radio engineers electricians and other employes as may be necessary to carry out the purposes of this act and pay such salaries from appropriations made for such purposes

Section 7—The sum of three hundred fifteen thousand three hundred and fifty dollars [\$315,350.00] or so much thereof as may be necessary is hereby specifically appropriated to the Pennsylvania School of the Air for the purpose of purchasing and installing necessary equipment for studios and broadcasting stations erecting or leasing transmission lines paying the compensation and salaries of necessary directors announcers operators artists lecturers radio engineers electricians and other employes and to fully carry out the purposes of this act

Cooperation Between Home and School

THE HOME is the first school and the last. It is the oldest unit of civilization. Nations have risen and fallen. Races have come and gone. Great arts have been discovered and lost. Monuments have crumbled. But the home lives on.

It is founded upon natural affection, mutual faith, and common aspiration. It is the richest soil that has ever been given for the development of the child. Within its sacred precincts are cherished the virtues and the dreams of countless generations of the finest men and women the race has produced. The ideals for which it stands constitute a cumulated wealth far beyond our material heritage.

The common school is America's greatest contribution to the advance of the race. We have more young people in our high schools and colleges than all the rest of the world combined. The common school has helped America

To conquer her vast frontiers

To assimilate diverse races and nationalities

To lift womanhood to the highest level of all time

To develop large-scale industry

To lift our standard of living to the highest level ever known

To outlaw beverage alcohol and war

And to set in motion forces of idealism, intelligence, and purpose which shall create upon this continent a new civilization worthy of the promise of democracy.

The common school of tomorrow will include virtually the entire population, both children and adults. It is almost impossible to overemphasize the lifting force of rightly conceived, rightly managed education. It is the process by which civilization grows. The teacher stands on the unlimited frontier of human possibility—a frontier that transcends time and space and leads on and on and on. We shall double the number of teachers. We shall free them and pay them and honor them beyond our most generous dreams of today. We shall do all this gladly and eagerly because of the richness which teachers add to our lives.

It is an inspiring circumstance which brings into one vast cooperation the forces of home and school. The two great institutions need each other. They have a common motive and a common purpose. Neither can do its best without the full understanding and support of the other. Every parent has a right to know and to love the teacher of his children. And every teacher has a right, a duty, to know the parents of the children

in his charge. Children are deeply impressed by the mutual respect of their parents and teachers. It helps them to value their homes and to appreciate their schools.

Radio and the Home

We believe that radio broadcasting is an extension of the home; that it is a form of education; that the broadcasting channels should forever remain in the hands of the public; that the facilities should be fairly divided between national, state, and county government; that they should be owned and operated at public expense and freed from commercial advertising.—Resolution adopted by the National Congress of Parents and Teachers at its thirty-fifth annual convention at Hot Springs, Arkansas, May 7, 1931. This organization has a membership of more than a million and a half representatives of the best homes and schools.

Values which children cherish are not a matter of chance or accident. They grow out of their experience and their teaching. If we wish children to believe health is a precious heritage, we must teach them to value health and to establish habits which will maintain it under conditions of today's life. If we wish them to believe in home and family, we must teach them the glory of home life, the necessity of sacrifice, and the beauty of mutual sympathy and service as exemplified in the intimate and abiding loyalties of husband and wife, parent and child, brother and sister.

The age in which we live presents peculiar and difficult problems for both home and school. I have just received a telegram saying that the experts who are studying our farreaching problems of unemployment are recommending that the 1931 graduates of our high schools and colleges remain for another year in school, when conditions will be more favorable for their absorption into the occupational life of America. In that recommendation the officers of the Na-

tional Education Association have joined. It is a proposal of great magnitude and significance, affecting the lives of literally hundreds of thousands of young people. Such a proposal presents huge problems of finance and organization but what an opportunity it is for the enrichment of American life!

The meeting which is being held in Hot Springs is one of the most important meetings held in America this year. It brings together our best home-loving people in a program for home, school, and community. It emphasizes the human values. It lifts up the child. It is the sanest and happiest group of people that I have seen in a life of travel and public service. Would that we could bring to all America the grace, the joy, the intelligence, and the beauty of life which are expressed here this week.

The National Congress of Parents and Teachers is one of the most significant organizations in America. It draws into one mighty fellowship the constructive forces of home and school. It appeals to the best, the highest, and the noblest. It is remarkably free from petty selfishness and personal ambition. May all you who share in this great movement be proud of your part in its vast program and put into it more and more of your money, your talent, and your spirit. It will return all you put in a thousand fold.

This talk would be incomplete without a word of tribute to these gracious, heroic people of Arkansas and the beautiful state which they are proud to call home. They have taught us anew the meaning of courtesy and devotion and charm. A state which can do what the people of this state have done in entertaining this great convention can do almost anything. It is in places like this that American life rises to its loftiest heights of nobility and fineness. My advice to the next generation of young people is to put their talent and their lives not in the great cities but in states like this where home comes first.—An address by radio over the National Broadcasting Company National Farm and Home Hour, May 6, 1931, by Joy Elmer Morgan, editor of *The Journal* of the National Education Association, and chairman of the National Committee on Education by Radio. The address was given in connection with the thirty-fifth annual convention of the National Congress of Parents and Teachers, Hot Springs, Arkansas.



4-17

Washington Post, April 17, 1931

By C. M. PAYNE

WHO SAYS THEY NEVER COME BACK?

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

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Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.

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Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Education's Rights on the Air

JOY ELMER MORGAN

Chairman of the National Committee on Education by Radio and Editor of The Journal of the National Education Association

MAY I EXPRESS my appreciation of the privilege of appearing upon this program. It is necessary for me to speak plainly and frankly. What I have to say can be valuable only in proportion as it is an honest conclusion based upon wide experience with conditions and needs. If at times what I shall say may seem a bit too plain I need merely to remind you that I am discussing a situation and not personalities and that I entertain only the kindest feelings for all the individuals who may be involved however mistaken their policies may seem to be.

As a result of radio broadcasting there will probably develop during the twentieth century either chaos or a world order of civilization. Whether it shall be the one or the other will depend largely upon whether broadcasting be used as a tool of education or as an instrument of selfish greed. So far our American radio interests have thrown their major influence on the side of greed. In striking contrast to other leading countries, they have preferred a hasty mushroom development to a slower and sounder development.

There has not been in the entire history of the United States an example of mismanagement and lack of vision so colossal and far-reaching in its consequences as our turning of the radio channels almost exclusively into commercial hands. The mismanagement of the public domain out of which our western states were carved was bad enough, but we did have the vision to reserve certain sections for schools. Our failure to take possession of our mineral and oil resources for the common good has contributed to extensive waste of our natural resources and to excessive wealth on the one hand and to poverty on the

other. The giving away of much of our water power—a resource almost as necessary during the years ahead as air—was even worse than our land policy or our squandering of mineral and oil re-

THE SUPREME COURT of the United States has issued during the past few weeks two decisions of such outstanding merit and significance that they will greatly enhance the standing of that tribunal in the eyes of all who believe in freedom and fair dealing. On April twenty-seven it declared the Radio Corporation patent pool in violation of the antimonopoly laws. On May twenty-five it declared the so-called Langmuir vacuum tube patent invalid, thus opening the way for independent manufacture. At least two more major decisions are needed to protect the fundamental rights of the American people. One should forever preclude the possibility of vested rights in the air in the hands of private interests. The other should protect the rights of the sovereign states to a fair share of the radio channels in the development of education and other state projects.

sources. But all of these fade into insignificance when compared with the giving away of radio frequencies of untold value with no thought of compensation or no reservation, as in the case of the public domain, for the uses of education.

The seriousness of the situation was recently set forth by Paul Hutchinson

in a series of seven notable articles in the *Christian Century*, in one of which he says:

Unimportant as they now are, the educational broadcasting stations represent the only considerable portion of the broadcasting facilities of this country which have not come under big business control. Undeveloped as they still are, programs for radio education represent the only considerable part of the radio fare which is not yet fully under commercial auspices. It is altogether likely that unless the educators can be rallied to demand from the government a permanent allocation of a reasonable portion of the broadcasting facilities of the country, to be used without any reference to the desires of commercial interests, the organization of the industry in rigid forms—soon to occur—will find the dream of Mr. Owen D. Young realized, with the broadcasting of any material to a national audience dependent upon the goodwill of a commercial despotism.

Of course someone will retort that the assignment of radio frequencies is temporary, and so it is in theory. It is inconceivable that the Supreme Court will grant vested rights in the air. But as a matter of practical application the radio assignments in the hands of powerful interests have tended to be permanent. Not until the Supreme Court decision of April 27 has there been any real indication of a check on the predatory movement toward national and world monopoly.

Education's place in radio—Education is the first and the last duty of the state. It is the most fundamental activity of government. It is the process by which the state lives and grows. Education is not only the life of government, it is the life of industry and of agriculture and of business. The pressing problems of this hour can be met only thru an enlarged concept of education and a more vigorous devotion to education by our entire population. Intelligence is not a sideline. Education is no narrow academic affair. It is not

An address before the Annual Assembly of the National Advisory Council on Radio in Education, in New York City, May 22, 1931.

THE QUESTION OF MONOPOLY in radio communication must be squarely met. It is not conceivable that the American people will allow this new-born system of communication to fall exclusively into the power of any individual group, or combination. It cannot be thought that any single person or group shall ever have the right to determine what communication may be made to the American people. We cannot allow any single person or group to place themselves in a position where they can censor the material which shall be broadcast to the public.—Herbert Hoover as Secretary of Commerce testifying before the House Committee which had under consideration the Radio Act in 1925.

confined to children. It concerns the entire population. It involves the whole life of the individual on the one side and the whole life of society on the other. We have at this very moment in our business depression an example of the results of education without character. We have people who want to work and we have the money with which to finance industry. Because our leaders lack vision, intelligence, and courage we are slow to recover from our fears and our inactivities.

Education is the one project which can unite the entire population regardless of class or creed or age. There is a crying need for the education of adults. The experts who have been studying our unemployment problem have recently recommended that the 1931 graduating classes of high school and college be retained in school another year when conditions will be more favorable for their absorption into the occupational life of America. These are large problems. Such a recommendation concerns at least 600,000 young people directly. Indirectly it concerns many, many millions of people. Such educational problems as this, coming with the suddenness of a summer storm cannot be met by the ordinary procedures that have been used in the past. They are the products of a new age and they will require for their solution the use of the tools of a new age. The most powerful educational tool of our day is the radio. Every other country in the civilized world has recognized from the first its educational and civic possibilities. America is the only great civilized country that has allowed this new garden of opportunity to grow up to the weeds of commercial advertising, competitive exploitation, and selfish greed.

Education not a special interest—When we speak of education's rights on the air we are not talking about the needs or the wishes of some special group. We are talking about the needs of the people themselves. Not only the needs of schools but the needs of government, the needs of agriculture, and industry, of home life, and of all our civic and public enterprises. The right to live is one of the most fundamental rights of the individual. It is certainly of equal importance in the life of the state. The success of our common enterprises depends upon a common purpose, a common intelligence, a common idealism, and a coordination of our efforts. The radio is an instrument thru which this coordination may be accomplished.

We have at the present moment approximately thirty million people who as teachers or pupils are giving their entire time to education. Let us not for-

ON APRIL TWENTY-SEVEN the Supreme Court of the United States denied the petition of the Radio Corporation of America asking a review of the decision of a lower court which held a provision (Clause nine) of RCA's patent licensing arrangements covering radio receiving sets to have violated section three of the Clayton Antitrust Act. Clause nine reserved to RCA the right to supply vacuum tubes which would make initially operative those sets of manufacturers within the agreement. RCA thus was brought into conflict with section thirteen of the Radio Act of 1927 which directs the Federal Radio Commission to refuse construction permits to corporations finally adjudged guilty by a Federal court of unlawfully monopolizing radio communication thru control of manufacture or sale of radio apparatus. Commission records show RCA and its associated companies to hold more than 1400 radio licenses.

get that in addition to these thirty million there are probably thirty million more who under the stress and strain of today's life are in serious need of the guidance and the help which schools can give. Our unemployment problem is primarily a problem of education. Our crime problem is primarily a problem of education. Our graft problem in city government is primarily a problem of education. The enrichment of our home life and the preservation of our national vitality against the inroads of a machine age are primarily problems of education. These problems appear thruout the entire fabric of our civilization. Their solution lies in a new education which will reach to the remotest parts of our country as only radio can reach. For example, it would take ten years at least with agencies now existing to train a group of teachers for the rural schools of America who have a sufficient grasp of scientific agriculture to deal with farm problems as they exist today. It

would be perfectly possible by the expenditure of a relatively small sum to provide by radio a system of auxiliary instruction in agriculture and farm life by master teachers which would reach every rural schoolroom in the land and which would save literally hundreds of millions of dollars annually in the adjustment of farm life to the conditions of today.

The setup—Since education is a function of government the educational radio structure should obviously run parallel to our established units of government. We should start with the county and the city which are responsible for education within these two areas of public administration. A civilization does not come down from above. It grows up out of the soil of life. It is an expression of the common experience and needs of the people. It grows out of their work and play, their home life, their purposes and aspirations. It would be perfectly possible to provide for each county in the United States a radio broadcasting station which would serve the schools, the government, the civic associations, the churches, and the other common enterprises of the county. Such a station would bring local government and local education into the very homes of the people. It would help to preserve our native ideals and our native arts. From a purely business standpoint it would create a demand for vastly more radio equipment than a few superpower stations scattered in a few places over the continent.

The next step in a normal radio development from the educational point of view would be to provide broadcasting systems for the states so that each state would be in a position to reach its entire population. The state systems would of course be closely related to the local systems, constituting a reservoir of material upon which the local stations could draw when they had no program of their own.

Begging the question—This question of the rights of the states is a question which both the Congress and the Federal Radio Commission have so far begged. It is a fundamental question—as fundamental to the destiny of America as any article of the Constitution of the United States. Our bill of rights will mean little; our attempt to preserve the sovereignty of the states will mean little; our attempt to preserve that initiative and individuality of our American states which has been so vital a part of the American system will mean little if we deny to the states this new

means of reaching their citizens. It is unthinkable that the Supreme Court of the United States would consider for a moment depriving the states, as states, of their rights in radio. There has been a lot of muddy thinking on this question in high places. There have been attempts to apply figures of speech drawn from the realm of interstate commerce that hardly do justice to the lawyers and the business men who use these figures of speech. Radio is a new thing. None of the outworn formulas which apply to water rights or to the rights of interstate commerce can be applied in this new field. No one in the convention which framed the Constitution of the United States even dreamed of the possibilities of this new creation. It requires a new type of imagination, a new courage, a new application of the fundamental principles of our government in order to define the rights and relations of radio.

It must be obvious to anyone who studies radio from the scientific point of view that the assignment of channels or frequencies requires national and international action. The number of these channels is limited. Anyone can set up a printing press, but it is not possible for anyone to set up a radio broadcasting station. The governments of the world in the nature of the case must assign the radio channels in order to prevent interference and confusion. This is a task which the government of the United States cannot escape. It is a task which the governments of Europe by mutual agreement have had to work out for themselves. The governments of the world will face this task anew at the Madrid Conference in 1932. No one can quarrel about the right of our federal government to perform this function for the United States.

One-sided administration — But when the federal government performs this function in such a way as to deprive our sovereign states of their fundamental rights it is time for the public to wake up. When our Federal Radio Commission so administers the law as to crowd the educational stations rapidly off the air; to reduce their assignments to less than seven percent of our broadcasting facilities; to leave whole states without any independent facilities whatsoever; to compel state institutions to spend for their protection, for traveling to Washington, and for legal fees the money which they badly need for the development of their programs; when these things can happen at the hands of men

who are sworn to uphold the Constitution of the United States, who receive their salaries from the public treasury, and whose personal obligation to the

ON MAY TWENTY-FIVE the Supreme Court of the United States ended litigation, pursued for nearly five years, when it declared invalid the Langmuir high vacuum tube patent held by the General Electric Company. Decision followed an appeal by the DeForest Radio Company from an opinion of the Circuit Court of Appeals of Philadelphia which held DeForest guilty of infringement of the Langmuir patent. GE originally brought the suit against DeForest. The Federal District Court of Wilmington, Delaware, held the patent invalid and was sustained by the Philadelphia appellate court which later reversed itself. The Langmuir process of tube evacuation is perhaps the heart of radio mechanical development. Without it the radio set is wanting its most vital detail. The court's decision constitutes another blow to the Radio Corporation of America which holds a pool of radio patents for GE, Westinghouse, and other RCA associates.

public is to advance the common welfare of the United States, it is time for a new deal. It is time for the people to wake up, for the educators to wake up, for Congress to wake up, and for the courts to apply anew the fundamental principles upon which our American structure has been built.

Under the Constitution of the United States the right to control education is reserved to the states. It is as fundamental as the police power to the very life of the states. The right to control education implies the right to use those tools and devices which are necessary to the most effective development of education. Our states are now choosing to use radio and I do not believe that any responsible court can or will deny them the right to independent channels for this fundamental activity. This is not the time or the place to review the long line of Supreme Court decisions upon which this reasoning rests.

New Yorkism—There are those in America who profess to fear the influence of communistic doctrines upon our people. We are in vastly greater danger as a people from New Yorkism than we are from communism. There is more danger that the trivial, the sensual, the jazzy, the confused notions of home life which are bred in the hothouse metropolitan centers will sap the ideals and the vision of the outlying regions which have been the stable centers of our national life. There is not a large city in America today that has the intelligence, the ideals, and the courage to govern itself without graft and corruption. Through motion pictures and radio the smart-alecky attitude of commercialized amusements in our metropolitan centers tends to destroy the home life and the community ideals of our smaller towns and rural communities. A fair division of radio between the county, the state, and the federal government would help to offset this rising threat of metropolitan invasion which is swamping our country.

The federal government needs radio for educational purposes just as it needs radio for military and naval purposes and it needs this radio free from commercial influence, domination, and interference. It certainly is not wise national policy to make our great government dependent upon privately operated radio in carrying on so vital a function as the education of its people. It is not a wholesome situation when a branch of the government like the great Department of Agriculture must acknowledge so-called obligations of a million dollars per year to a private corporation, nor is it a wholesome thing when members of the Congress of the United States whose business it is to pass the laws which regulate radio must place themselves under obligation to private industries in order to reach the ears of their citizen constituents.

Precedent—In an earlier day when the railroads sought to control state and national legislation, passes for free rides were given generously to public men, their families and their friends. With the suddenness of a bright new dawn this gift and favor form of bribery was abolished by an enlightened public sentiment. Does the radio trust—and its powerful mother, the power trust—now rely upon favors granted to prominent citizens and organizations as the railroads relied upon passes? Can the public be blinded by such gifts and favors to barter away the freedom of the air and the rights of educational institu-

tions to the permanent use of independent radio channels free from commercial domination?

History will repeat itself. The railroads learned their lesson. Gradually but irresistibly the tide of public ill-will and criticism rolled up until there spread over this country in the early part of the twentieth century a wave of railway regulation and supervision far beyond what would have been necessary had the railroad leadership been less corrupt and unwise. Likewise the public will take charge of radio.

Now comes freedom of the air—Radio is the voice of the people. It is an expression of the very soul of the people. The fight for freedom of thought, for freedom of speech, and for freedom of the press represents struggles that have been waged thruout the centuries. Men by the million have been willing to sacrifice their homes and their lives to struggle on behalf of these great ideals. They have been willing to face war because they knew that life without freedom of thought and freedom of conscience was not life but slavery. The fight for freedom of the air has begun. It is more important than the struggle for the freedom of the press because radio is instantaneous and worldwide in its reach. Whoever controls radio will in the end control the development of the human race. It is unthinkable that so powerful an instrument should be monopolized by any one branch of the government—by the nation as against the state or by the state as against the locality. It is unthinkable that it should be monopolized by government as against independent and private enterprise. A generous and fair division, a just and reasonable distribution are the safeguards to which we must look for freedom of the air and for justice to all.

There are those who profess to fear the censorship of radio stations operated by local, state, and national governments. Do they fail to realize that we already have censorship—a censorship applied not by government which is elected and maintained by the people and responsible to their control, but a

copyright maintained by powerful private interests who are responsible to no one but to their own selfish ambitions. During the past few years under our present system of management radio programs have fallen to the lowest point in the entire development of broadcasting. In spite of brilliant programs here and there the general level of radio offerings is utterly unworthy the tastes and the aspirations of the American people.

What educators say—The letters which have come to the National Committee on Education by Radio during the past few months indicate clearly that it is not possible for our educational enterprises to share facilities with commercial enterprises. That practise has been tried for nearly a decade and has proved unworkable. It is no longer open to discussion. It has been tried in Minnesota. Comptroller W. T. Middlebrook of the University of Minnesota told the Chicago Radio Conference in October:

One thing I am sure of—and we have demonstrated it in our own experience—is that we cannot share time with a commercial station on a satisfactory basis. If we don't get Congress to legislate giving us air rights, I think our case is hopeless.

Mr. H. Umberger, Dean of the Kansas Agricultural College, said at the same conference:

It seems to me that we must have a distinctly different allocation from commercial stations. I don't believe that the two interests can be harmonized.

Here is another testimony from Mr. Charles A. Culver, Carleton College, Minnesota:

On the very face of the situation it is inevitable that we cannot mix educational and commercial stations on the same frequency. That isn't an opinion; it is based upon plenty of evidence.

Here is another statement from President George W. Rightmire of Ohio University:

I note a considerable effort to show to the public that the commercial broadcasting companies are offering great facilities to the educational institutions, thereby making it unnecessary for these institutions to own and operate their own broadcasting stations and therefore making it unnecessary for Congress to pass the

fifteen percent bill. One element which is not discussed, at least I have not seen it, is that the commercial stations may at any time cut off these educational institutions and attach a heavy compensation to their services, or that they may so allocate their time bands as to make them practically useless for educational institutions.

And so we might go on and on with letters from people who have had actual experience in the field, showing that neither education nor business interest is best served by attempting to combine them on the same frequencies.

Resolutions—The demand that education shall have its rights on the air is the adopted program of the leading educational groups of the United States. The National Education Association at its convention in July, 1930, expressed itself as follows:

The National Education Association believes that legislation should be enacted which will safeguard for the uses of education and government a reasonable share of the radio broadcasting channels of the United States.

The Department of Superintendence of the National Education Association at its meeting in Detroit, February 26, 1931, adopted the following statement:

The radio broadcasting channels belong to the public and should never be alienated into private hands. We believe that there should be assigned permanently and exclusively to educational institutions and departments a sufficient number of these channels to serve the educational and civic interests of the locality, the state, and the nation; and that these channels should be safeguarded by the federal government. The Department of Superintendence endorses the work of the National Committee on Education by Radio in its efforts to protect the rights of educational broadcasting.

The National Congress of Parents and Teachers at its recent meeting in Hot Springs, Arkansas, adopted the following resolution:

We (the National Congress of Parents and Teachers) believe that radio broadcasting is an extension of the home; that it is a form of education; that the broadcasting channels should forever remain in the hands of the public; that the facilities should be fairly divided between the national, state, and county governments; that they should be owned and operated at public expense and freed from commercial advertising.

IT SHOULD BE borne in mind that out of a total of 400 units which are available to the United States, educational stations occupy only 23.16 units. The two great commercial chains occupy 268 units, of which the National Broadcasting Company claims 171.33 and the Columbia Broadcasting System claims 96.67 units.

Is it not apparent that the common schools which occupy the full time of 30,000,000 young people and their teachers have needs and resources which entitle them to more than oncsixteenth of these invaluable radio frequencies as a permanent, independent, and exclusive possession?

These are not hasty judgments. They grow out of wide experience with radio in the home, the school, and the community.

Quantity versus quality—There is an impression in some quarters that the schools need only a few hours a day. I see no reason why any time which is valuable to a commercial station should not be valuable from the educational point of view. The educational stations are entitled to the use of the best hours. They can also make good use of the less favorable hours for the broadcasting of courses which appeal to more limited groups who are able to listen at those hours.

The commercial stations seek to reach great numbers of people. They measure the worth of their programs by the size of the audiences. In order to get large audiences they cultivate the lower appeals. The educational stations realize that the finer things of life have always appealed first to the few. Education seeks to maintain standards and to pull up. The commercial radio structure as it now operates seeks to sell things and to create an audience at any price. The development of education by radio will not really begin until education's rights on the air are realized in terms of independent channels permanently assigned to our states and to educational institutions. Our schools—already overloaded by the demands which the public has made upon them—will not be willing to spend their time and money to develop programs in the face of the fact that at any moment those programs may be crowded off the air. The development of an educational program is more difficult than the development of a commercial program. To perfect such broadcasting will take more time but eventually it will go much further than the commercial broadcasts. Our great system of education with its mighty army of thirty million fulltime workers can in the end present programs of higher excellence, greater diversity, and of more fundamental and abiding interest and value than can possibly be produced by any commercial structure.

We might learn something from the motion picture industry which after a period of mushroom growth finds itself literally bankrupt of ideals and ideas and faced with the task of beginning at the beginning to develop a motion picture art that will be strong and genuine; faced with the task of going back into the universities and schools to lay a foundation in fundamental principles and right ideals for the great movie art of tomorrow.

No conflict—There is no conflict between business and education. They are both the servants of our common life. They can be wisely developed. They can enjoy stability and public enthusiasm only in proportion as they serve public interest. A business may seem to thrive for a day on a wrong foundation. An individual business man may grasp a fortune by unfair and dishonest methods, but business as a whole can survive and grow only by permanent essential service on a high plane.

The effort of certain elements in the radio industry—voiced here yesterday afternoon by Vicepresident Bellows of the Columbia Broadcasting System—to strangle the educational stations and to thwart their efforts to secure independent channels is unworthy of the industry itself. The leadership of the industry owes a deeper loyalty than that to the great body of scientific and professional men who compose the rank and file of their organization. It will defeat its own end. The public will ultimately secure its rights. A more farsighted policy on the part of the industry would encourage the development of independent educational broadcasting as the solidest possible foundation upon which to build a broadcasting art. Our country can advance and prosper only as the lives of the people are lifted up. We have gone far beyond the other countries of the world because we have put more into education. We have had faith in our people. We have thought that their talents were worthy of cultivation. We have kept them in school longer. We have more young people in high school and college than all the rest of the world combined. We have added

three million young people to our high school group within the past decade, making a grand total of five million who are obtaining the best education ever given to a generation of young people. Having created this vast machinery, and feeling as we now feel the need for a richer program of education related more permanently to the entire life of our country, it is only fair and just that we should assure to our educational institutions in the locality, in the state, and in the nation their reasonable rights on the air.

In college days in our Latin classes we used to discuss what grammarians called conditions contrary to fact.

Let us assume for a moment that there were no power trust seeking to corrupt government from top to bottom, to charge excessive rates, to sell watered stock to an unsuspecting public, to influence the teaching of the public schools.

Let us assume that an arrogant radio monopoly were to change its cynical and belittling attitude toward the teaching profession.

Let us assume that widespread efforts to misuse the common schools for all sorts of commercial purposes were to cease.

Let us assume that there might be a Federal Radio Commission with some grasp of its job and some sense of obligation to the public.

Let us assume even that the commercial stations would give without charge a free choice of the best hours with permanent tenure of the air. It would still be wise and better in my judgment from the point of view of both education and industry for the two interests so different in purpose and method to have separate channels from top to bottom.

The National Committee on Education by Radio—I have been talking about education's *rights* on the air. That is only one of the tasks which lies before our National Committee on Education by Radio. That Committee is highly representative in character. Its members are associated with nine of our great educational organizations, including the following:

National Council of State Superintendents
National Association of State Universities

THE MODERN AMERICAN CITY is a colossal joke on humanity. It never thought of the real basis of humanity from the biology side, or of the future, insofar as the children were concerned. That has been a pure afterthought. . . . Either we must build up a great city, throw all the children out of it, make it a magnificent, big office building where the work is done and live away from it and get methods of transportation to it, or we must clean out certain areas where the children can get a fair chance. . . . We are destroying the opportunities for too many children so far as nutrition and food and fresh air are concerned, and it isn't just good commonsense.—Ray Lyman Wilbur.

Association of College and University Broadcasting Stations

National Education Association

National University Extension Association

National Catholic Educational Association

American Council on Education

The Jesuit Education Association

Association of Land Grant Colleges and Universities

The big task of this Committee is to serve as a clearing house for research and the development of radio broadcasting for educational purposes. The nature of this organization and its contacts with leaders in education are sufficiently wide to justify the hope that its efforts will arouse constructive activity thruout the union. There are many evidences that this is so. The amazing interest from every quarter of the country in the activities of this Committee is a radiant promise of a brighter day for education on the air.

The National Committee on Education by Radio is sponsoring a bill in Congress to set aside fifteen percent of the radio broadcasting channels which are or may become available to the United States for the use of educational institutions. This bill was introduced into the Senate by Honorable Simeon D. Fess of Ohio. It will be introduced again into the Seventy-Second Congress when it convenes in December. It is a conservative measure and deserves the support of everyone who is honestly interested in the development of the radio art.

The National Committee on Education by Radio maintains two offices, one a general office for administration, publication, research, and conference, located in the headquarters building of the National Education Association; the other a service bureau in the National Press Building, which aids the educational stations in preserving their rights before the Federal Radio Commission.

The National Committee on Education by Radio publishes a weekly bulletin which within the brief period of four

months has become the leading periodical in its field.

The National Committee on Education by Radio is developing a program of experiment and research which will encourage enterprises permanent in character.

The Committee believes that the future of education by radio depends primarily upon the ability of educational workers to produce programs of high quality. Most of the material which now goes on the air from both educational and commercial stations is unworthy a place on the air. It would be better to have our broadcasting stations lie idle than to fill the air with the trivial and the trifling.

Emancipation by radio—It has not been many centuries since people were discussing the new art of printing as we are now discussing the new art of radio. They asked questions just as we ask questions. Teaching up to that time had been largely oral. Children had sat in stiff benches to drone over and over the sayings of their teachers. Memory was the god of the schoolroom and incessant drill was its method. Those who believed that books could never be used in the classroom pointed to their great cost and to the centuries of practise where the old method of dictation by the teacher and repetition by the pupil had been the established procedure. But gradually the book did find its way into the classroom. Gradually the curriculum was enriched and instead of replacing teachers, as the early prediction would have had it, the development of printing only increased the number of teachers and added to their power. It will be the same with the radio. Our teachers are today overloaded. Their classes are too large. The mechanical aspects of their tasks consume too large a proportion of their energy. They have neither the time nor the energy to give to the individual pupil that guidance and inspiration which are necessary to his finest mental, moral, and physical development. By the

use of radio and television it will be possible to free the teacher in the classroom for his larger service.

This address would be incomplete without a word of tribute to the devoted men and women who in laboratory and shop have made possible the marvels of radio broadcasting. Electrical science had its birth in the universities. Our universities have pioneered in the application of electricity thru radio. They have trained engineers and have been pioneers in the art of broadcasting. Likewise scientific men in the research laboratories of our great industries have given themselves to this new field with zeal and enthusiasm. Many of our farsighted business men have contributed generously of their wealth and talent to the development of this new enterprise. As an achievement in technology, it is something of which our generation may be justly proud. Let us honor all who have done their bit but let us not forget that we have merely taken the first steps down a long road which leads on to a new order and that the quality of that new order, the level of its intellectual, social, political, and religious life will depend on the character, vision, and courage of the men who use this new and powerful tool. Television is here; within a decade it will be a commonplace. Within a generation or two, it will widen the walls of the home to embrace literally the entire world. Shall this new instrument for the spread of truth or untruth, shall this means of reaching the human mind be treated merely as one more means of collecting vast fortunes in a few great centers, where they will lead to luxury, debauchery, and decay or shall it become an agency for the uplift of the human race? Perhaps it is no mere accident that radio impulses travel with the speed of light. Shall they not some day carry to the remotest corners of the earth the torch of truth, beauty, and goodness of which wise men have dreamed thruout the ages?

E DUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

J. L. Clifton, director of education, Columbus, Ohio, National Council of State Superintendents.

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.

R. C. Higggy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.

J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.

Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.

John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.

Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.

H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.

Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

National Committee on Education by Radio

MAY I take this opportunity to extend congratulations to the educational leadership of Ohio for its pioneering service in the field of education by radio. Ohio is the first state to develop an institute of education by radio. This institute is an enduring monument to Dr. W. W. Charters and his associates who have made it possible. It has become a gathering of such importance that it has a national and even a world significance. Ohio is the first state to maintain by legislative appropriation a school of the air under the direction of the state department of education. The members of the legislature who made that school of the air possible deserve a large place in the history of education. Dr. J. L. Clifton, state director of education for Ohio under whose sympathetic leadership the foundations of this school have been laid, deserves a large share of the credit, and Mr. B. H. Darrow, director of the Ohio School of the Air has performed a pioneer service requiring originality, initiative, and imagination. The broadcasting station of Ohio State University is one of the most successful and promising of our educational stations. The state owes a debt of gratitude to Dr. George W. Rightmire, who has had the vision to see the importance of this station and to its able director, Mr. R. C. Higgy who along with Dr. Clifton is a member of the National Committee on Education by Radio. In the city of Cleveland under the far-sighted administration of Superintendent R. G. Jones there has developed a series of valuable experiments in teaching by radio. This work has been maintained on the highest level of technical and professional excellence. These achievements in the state of Ohio give it the premier place in the American family of states in the development of this new phase of education. The other states of the Union will profit immeasurably from the foundations which have been here laid.

Over the entrance of that most beautiful of all capitols at Lincoln, Nebraska, is this significant sentence: "The safety of the state is watchfulness in the citizen." The truth of these prophetic words has

never been better illustrated than in the American radio field where the most powerful of all tools of human intercourse

WHEREAS it is the opinion of the National University Extension Association that one of the most important questions of the day is the development of Education by Radio.

AND WHEREAS the present situation of Radio Education is unsatisfactory because of the persistent efforts of commercial interests to dominate and control the entire field of Radio Educational Broadcasting.

NOW THEREFORE BE IT RESOLVED: That the National University Extension Association believes that it is vitally important that the rights and liberty of action of all educational broadcasting stations should be adequately defended, preserved, and extended,

AND FURTHER RESOLVED: That this Association through its Committee on Radio Education and its Executive Committee take all necessary action so far as it is able to do so to assist in the efforts of its member institutions, to protect their rights in the educational broadcasting field.—Adopted unanimously by the National University Extension Association in convention at Boulder, Colorado, May 15, 1931.

has fallen largely into the hands of persons who have not thought of the safety of the state but of the possibilities of huge profits and of powerful monopolies.

The National Committee on Education by Radio is an organized effort to conserve and develop radio broadcasting for the most important of all uses to which it could be put—the lifting of the level of our American culture.

On October 13, 1930, there met in Chicago a radio conference composed of representatives of college and university broadcasting stations and of certain great

national associations interested in education. That conference grew out of the failure of the Federal Radio Commission to protect and conserve education's rights in radio under the radio act of 1927.

During the early months of 1930 one educational institution after another was placed in a position of having to give up its broadcasting station so that between January 1 and August 1, 1930, twenty-three educational broadcasting stations were forced to close their doors.

The practise of squeezing these stations off the air ran something like this. First, they would be given the less desirable frequencies, the more desirable being assigned to the commercial and monopoly groups. Second, they would be required to divide their time with some commercial interest. Third, they would be required to give a larger share of their time to the commercial interest. Fourth, they would be required to meet some new regulation involving costly equipment—often a regulation essentially right in itself but applied with such suddenness as not to allow time for adjustment in the educational budget. Fifth, the educational station would be required to spend on trips to Washington for hearings before the Federal Radio Commission and on lawyers' fees the money which should have gone into the development of personnel and programs.

These are typical experiences that were multiplied during the early months of 1930 until the situation became desperate. Hence the Chicago conference. This conference—presided over by United States Commissioner of Education, William John Cooper—committed itself to two major propositions. *First*, that the Congress of the United States enact legislation that will permanently and exclusively assign to educational institutions and to government educational agencies a minimum of fifteen percent of all radio broadcasting channels which are or may become available to the United States.

In the *second* place the conference provided for the creation of a National Committee on Education by Radio to continue its work. That National Committee was first brought together on December 30, 1930.

The members of this Committee and the groups with which they are associated are as follows:

An address by Joy Elmer Morgan, chairman of the National Committee on Education by Radio and editor of THE JOURNAL of the National Education Association, before the Second Annual Institute for Education by Radio, Ohio State University, Columbus, Ohio, Monday, June 8, 1931.

J. L. Clifton, director of education, Columbus, Ohio, National Council of State Superintendents

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities

R. C. Higgy, director, Radio Station WEOO of Ohio State University, Columbus, Ohio, Association of College and University Broadcasting Stations

J. O. Keller, head of Engineering Extension, Pennsylvania State College, State College, Pennsylvania, National University Extension Association

Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Education Association

John Henry MacCracken, 744 Jackson Place, Washington, D. C., American Council on Education

Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association

H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities

Joy Elmer Morgan, *chairman*, 1201 Sixteenth Street, N. W., Washington, D. C., National Education Association

The Committee held meetings on December 30, 1930, January 28, March 9, April 9, and May 11, 1931. Most of these have been all-day sessions which have brought together a wide range of experience, observation, and judgment relating to this important field. The purpose of the Committee as stated in its bylaws is as follows:

To secure to the people of the United States the use of radio for educational purposes by protecting the rights of educational broadcasting, by promoting and coordinating experiments in the use of radio in school and adult education, by maintaining a service bureau to assist educational stations in securing licenses and in other technical procedures, by exchange of information through a weekly bulletin, and by serving as a clearing house for the encouragement of research in education by radio.

The work of the Committee has been financed for a period of five years by the Payne Fund—a private fund entirely free from monopolistic or commercial associations.

The Committee maintains two offices in Washington, D. C.: one at 1201 Sixteenth Street, N. W., in the headquarters building of the National Education Association which is a general office for administration, publication, and research; the other a temporary office in the National Press Building near the Federal Radio Commission which is a service bureau to aid educational stations in their dealings with the Commission.

The first great task of the National Committee on Education by Radio is conservation. It is endeavoring to save or to recover for the uses of education a fair share of the radio broadcasting frequen-

cies. To accomplish this it had introduced into the Senate of the last Congress Bill S 5589. This bill was presented by Senator Simeon D. Fess of Ohio on January 8, 1931:

Not less than 15 per centum, reckoned with due weight to all factors determining effective service, of the radio broadcasting facilities which are or may become subject to the control of and to allocation by the Federal Radio Commission, shall be reserved for educational broadcasting exclusively and allocating when and if applications are made therefor, to educational agencies of the Federal or State Governments and to educational institutions chartered by the United States or by the respective States or Territories.

It is a reasonable proposal and deserves the support of everyone interested in the radio art. This proposed legislation brings us face to face with one of the great radio issues—the reservation of independent channels for education. This policy of independent channels for education is the adopted policy of our great educational and civic organizations. It is set forth in the resolutions of such bodies as the National Education Association, the Department of Superintendence, and the National Congress of Parents and Teachers as outlined in my address in New York on May 22.

Dr. Ray Lyman Wilbur, Secretary of the Interior, who on June 6, 1929, appointed the first Advisory Committee on Education by Radio and who has been generally friendly toward education's rights on the air, in an address on May 22 in New York declared that:

In the development of radio the subject that is outstanding before the public is that of education. . . . Since our schools for the most part are publicly owned, the desirability of publicly owned radio stations for educational purposes is one that will not down. . . . Just what percentage of the radio band should be devoted to education is beyond the ken of man, but that a proportion of this great human possession should be used for education is selfevident.

This demand of education for independence and security on the air is based on actual experience in home and school.

The radio industry has chosen through its highly organized public relations experts to take an opposite view and to adopt a cynical and belittling attitude toward the teaching profession. It has thus made all the more impossible the dependence of educational service upon the goodwill of commercial monopoly. Typical of this view is a statement made by Mr. Henry Adams Bellows, vicepresident of the Columbia Broadcasting System and a former member of the Federal Radio Commission in an address before the First Annual Assembly of the Na-

tional Advisory Council on Radio in Education in New York, May 21, 1931. This hired spokesman of the monopolistic group near the close of an address which showed an amazing lack of grasp of the educational viewpoint reached the conclusion:

I do not believe that a greater disaster could possibly befall the cause of education through radio than a legal decree of divorce between education and commercial broadcasting.

In other words this spokesman of the radio-power-trust group and his associates—quite discredited by the decisions rendered by the United States Supreme Court on April 27 and May 25—would force the educational institutions to become dependent upon a commercial despotism and to take for the uses of education the leftover hours which cannot be used for commercial purposes. The officers of the radio trust somehow delude themselves into believing that the schools will be willing to spend time, talent, and money to build up an educational service during the hours that have the least value without reasonable assurance that after that service has been established it will enjoy permanent tenure on the air. This proposal is so absurd as to suggest that those who set it forth are far removed from the vital currents of American public sentiment.

It is not surprising to find the representatives of commercial monopolies pleading that education shall be subordinated to the commercial stations, but it is a bit surprising to find members of the Federal Radio Commission going out of their way to plead on behalf of these same commercial stations in spite of the fact that the organized educational and civic groups after wide experience have taken a decisive stand for independence and freedom for education on the air. If the members of the Federal Radio Commission would spend as much energy trying to find out the real needs of education as they have spent trying to subordinate education to the radio monopoly, recently discredited by the Supreme Court, they would be performing a large public service. Such an attitude on the part of a public employee properly raises the question as to whether he represents the interest of the public by whom his salary is paid or some narrower more limited point of view. When a member of a public body charged with judicial responsibility takes such an attitude on behalf of commercial stations can the educational station appearing before him expect a fair and impartial consideration of its case?

The member of the Commission who is to succeed me on this program, Mr. Harold A. LaFount, issued on March 9, 1931, elaborate figures to show the advantage of putting education at the mercy of the commercial stations. At no point in these figures which are so carefully organized to make a case for the commercial monopoly is there any evidence of recognition that different hours have widely varying values as well as for education as for sales talks. If these figures represent the point of view of the Commission as a whole, we have a right to assume that they consider the left-over hours which the commercial stations are unable to sell equal in value to the best hours of the early evening which have been filled largely with trashy material and objectionable advertising.

Another phase of the effort to make education dependent upon commercial interests has been the attempt to exploit the schools for selfish purposes. Unscrupulous advertisers are looking with longing eyes at the children. For example, the California Commission for the Study of Educational Problems in Volume I of its recent able report which was submitted to Governor C. C. Young, on January 5, 1931, points out:

Radio advertising invades schools—In the same way, it has always been a fundamental principle of American education that the schools must protect their children from exploitation; that no interest shall be permitted directly or indirectly to advertise in the classroom. The commission regrets to report that this principle is being flagrantly violated in many California schools and that the regular work of the children is being interrupted, largely because modern methods of advertising have insinuated themselves into the school system.

By donating to the public schools fine radio and motion picture programs, and cleverly enlisting support therefor from teachers, parents and school officials, a number of California business firms are today inducing the schools to grant them advertising time in the schoolroom. The commission is unable to see any practical difference between printing the words "Brown and Company are good merchants" on the blackboard, and permitting the words "Brown and Company are making you children a present of this fine program" to be spoken repeatedly in the classroom or to be flashed upon a motion picture screen.

The admission into the schoolroom during school hours of radio and film programs carrying "goodwill" publicity, establishes precedents which naturally lead other firms to try to gain admission for their own advertising. Granting one firm such a privilege while denying it to others confers an unfair trade advantage.

The Committee then makes the following recommendations: That by amending Article V, section 3.53, of the 1929 School Code, the introduction into the schoolroom of any radio pro-

gram or film, however fine its quality, which is so announced or so titled as to gain "good will" or "name publicity" for its sponsor, or which advertises a sponsor's wares, be forbidden by statute.

That in view of the growing importance of radio and motion pictures as educational media,

RADIO represents great power in education if we learn to use it effectively, and there seems no doubt that we shall profit from this power. At the outset, radio is likely to suffer at the hands of the novice and the exploiter under the guise of experimentation. The scientist has so far explored and developed the field of radio that we know that one person can convey his impressions to an infinite number of persons. Class instruction may be conducted easily; all that is needed is proper organization and management. The major job is to plan educational instruction which will be effective. The scientist will carry out his part because he has the tools and the craftsmanship to reach his destination, truth. The exploiter is the hazard in the case: he may be both untutored and unskilled, and his end is selfish.—
R. G. Jones, superintendent of schools, Cleveland, Ohio.

the legislature authorize the appointment of a special commission to report at the 1933 session how the schools may properly utilize these two new means of public instruction.

It is worthy of note that the Conference for the Voluntary Control of Radio, called by the Secretary of Commerce—Mr. Herbert Hoover—in 1922, considered this problem of the division of the radio frequencies and came to certain conclusions which in some ways are probably wiser than anything that has been developed since. That conference established a classification of four degrees of priority in broadcasting.

The first class, for which a service area of 600 miles radius was to be expected, was to consist of stations owned and operated by the government itself for the purpose of disseminating information of the kind which the federal government gathers and is particularly qualified to distribute.

The second class of station, for which a service area of 250 miles radius was to be sought, was called "public" and was to be operated by institutions such as states, municipalities, colleges and universities.

The third order of priority attached to private stations, which were to be operated for private goodwill, giving a general broadcasting service, but for the time of which no charge was to be made.

The fourth order of priority was for "toll broadcasting stations," which were to be operated as the long distance telephone system, with facilities available to all who desired to sponsor programs. For private and for toll stations a service area of 50 miles was to be protected.

Had these conclusions been put into effective operation America would not face today many of the difficult problems that have grown up under our system of toll broadcasting which makes advertising the basis of radio support. America is the only large civilized country in the world to open its homes in this way to sales talk. Other countries have preferred a slower and sounder method of development.

As a second protective measure the National Committee on Education by Radio has maintained the service bureau to aid the educational stations. The work of this bureau has been carried on under the able direction of Mr. Armstrong Perry who from the beginning has been an earnest student of our radio problems. Its service has been received with gratitude and appreciation throughout the country.

A second service of the National Committee on Education by Radio is public information. The whole radio field is so new, it is developing so rapidly, and misinformation has been spread so deliberately by selfish and greedy interests that even public officials have found it difficult to get at the facts.

For example, there has been persistently spread throughout this country the notion that American radio programs are superior to those of other countries. Nothing could be farther from the truth, if one can believe the first-hand reports of responsible and competent citizens who have listened to programs both here and abroad.

There has also been a popular notion that the sales of radio equipment have expanded more rapidly in America than in other countries. Making a reasonable allowance for the difference in buying power and the level of popular education, the exact reverse is probably true.

There has also been an effort to convince the public that radio listeners abroad are obliged to pay for their radio programs whereas American listeners enjoy their's free. It must be apparent to anyone who studies the situation that

American listeners pay for their programs and pay dearly. They pay this bill in excessive charges for radio sets, in special privileges granted to monopolies, in the sale through advertising of many products which are useless or worse than useless to the consumer. In the end the public always pays. There is no reason why America should not support education by radio as it supports its common schools—as the Ohio School of the Air is supported by the legislature. The expenditure by each state of \$100,000 per year for radio program service—a relatively small sum considering the vast possibilities—would provide a national total of nearly five million dollars. Our federal Department of Agriculture alone spends millions of dollars each year for extension services.

As a means of spreading information the National Committee on Education by Radio has been issuing regularly each week since February 12, 1931, a bulletin containing the most reliable information that could be found on the many aspects of the radio problem. It has sent this bulletin free to persons who are most concerned. It has thus made available a body of fact and policy such as exists nowhere else. This bulletin has come to occupy in the brief space of a few months first place in the American literature of radio.

A third service of the National Committee on Education by Radio is research. The Committee has employed as executive assistant Mr. Tracy F. Tyler of Teachers College, Columbia University, who beginning on June 1 is giving his entire time to the development of its research service. In this connection the Committee will seek to define the major problems in education by radio and to gather facts which will point toward the solution of those problems. Perhaps it can deal with such questions as the following:

1. How many frequencies will be required to serve the educational needs of our counties, cities, the states, and the nation and how should these frequencies be distributed to secure the best results?
2. What should be the cost of building, maintaining, and operating a county broadcasting station? A state broadcasting station? A regional station? A network which will connect the educational institutions of the entire country?
3. How can the educational forces of a county or city best be organized so that the talents of all will be available for broadcasting service?
4. How can the educational forces of a state be so articulated and organized that the best talent, wherever it may exist in the state, in the elementary schools, in the high schools, in the colleges, or in state departments, may be

mobilized for an educational program that will stay on the air during the entire broadcasting period?

5. How can teaching via the air best be correlated with teaching in the classroom and the use of printed and visual education?

A fourth field in which the Committee hopes to render service is the field of experiment. It is especially interested in

IF RADIO is to share with the classroom teacher and the textbook the responsibility for the dissemination of knowledge, then there must be developed means whereby certain of the available air channels may become unconditionally the property of the state or of the municipality for the purposes of education. Perhaps the greatest danger that confronts our nation today as a result of the development of radio is that of propagandizing thru every conceivable subtlety, in the interests of private gain or of political or social partisanship. — Courtenay Mosen, secretary, Board of Education, Pasadena, California.

experiments conducted by broadcasting stations owned and operated by educational institutions. It is especially interested in experiments which give reasonable promise of developing into permanent activities. It will aid these experiments by calling attention to their importance, through research, through publication, and—whenever feasible—by helping to obtain for them sources of financial support. By serving as a clearinghouse it will make the fruits of experiment quickly available to educational broadcasting stations everywhere.

A fifth field in which the Committee will work is that of organization and coordination. Education by radio is a pioneer field. Under such conditions there is always much lost motion and wasted effort. Radio by its very nature requires new types of organization to protect its development and to make the best use of the opportunities which it offers. The Committee will seek to determine so far as it can and to foster forms of organization suited to this new purpose. It does not believe that such

organization can originate or be financed by the monopoly groups. The public has already learned as a result of its experience with the motion picture industry that groups financed by selfish interests represent selfish interests; that they merely constitute a smoke screen which seeks to protect the industry from the just and wholesome criticism of an enlightened public. The practice of employing at fabulous salaries public men of high reputation, who owe all they have to the goodwill of the public, to stand between the evil practices of monopoly groups and a righteous public sentiment is a diabolical practice quite unworthy of the best citizenship of our country. It has not proved fruitful in the motion picture industry and it will not prove fruitful in the radio industry. The best results can be obtained only through independent organizations which represent the public as a whole and which are unselfish in motive and purpose.

Education by radio is here. It is now an established fact that radio may be used effectively as a supplementary method of teaching children the common branches even as low as the third grade; that it can be used to enrich and vitalize many school subjects; that it can be made the means of bringing children in the classroom into closer contact with the actual processes of citizenship and government; that it has large possibilities in training for music appreciation; and that it is the most powerful tool so far devised for reaching large numbers of adults.

Much remains to be done. Education by radio calls for men and women who have the pioneer spirit, who are well endowed with imagination, initiative, and courage. This is no field for men or women who are unwilling or unable to lay aside tradition and to try new and difficult things, but it is a promising field. The struggle for radio frequencies is merely a passing phase. It is only common sense that the schools should have their independent facilities. The next step will be the constructive development of educational service of such high quality that programs will reach larger and larger audiences. The classroom of the future will be so organized that the teacher will be freed for his wider service. Radio will be one of the instruments which will guarantee this freedom, leaving the teacher a larger share of his best energy for the guidance and inspiration of individual pupils.

The Canadian Radio Situation

GRAHAM SPRY

President of The Canadian Radio League

CONFLICT between the advocates of public ownership and private enterprise in the operation of broadcasting is today the principal feature of the Canadian radio situation. There has been recently some material progress in educational broadcasting, very substantial improvement in musical and especially dramatic programs, and a continuing growth of the listening public, as reflected in the collection of the federal license fee of one dollar. But for two years there has been stalemate alike in the construction of larger and better stations and in the formulation of broad policies for the educational and other uses of broadcasting. At the present time there seems little hope that this stalemate may be ended until the Supreme Court of Canada or the Privy Council of Great Britain determines whether radio communication is a federal or provincial subject, and until a national broadcasting policy may be formulated at the next session of Parliament in 1932. In the interval the conflict for and against nationalization proceeds.

In this address I propose to sketch in broad lines the present distribution and ownership of Canadian stations, the recommendations of the Royal Commission on Radio Broadcasting, the conflict between the forces supporting or condemning the Commission's policy of nationalization, and the influence of the American situation upon Canadian opinion.

Canada first on the air—The first regular broadcast programs in the world were sent over station CFCF, owned by the Canadian Marconi Company, Montreal, in the winter of 1919, some months before KDKA first began to acquaint the world of a revolution in human communication as vital, perhaps, as the invention of printing. Since that time there has been a slow, disorderly, and inadequately financed development of Canadian broadcasting on two bases, the advertising or propagandist basis, and the basis of public service. Today there are sixty-seven stations, only four of them of 5000 watts, using the six exclusive and eleven shared wave-lengths allotted by

the United States to Canada. The total power of all these stations combined is less than 35,000 watts and at least ten American stations and a score of American cities broadcasting into Canada have greater power.

Advertising—The largest class of station is, of course, the advertising station, operating for profit, and within this class may be included stations operated on a commercial basis but primarily used to spread the point of view of some organization such as the Winnipeg Grain Exchange or the Canadian Wheat Pool. The second class of station represents about one-quarter of the stations in power, and in these stations the principle of ultimate responsibility to the public obtains. There are two stations owned and operated by the Manitoba Government, three stations owned and a trans-Canada network operated by the publicly-owned railways, the Canadian National Railways, and several stations owned by such universities as Alberta, Queen's, and Acadia, not one of them, however, owning more than a five-hundred-watt transmitter.

The Canadian situation differs, therefore, from the American in three respects. First, the capital invested in stations is relatively insignificant and is less than \$2,000,000; second, publicly-owned stations have led the way in developing the first Canadian chain broadcasts, the first national symphony, dramatic, and operatic hookups, and thru the state-owned university stations, above all CKUA of the University of Alberta, very important and significant educational developments have been made possible. *Third, the principle of collecting a license fee from listeners has been established. The Canadian people, therefore, have a very great opportunity to save their broadcasting from the intense commercialism and ruthless capitalism which seems to me to be the characteristic of the North American situation.*

The sixty-seven Canadian stations do not, however, provide complete Canadian coverage, and some forty percent of the Canadian people cannot regularly receive Canadian programs. Stations operating on an advertising basis have tended to locate near the centers of

population and have left remote but important sections inadequately served. Over these stations programs of the greatest difference in quality are broadcast, from the jazz phonograph record to the radio dramas produced by the Canadian National Railways, with the utmost technical efficiency and popular success. But there are not more than ten hours of national broadcasting a week; indeed, the average over a year is only one hour a day. Four of the largest stations—two in Montreal and two in Toronto—are associated with the National and Columbia chains. The result, in brief, is that the American broadcaster has command of the Canadian ear, if not sovereignty over the Canadian air, and most Canadians listen most of the time to American broadcasting.

Committee appointed—The condition of Canadian broadcasting two and a half years ago led the government of the Right Honorable W. L. Mackenzie King to appoint a royal commission to investigate and make recommendations. This Commission, consisting of Sir John Aird, president of the Canadian Bank of Commerce, A. Frigon, director of Technical Education in Quebec, and C. A. Bowman, editor of the Ottawa *Citizen*, represented thereby the varied views of business, education, and the profession of public opinion, and was assisted by the most skilled technicians in the government service.

Recommendations—The report of this Commission, which has still to be implemented, is now the subject of the most strenuous but useful controversy. The report recommended as follows:

One, that the Government of Canada establish a Canadian Radio Broadcasting Company, to be administered by a directorate of twelve—nine representing each of the provinces, three representing the federal government.

Two, that this company appropriate and dismantle the existing stations and establish a network of seven 50,000-watt and four subsidiary stations.

Three, that the initial capital expenditure of \$3,225,000 be advanced by the government as well as the amount of compensation paid to existing station owners.

An address before the Second Annual Institute for Education by Radio, Columbus, Ohio, June 8, 1931. Headquarters of the Canadian Radio League is at 110 Wellington Street, Ottawa, Canada.

Four, that the operation and maintenance of the company be financed by a license fee of \$3 a year, collected from each owner of a receiving set.

Five, that direct advertising be totally eliminated, but that commercial companies be given adequate opportunity to purchase time on the national stations for offering indirect advertising programs, programs of entertainment accompanied by the announcement of the name of the sponsor.

If this report were implemented, broadcasting would be altered from advertising, to a public service basis. The principle would be not broadcasting as bill-boarding, but broadcasting as the servant of the public. This principle is one which has been adopted in Great Britain, and by almost a score of other nations.

But while the Canadian company would resemble the British Broadcasting Corporation to this extent, in two other aspects it would be totally different. In the first place, the directorate of the company would be federal in its character, and as the programs would be subject to provincial control, they, too, would be federal rather than unitary. In this respect the analogy is not British, but German.

And indirect advertising would be permitted and encouraged. Here the essential nature of the recommendations stand out. They provide, in brief, for the public ownership and operation of stations, but for private enterprise and competition in programs. Private enterprise would provide not all, but a substantial proportion of the entertainment programs. The national company would provide a proportion of the programs also, and the provinces, the educational programs.

Advertising vs. education—At this point may I say that those Canadians primarily interested in broadcasting as a new medium of education feel strongly that *so long as broadcasting stations are operated as advertising agencies, educational programs must be subordinated to advertising and be stultified thru securing too few or too unsatisfactory hours*. Public ownership, we believe, is the one sure road out of that difficulty. When a station is an advertising agency, profit must take first place and public service second, the noble professions of the operators to the contrary, notwithstanding.

Public ownership and control of broadcasting stations, private enterprise and competition in programs,

financing by a license fee and not by direct advertising revenues, joint federal and provincial administration by a

PRELIMINARY count of radio receiving sets in twenty-five of the forty-eight states and in the District of Columbia as of April 1, 1930, reveals that there is a radio in every third household. It also shows that the estimate of the Department of Commerce and the radio industry, made in the fall of 1930, is more than fourteen percent too high for the states involved. The average percentage of families in the twenty-five states and the District of Columbia reporting radio sets in the census is 35.46 percent. A total of 2,374,287 sets have been counted as against 2,746,800 estimated for the same area. If the same percentage prevails for the remaining twenty-three states, the total count of radio receivers in the United States when the census was taken will be approximately 11,500,000 instead of 13,478,600 as estimated.—From the *New York Times*, Sunday, June 7, 1931.

directorate independent alike of political parties, and the civil service, but ultimately responsible thru Parliament to the people—such, in brief, are the recommendations of the Royal Commission and the objectives of the Canadian Radio League.

In those recommendations, with the alterations required by the passage of nearly two years, important sections of the Canadian people have great confidence. Canada, perhaps more than the United States, retains a faith in democracy, not only in specifically political questions, but even in economic control, and our experience in the public ownership of hydroelectric utilities, national railways, harbors, street railways, and numerous other community-owned economic services, has in the main given us confidence that the alertness of public opinion, the freedom of editorial comment, and the intelligence and sense of responsibility of our governments will ensure efficient and fair operation.

The League—The Canadian Radio League itself and its growth is a measure

of the extent of favorable opinion. It is an entirely voluntary and independent body, without associations with any political party, newspaper interest, corporation, or group. It represents and is financed by the largest national, patriotic, social and educational organizations. It is endorsed by the heads of the Episcopal, Catholic, and United (Methodist and former Presbyterian) churches. It has the support of labor and farmer organizations, and of presidents of chambers of commerce, directors of banks, trust companies, and railways. And no less than sixty newspapers of every political opinion editorially endorse and actively assist the League. Labor and capital, city and country, French and English, Catholic and Protestant have combined to create and to sustain this organization.

Its opponents—Opposed to the Canadian Radio League is the Canadian Pacific Railway, the Canadian Association of Broadcasters, and half a dozen newspapers owning or using broadcasting stations. The most active opponents have been able to use the broadcasting station as a weapon, and the power of this weapon is best illustrated by this fact. A member of the Canadian House of Commons wrote the Canadian Radio League offering his support. Broadcasting stations reaching his constituency began to attack nationalization and announced the Canadian Radio League's proposals would mean a \$30 license fee and the withdrawal of the Amos 'n' Andy programs. Listeners were urged to protest to the members of Parliament and to the Government. Within a few days this misrepresentation created such a public opinion that the member in question had to withdraw his support. But this misrepresentation has proved to be its own enemy, and it established the Radio League in the public mind, as no other agency has been able to do.

The League hopeful—It is not wished, however, to suggest either of two ideas: first, that the strength of the Canadian Radio League is any guarantee that the Government will accept its proposals. We are confident that a radical reform and improvement of Canadian broadcasting will result. We are confident that the Government is alert to the problem and anxious to solve it. But its manner of solving it is in the lap of the gods until the courts settle the legal question of jurisdiction, and the Cabinet faces the specific administrative and financial details involved. Nor, on the other hand, do I wish to suggest that the controversy is bitter, or regrettable. Both sides have

made mistakes, and no doubt both have profited from the mistakes of the other, but the controversy has been fair and honest, friendly and decent relations existing between the two forces.

The nationalization of radio, as of other services in Canada, has received an impetus and strength from the inevitable apprehension that the people of a small nation must have of the influences of a larger neighbor, and this is especially true of any influence upon public opinion. The Canadian people are building a nation with a character of its own, a character different from that of Britain or the United States. To maintain national unity and develop a national public opinion in the face of the serious disintegrating forces of race, geography, and economic rivalries is a sufficient test of Canadian statesmanship, and in that task radio can be either a friendly ally or a threatening enemy.

Americanism—Inevitably, that task is influenced by the proximity of the United States, and whatever the similarity and close friendship which exists between our two people, the ten millions of Canadians strung across the thinly-populated strip north of the frontier must be cautious towards and sometimes resist forces which may tend to Americanize our institutions or our public opinion.

The Canadian people, therefore, approach the problem of radio broadcasting more and more, not only from the point of view of entertainment, but of public opinion. More and more we are coming to recognize that the essential, the predominant, and supreme characteristic of radio is its power to influence public opinion.

Free public opinion endangered—This realization leads to two profound doubts, both related to the inevitable and underlying apprehension that colors Canadian thinking on the influence of the United States. *The first is the serious doubt that public opinion can be freely and independently formed if commercial and propagandist organizations, with purposes of their own not necessarily consistent with public interest, control an instrument so clearly of a total or partial monopoly by nature, as the radio.* The second doubt is: can commercially-operated broadcasting insure that Canadian opinion is not constantly and increasingly subject to American influences?

The great majority of Canadians listen to American programs the great majority of the time. They enjoy, and they will always wish to enjoy those pro-

grams, but increasingly also they wish to have Canadian programs reflecting our own character and needs and pro-

ANY TALK about the danger of the monopolistic control of the ether at this time in the United States is not well considered. I cannot imagine any group in the country, which is sufficiently influential to have any power at all, daring to take the responsibility of attempting to monopolize the ether.—From an address by Dr. Robert A. Millikan to the First Annual Assembly of the National Advisory Council on Radio in Education.

Isn't this an amazing statement in view of the Supreme Court decisions of April 27 and May 25, which virtually held RCA guilty of violating the antitrust laws, and GE forcing a monopoly in radio tubes?

Dr. Millikan is president of the National Advisory Council—a selected group whose activities are financed by the Carnegie-Rockefeller interests.

viding some alternative to broadcasting which we cannot help feeling is colored by the peculiar philosophy of the omnipotent commercial group represented by the American power, radio equipment, and broadcasting companies. With such a group no Canadian financial interest could compare, and, more than the people of the United States, we tend in such circumstances to look to the united power of the nation, as represented by our Government, for the remedy. This is one of the great influences which strengthens the objectives of the Canadian Radio League. And that influence grows correspondingly greater as we understand that *the dominant group in American broadcasting has not in the past hesitated ruthlessly to attack institutions established by Canadian governments, and that it represents a doctrine, indeed a fetish, of individualism and private enterprise which less consistently deludes the Canadian people, and which has been abandoned in some of our major economic services, such as trans-continental railways, hydroelectricity, harbors, electric railways, etc.*

Democracy—*These conditions inevitably lead us to fear for the freedom of*

public opinion, for the Canadian character of public opinion, and to advocate government ownership and control of stations on that fundamental and paramount ground.

The interest of this Institute is primarily educational, and that aspect in which I am most specifically interested is that education which most directly concerns the effectiveness of democracy and the efficiency of governance. Science has given humanity the ideal and potent instrument for its development. Thru broadcasting nation speaks to nation, race unto race, and within each nation it provides as no other instrument provides the opportunity for the cultivation of a healthy, alert, informed, and active public opinion. Here is the voice of the Stentor which Aristotle prescribed as the range of free governance. Here, supreme in its potentialities above all others, is the instrument which may enable peoples to realize that rash but noble aspiration—democracy. *And the basis of democracy, its very premise, its very definition and foundation, is the public opinion of its citizens.*

More than selling cakes of soap and toothpaste, more than an evening's entertainment or an afternoon's relaxation, more even than school broadcasts or adult education, it seems to me is wrapped up in the problem of broadcasting control. To me, *the problem is the problem of free public opinion. The issue is freedom. Let the air remain as the prerogative of commercial interests and subject to commercial control, and how free will be the voice, the heart of democracy?*

The maintenance, the enlargement of freedom, the progress, the purity of education, the protection, the development of democracy, require the responsibility of broadcasting to the popular will. Commercial interests cannot be chastened. They must be subdued. There can be no liberty complete, no democracy supreme, if the commercial interests dominate the vast, majestic resource of broadcasting.

The Canadian Radio League was founded in response to a widespread demand for improvement of the present radio situation. In effect, it is the organized expression of people thruout Canada who feel that radio broadcasting is not being used adequately as an instrument for the cultivation of national public opinion, of public entertainment, of the development of musical and dramatic talent; that the Canadian radio listener is coming increasingly under influence of American commercial broadcasting to the detriment of Canadian business and national interests.



Washington Post, June 2, 1931

A BAD DAY IN COURT

St. Louis Post-Dispatch

E DUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

J. L. Clifton, former director of education, Columbus, Ohio, National Council of State Superintendents.

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.

R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.

J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.

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Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Radio During May and June

THE GOVERNMENT VS. RCA—The Radio Corporation of America came out of its litigation with the government more scared than scarred. Just as it seemed that the federal courts had backed RCA up against a wall too high for even its high-priced legal talent to scale, the Federal Radio Commission pulled the wall down and RCA walked thru wearing the same triumphant grin which for years has mocked all efforts to curb its monopolistic tendencies. The story of defeat turned into virtual victory occupied nationwide interest during May and June.

Although it began several years ago, the story was given current interest by a decision of the United States Supreme Court on April twenty-seven in which it refused to review a decision of a lower court holding RCA in violation of the Clayton antitrust law. This commercial giant had inserted a lucrative clause into its patent licensing agreements with radio set manufacturers—the now famous Clause Nine. It reserved to RCA the right to supply vacuum tubes to make initially operative those sets manufactured under the licenses.

The National Broadcasting Company is a one hundred percent subsidiary of the Radio Corporation of America. Thus, by the court's action, RCA was brought into conflict with Section Thirteen of the Radio Act of 1927 which reads as follows:

The licensing authority is hereby directed to refuse a station license and/or the permit hereinafter required for the construction of a station to any person, firm, company, or corporation, or any subsidiary thereof which has been finally adjudged guilty by a federal court of unlawfully monopolizing or attempting unlawfully to monopolize, after this act takes effect, radio communication, directly or indirectly, thru the control of the manufacture or sale of radio apparatus, thru exclusive traffic arrangements, or by any other means to have been using unfair methods of competition. The granting of a license shall not estop the United States or any person aggrieved from proceeding against such person, firm, company, or corporation for violating the law against unfair methods of competition or for violation of the law against unlawful restraint and monopolies and/or combinations, contracts, or agreements in restraint of trade, or from instituting proceedings for the dissolution of such firm, company, or corporation.

The Commission asked its legal division to determine the applicability of Section Thirteen of the Radio Act to licenses held by the Radio Corporation

and its subsidiaries. Meanwhile, it was found at the offices of the Commission that the RCA group held approximately 1400 communication's licenses. These were in the hands of RCA Communications, Incorporated; the National Broadcasting Company; the Radiomarine Corporation of America; and RCA Victor.

Senator Clarence C. Dill of Washington, co-author of the Radio Act, declared that there was "no doubt whatever" in his mind that Section Thirteen was applicable in this case. In some quarters it was felt that the Commission would refuse to renew one of the licenses of RCA, thus opening the way for directing the matter back to the courts. This procedure seemed a fair way to Senator Dill, who said:

The Radio Commission should not, however, take drastic action but should refuse to renew a license and thus open the way for an appeal to the Court of Appeals and thence to the Supreme Court of the United States, in the meantime extending other RCA licenses on a temporary basis. The RCA has done good work in communications and broadcasting, and it would be unwise to disrupt the companies at this time.

June fifteenth, was selected by the Commission as the date for review of the whole case. At that hearing RCA was to show cause why the Commission should not refuse to renew any of its 1400 communication's permits. In the interim the Commission determined to grant temporary renewals of applications to any of the companies affected in order that service might not be interrupted pending outcome of the hearing.

RCA's case before the Commission amounted to little more than a personal plea. Each witness described the great size of the corporation's business, the huge amounts of money invested, and dolefully concluded that if the Commission refused to renew its licenses, an industry which had required ten years in the building would be destroyed in twenty-four hours. So obtuse was the testimony that at one point Commissioner Ira E. Robinson was moved to remark that he was out of patience with the introduction of extraneous issues.

The complete lack of fine taste which frequently characterizes the programs of the NBC was reflected in the words of its president, Merlin H. Aylesworth, a witness for the defense. During cross-examination he declared there was little duplication of program material on the

stations of the NBC except in the case of great events. He then described a great event as "the Stribling-Schmeling fight, or President Hoover." Radio listeners may expect but little in the category of culture when the head of one of the two great broadcasting companies speaks of the President of the United States in the same breath with prize-fighters.

Ten days after the hearing it was announced that the Commission by a three to two decision had ruled that Section Thirteen of the Radio Act was *not applicable* in the case, and license renewals would be granted the Radio Corporation of America. RCA walked out of court grinning nervously, like a bad boy who had escaped punishment for a misdemeanor of which he knew he was guilty. Once more the government had been outwitted, and the bad boy encouraged in his malfesance.

A study of the opinions of the Commissioners discloses a paradox difficult to understand. Judge Robinson, long a foe of the monopoly and the trust, cast his lot with Commissioners Lafount and Starbuck, to make the majority which turned defeat into victory for RCA. He rightfully held that the courts *had not said specifically* that radio communication had been monopolized or that an attempt was being made to monopolize it. Because Section Thirteen states specifically "radio communication," he, therefore, could not bring himself to say that RCA had created or was attempting to create a monopoly in radio communication. He took the restricted point of view that it was "for the court to say that the control of the sale of tubes effected a monopolization of radio communication." Referring to the Commission, he said that "we cannot extend the judgment of the court beyond its terms."

During the hearings Judge Robinson had stated openly from the bench that everyone knew that the tube was the "heart of radio." In his opinion he stated that the court's decree "does adjudicate that the sale of radio broadcasting tubes was controled." Is it not a reasonable fact, then, that he who controls the sale of radio tubes is creating a monopoly in radio communications? Substantially, such was the reasoning followed in the dissenting opinions of General Charles McK. Saltzman, chairman, and Judge Eugene Sykes, vice-chairman of the Commission.

Commenting on the action of the Commission, Martin Codel, nationally known radio authority, said:

Especially surprising was the vote of Chairman Charles McK. Saltzman, known to be the White House's contact man on the Commission, and a personal appointee of President Hoover. So far as political effect is concerned, General Saltzman's vote on the minority side can now be pointed out by the administration as its answer if any effort is made to fasten upon it the onus of favoritism toward an alleged radio trust during the electioneering that is soon to come again.

Equally as surprising as General Saltzman's vote, if not more so, was the vote of former chairman Ira E. Robinson, long an outspoken critic of monopoly in radio, and of RCA in particular. Commissioner Robinson with Commissioners Lafount and Starbuck constituted the majority which declared that Section Thirteen did not apply.

That the better part of political discretion for the Commission would have been to deny the licenses and permit the case to go to the courts, is patent. In spite of his high standing with the antitrust faction on Capitol Hill, Judge Robinson undoubtedly took his political life into his hand by his vote in favor of RCA, which he accompanied with a strictly legal opinion declaring that he was "holding that which, as an experienced lawyer, I know the courts will eventually hold."

Judge Robinson's appointment expires next February. If he is reappointed by President Hoover, he will undoubtedly face a fight in the Senate for confirmation, especially in view of the fact that "radio trust" charges are being involved in the various pieces of radio legislation coming before Congress at the next session. Charges of domination of American radio by RCA are being made freely by the labor, the farm, and the educational interests that are all seeking wave length privileges thru legislation.

Hedging—That RCA was frightened by the narrow margin of its victory in June was reflected in an announcement of the Department of Justice on July first. The huge corporation, which for so many years has operated a closed patent pool, indicated its willingness to form an open pool in which patent contracts would be revised to make them unobjectionable to the government. The announcement was made in the face of the government's antitrust suit against those companies commonly regarded as constituting the "radio trust"—RCA, GE, AT&T, Western Electric, Westinghouse, RCA Photophone, Inc., RCA Radiotron, Inc., RCA Victor, Inc., General Motors Radio Corporation, and General Motors Corporation.

Nothing that RCA has done within the last few years will be acclaimed by so much public favor as the ultimate consummation of the projected open patent pool. Although this great organization has worked unceasingly in its research laboratories to make the best in radio available to everyone, hurrying radio to

its present stage of advanced development, the glory of its laudable efforts has been cheapened in public estimation by selfish financial acquisitiveness which kept RCA constantly before the courts. Failure to recognize this principle constitutes the most serious indictment against an otherwise commendable example of American industrial genius.

This most recent move to bring peace to the radio industry comes with refreshing hope that an end has been made of the strife and bitterness which has punctuated the growth of this comparatively new method of communication. Martin Codel recounts the story from its inception to make the record intelligible:

Behind the official statement given out by the Department of Justice is a story of the growth of a gigantic institution based on the relatively new art of radio; the affiliation of that institution with other holders of radio patents to form an exclusive pool controlling more than 4000 patents and dividing among themselves the various fields of radio endeavor, and an unrelenting fight by a small group of independents to break up that pool.

The Radio Corporation and affiliated companies have dominated the radio manufacturing, if not the radio communications, industries ever since radio broadcasting became a practical utility not much more than ten years ago. To be able to enter the radio manufacturing field, all companies or individuals not in the combination have been required to take out blanket licenses from the RCA, the major repository of the pooled patents, and to pay RCA a royalty of seven and one-half percent on their gross production with a minimum annual royalty of \$100,000. This applied and applies today to nearly fifty makers of radio receiving sets and tubes representing about ninety-five percent of American radio manufacturers. It is estimated in the petition of the Attorney General to the Delaware court in the antitrust suit that gross collections by RCA from royalties exceeded \$7,000,000 in 1929.

Many of the licensees not themselves owning many patents or engaged very deeply in research and development did not object to this royalty charge, which Owen D. Young, former chairman of the Radio Corporation's Board, recently defended before a Senate committee on the ground that it was necessary to derive a revenue from patents in order to pay for and continue research and development in the extensive laboratories maintained by RCA and its affiliates.

Other independent manufacturers objected strenuously to the fee, though only a few ever went to court to dispute the patents. Among the latter, the DeForest Company, sued by General Electric for infringing the Langmuir high vacuum tube patent, obtained an adjudication in the Supreme Court of the United States a few weeks ago, declaring that that patent was not an invention and therefore not infringed. Still other independents, represented in Washington by Oswald Schuette, as secretary of their Radio Protective Association, waged an unremitting fight before Congress against what Mr. Schuette repeatedly called a six-billion-dollar monopoly—the figure being

derived from the total assets of the affiliates in the giant patent pool. . . .

Further consideration of the patent pool proposal by both sides will "postpone indefinitely" the pending court case, which was scheduled for argument in the Wilmington federal court next September, according to Judge Warren Olney, Jr., the special counsel engaged by the Department of Justice to prosecute the "radio trust" proceeding. The court case, he said, will be held in abeyance until it is learned whether the proposed truce can be effected. "But if the negotiations do not succeed," Judge Olney added, "we will press our case vigorously in the court."

Pro and Con—While the RCA litigation held the focus of radio news during May and June, other events provoked the newswriter's pen. The annual assembly of the National Advisory Council on Radio in Education was held in New York City, May twenty-one to twenty-three. If no one road was chosen as the *via media* to ultimate success in education by radio, several good roads were mentioned, and many detours suggested to avoid possible disaster.

Altho the National Committee on Education by Radio is affiliated in no way with the Advisory Council, both seek to attain the ideal of a cultural radio. From the outset the Committee has insisted on channels for exclusive use by educational broadcasters. The position of the Committee was taken when evidence proved that education and commercialism were impossible bed-fellows.

Education in radio was presented from a commercial point of view by Henry A. Bellows, vice-president of the Columbia Broadcasting System, and former member of the Federal Radio Commission. It might also be stated fairly that the commercial position was presented as well by the present chairman of the Commission, General Charles McK. Saltzman.

Opposed to these gentlemen were Ray Lyman Wilbur, President Hoover's Secretary of the Interior Department, and Joy Elmer Morgan, editor of *The Journal of the National Education Association* and chairman of the National Committee on Education by Radio. While the address of Secretary Wilbur on *The Radio in Our Republic* was not directed against the present system of broadcasting in America, he declared there would be "no difficulty in setting aside" channels for educational purposes in the event education by radio proved its worth. Mr. Morgan minced no words, hitting straight from the shoulder in a vigorous stand for cultural radio. His address has been mailed as a complete issue of *Education by Radio*. Additional copies are available at the headquarters' office of the Committee in Washington.

Mr. Bellows emphasized a point which already has been adequately disproved for all except those who seek in vain for convincing arguments to sustain their case—drowning men clutching at straws. From the ragbag of uncertainty he withdrew the moth-holed gag of “unsold-time” which commercial stations offer “without charge to educational institutions in the generally vain hope that they will make sensible use of it.” Let educational institutions feel no debt of gratitude due the magnanimity of any broadcaster who offers gratis his very worst hours in an empty gesture of good faith which provides him a talking point!

One other important voice was heard at the assembly of the Council—that of its president, Dr. Robert A. Millikan, internationally known physicist, and director of the California Institute of Technology. Inasmuch as his was the only address by any of the members of the Council, his words are to be accepted as the opinion of that organization. Not present at the sessions, he spoke by radio from Los Angeles following an introduction by President Hoover. His was the last address on the two-day program.

“Any talk about the danger of the monopolistic control of the ether at this time in the United States is not well considered. I cannot imagine any group in the country, which is sufficiently influential to have any power at all, daring to take the responsibility of attempting to monopolize the ether,” Dr. Millikan wrote, in drafting his address.

“Any talk of the loss of liberty thru the monopolistic control of the ether at this time in the United States is too grotesque to need to receive more than a line in an address like this. Any highschool boy knows that it would be very simple now, and increasingly easy as research moves on, to break such a monopoly if there ever appeared to be the slightest danger of its being created,” Dr. Millikan said in his actual radio speech.

Dr. Millikan’s address was delivered on May twenty-second, less than a month after the Supreme Court of the United States, thru refusal to review a decision of a lower court, held the Radio Corporation in violation of the antimonopoly laws of the country. As though lightly flicking a dust particle from his sleeve, Dr. Millikan’s word *grotesque* would hold in a rather ridiculous light thousands of those persons who concur in the opinion of the Supreme Court.

Constant association with representatives of the American big business point of view may have so modified Dr. Mil-

likan’s usually unimpeachable reasoning that he challenged the existence of a radio monopoly, Supreme Court judgment to the contrary. Two of the five members of the advisory council of the California Institute of Technology are vice-presidents of the American Telephone and Telegraph Company; a third is a director of E. I. DuPont de Nemours and Company; a fourth is vice-president of the J. G. White Corporation of New York City, while the fifth member is president of the Carnegie Institution, Washington.

Unpatentable—Three days after Dr. Millikan’s surprising statement, the Supreme Court again laid a heavy hand on the machinations of the RCA group. It ruled the Langmuir high vacuum tube patent, granted the General Electric Company several years ago, to be unpatentable and therefore void. One of the best newspaper stories of that decision was written by Robert Mack of the Consolidated Press, who said in part:

Perhaps the most valuable of the thousand or more patents that unite to make radio, which might have meant to its owners a most powerful radio monopoly, today stands invalidated by the Supreme Court of the United States.

The Langmuir high vacuum tube—the lifeblood of modern radio and of the miraculous electronics art—is simply a “scientific explanation” of old processes and cannot be patented, the court has held. The decision, handed down Monday regarding the DeForest Radio Company against the General Electric Company, ends a case which has been in litigation for nearly five years.

It was another crushing blow for the Radio Corporation of America, custodian of the pool of radio patents of General Electric, Westinghouse, and other RCA associates. It follows the RCA’s defeat at the hands of DeForest in the Supreme Court just a month ago in another tube case, in which the RCA was held to have violated the antimonopoly laws. As a result of the latter decision some 1400 radio station licenses held by this company and its subsidiaries legally are in jeopardy.

Independent tube manufacturers, says Oswald F. Shuette, executive secretary of the Radio Protective Association, who has waged a relentless battle against RCA, win a sweeping victory in the decision. He declares that had the Langmuir patent been sustained, every manufacturer of high vacuum tubes of every character “would be forced to pay seven and one-half percent tribute” to RCA and its associates.

Who and What—The Second Institute of Education by Radio was held at Ohio State University, Columbus, Ohio, June eight to twelve. Those men in attendance at the conferences this year declared the Institute had given definite indication that the ideal of establishing cultural radio in the United States had

been made an issue in the lives of educators across the country.

Space limitations prevent publication here of any of the addresses delivered at the Institute. It will be worthwhile, however, to publish the names of those men and women who spoke to the conferees, and the titles of their messages. It then will be possible to evaluate the significance of the Institute’s work in bringing together this group to hasten the day when jazz and advertising will not rule the radio.

Delegates were greeted by President George W. Rightmire of Ohio State University, and J. L. Clifton, state director of education, Ohio. Harold M. Lafount, member of the Federal Radio Commission, spoke on *Contributions of the Federal Radio Commission to Education*; Graham Spry, president of the Canadian Radio League: *The Canadian Radio Situation*; Lévering Tyson, director of the National Advisory Council on Radio in Education: *Community Organization for Education by Radio*; Joy Elmer Morgan, editor of The Journal of the National Education Association and chairman of the National Committee on Education by Radio: *Work of the National Committee on Education by Radio*.

Allen Miller of the University of Chicago, W. I. Griffith of Iowa State College, Joseph F. Wright of the University of Illinois, C. A. Taylor of Cornell University, and R. C. Higgy of Ohio State University shared the discussion of *Significant Activities of the College Broadcasting Stations*; W. S. Hendrix, chairman of the department of romance languages, Ohio State University: *An Experiment in Foreign Language Teaching by Radio*; Armstrong Perry, specialist in education by radio, Federal Office of Education, and director of the service bureau of the National Committee on Education by Radio: *The College Station and the Federal Radio Commission*.

William J. Cooper, United States Commissioner of Education: *The Educational Functions of Radio*; J. B. Hasselman, Michigan State College: *The Contribution of Broadcasting to Agriculture*; Ida M. Baker, Western Reserve University: *Teaching Arithmetic by Radio*; R. Dean Conrad, superintendent of schools, Delaware, Ohio: *Ohio School of the Air Broadcasts*; G. P. Drueck, Jr., principal of Marquette School, Chicago, Illinois: *Chicago Schools’ Broadcasts*; Dorothy C. Mancha, representing the public schools of Ardmore, Pennsylvania: *Using the Damrosch Concerts*; Bruce Mahan, Uni-

versity of Iowa: *Training Radio Announcers*.

Margaret Harrison, radio research division of Teachers College, Columbia University: *Using Extra-School Broadcasts*; B. H. Darrow, director of the Ohio School of the Air: *Liaison Problems in Schools of the Air*; E. L. Nelson, radio development engineer, Bell Telephone Laboratories: *The Selection and Utilization of Broadcasting Equipment*; C. M. Jansky, Jr., Jansky and Bailey, consulting radio engineers: *The Allocation of Educational Broadcasting Stations*; W. C. Bagley, Jr., of the American School of the Air: *An Evaluation of Schools of the Air*; Edgar Dale, research associate of the Bureau of Educational Research, Ohio State University: *Vocabulary Level of Radio Addresses*; W. W. Charters, director of the Bureau of Educational Research, Ohio State University: *Conference on Investigation in Radio Education*; Judith Waller, vice-president and general manager of Station WMAQ, Chicago: *Educational Responsibilities of the Commercial Broadcaster*; Clem F. Wade, president of Western Television Corporation: *Television's Contribution to Education*; Bertha Brainard of the NBC: *Preparing a Chain Program*, and Alwyn Bach of the NBC: *Executing a Chain Program*.

Medievalism in 1931—On June twenty-six the Federal Radio Commission filed an order denying the application of Station WHA, of the University of Wisconsin, and station WLBL, of the Department of Agriculture and Markets of the State of Wisconsin, for a construction permit to consolidate these and other departments of the state in one station. The case was heard on November 19, 20, and 21, 1930. On April 9, 1931, five months later, the examiner submitted his report, recommending denial. The applicants filed exceptions to the report, and the Commission

granted a request for oral argument. The full Commission heard the argument on June 3, 1931, filing its final order of denial three weeks later. The following astounding paragraph appears as the Commission's refutation of an argument advanced by the applicants in filing its exceptions to the examiner's report:

While the Commission consistently has been of the opinion that the devotion of radio facilities to work in education is important in a consideration of the public interest, nevertheless it has never held that a state has a fundamental right to the use of radio in connection with its educational system. *Radio is not essential in the dissemination of education.* It has been and may be used as an efficient supplemental means thereof when employment of a particular facility to that end is consistent with the public interest, convenience or necessity. Radio is not education itself, or the means of its dissemination, but at best education is only one use to which radio may be put. And the power to regulate radio communication as an instrument of commerce has been delegated to the Federal Government.

There is 1931 seen thru medieval spectacles! There is an answer which should silence forever those who contend that the methods of educators are backward. Certainly radio is not essential in the dissemination of education. Neither is printing; neither are books; neither is paper or pencil. Radio is not more essential in the dissemination of education than aviation in the dissemination of mail—the only difference being an enlightened Post Office Department which has encouraged, rather than discouraged, the use of modern transportation methods to serve better the citizens of the United States.

The Commission states it has never held that a state has a fundamental right to the use of radio in connection with its educational system. Why not? The state has a fundamental right to use and has used practically everything else it required in connection with its educational system. Education is a function of the state in this country. Does the Commis-

sion maintain that it is a function of the federal government? The Commission itself argues that the power to regulate radio communication as an instrumentality of *commerce* has been delegated to the federal government. Under what department of commerce does education fall?

The Commission states that "radio is not education itself, or the means of its dissemination, but at best education is only one use to which radio may be put." Neither is the radio entertainment itself; neither is it a new super-salesman, in spite of the fact that an evening before the receiver would convince one to the contrary. It is not denied that education is only one use to which radio may be put. It is contended that commerce also is only one use to which radio may be put.

The Commission need not feel the necessity of emphasizing the fact that it embraces the power of regulation in radio. In the minds of those who have tried to receive fair treatment, there is not the slightest doubt but that the Commission, indeed, is the czar of things radio. The state is not trying to encroach. It merely asks that, inasmuch as its citizens are dependent on such medieval-minded men, the Commission exert its faculties to the utmost in an effort to harmonize its reasoning with the progressive thought of the twentieth century.

Wisconsin asked no great favor. Unlike the mighty broadcasting chains, it sought no great amount of power, nor did it seek to acquire other stations to form a gigantic system of monopolistic proportions. It might have been better if Wisconsin had wanted those things because the Commission normally favors such applications. Wisconsin asked for a single station with sufficient power to permit programs sponsored by agencies of the state government to reach citizens in all parts of the commonwealth.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

J. L. Clifton, former director of education, Columbus, Ohio, National Council of State Superintendents.

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.

R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.

J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.

Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.

John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.

Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.

H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.

Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Radio Channels for College Stations

ARMSTRONG PERRY

THE ACT by which the Congress of the United States created the Federal Radio Commission ignored the fact that public education is a function of the individual states and not of the federal government.

A Senator who was concerned with drafting and passing the law has stated that he inserted a clause which was intended to protect broadcasting stations operated by educational institutions established or chartered by the states, but that this clause was taken out of the bill at the suggestion of a Congressman who argued that, of course, the Federal Radio Commission could be trusted to protect such stations. The Commission, however, soon began to cut down the privileges of some of the college stations, and educators then began to realize that Congress had given the Federal Radio Commission more control over the educational functions of the states than ever before had been placed in the hands of a federal agency.

The Federal Radio Commission did not protect the educational stations as the Congressmen believed it would. It accepted the fact that radio broadcasting was classified in the business world as an amusement enterprise, supported by the sale of advertising. Broadcasting as it existed in America was a business, more nearly related to the vaudeville theater and the movies than to the public school, the college, and the university. From the point of view of the radio industry, as of the theatrical profession, the public was to be exploited rather than educated. Both assumed that amusement was the major interest of the people of the United States. Both believed that only a small minority of the radio listeners was interested in education. The commercial broadcaster's aim was to reach everybody, including important minorities, so material of an educational nature was broadcast. However, most of the hours when the largest audiences could be reached were devoted to amusement. Inasmuch as collecting fees from American listeners appeared to the broadcasters to be more difficult and less profitable than selling time to advertisers, in spite of the experience in other

countries, advertising became the means of producing income.

The members of the Federal Radio Commission were not educators.

Commercial pressure—The commercial broadcasters, being more aggressive than the educators, surrounded the Commission with such influences and brought such pressure to bear, that it was natural, perhaps, that the Commission should overlook the fact that education and business have radically different objectives, and that it should agree with the commercial broadcasters in believing that public education, so far as radio was concerned, should be in the control of men and corporations who were interested mainly in making profits.

The control of radio is the basic problem. The whole radio industry and some educators have tried to keep this problem in the background until all broadcasting channels should have passed into the control of business corporations. It was kept in the background until 94.5 percent of the channels had been given by the Federal Radio Commission to stations devoted to amusement and advertising, and until only about fifty of our more than six hundred American broadcasting stations remained free from commercial control and censorship.

Commercial broadcasters have offered education magnificent gifts on one hand, and on the other hand have made a determined effort to take away from the public schools, colleges, and universities the fundamental right, left to them by the Constitution of the United States, of using any method of education and keeping education free from any obligation to promote the interests of particular commercial groups. They have offered more time on the air than the educators have accepted. They have spent more money on educational radio programs than the educators have, and have made these programs more widely available than any that have originated in the halls of learning. They have given outstanding educators high positions, attractive titles, and much publicity for serving, or appearing to serve, in an advisory capacity to commercial companies. But they have fought every attempt to reserve any radio channels and keep them under control of officials elected by the citizens of the states to

administer public schools, colleges, and universities. They have said, by official action of their leading trade organizations, that the demand of educators for reservation of radio channels is based on a totally false conception of the function of broadcasting stations, and have revealed that the industry maintains state and national organizations for the purpose of controlling legislation.

These methods resemble closely those of other industries based on the use of public property. It is natural that they should, for some of the largest public utility corporations are associated with the dominant radio group, and when the first broadcasting chain was organized its first president was a man who had been serving as the public relations director of a public utilities corporation. He had revealed with the utmost frankness his plan for subsidizing educators so that they might shape education to the advantage of public utilities corporations.

Educators organize—Few educators have objected to granting the use of part of the radio channels to commercial concerns, to use for their own profit. It was not until the trend toward monopoly had reduced the uncensored channels to a disappearing remnant that educators organized to save the birthright of the public schools and institutions of higher learning.

Then they studied the history of the dealings of the Federal Radio Commission with the educational stations.

Here are some of the facts that were considered:

The Radio Committee of the Association of Land Grant Colleges and Universities reported:

The primary purpose of the Radio Committee is to protect the interest of the Land Grant Institutions on the air so far as practicable. It has been the hope of several members of the Committee that they could secure from the Federal Radio Commission definite rulings which would ensure, at least to every state and particularly to the Land Grant Institution thereof, a definite wavelength or period, which could be used by the institutions for educational broadcasting. This had not yet been accomplished at the end of August, 1929.

It has not been accomplished yet. The action of the Commission, in compelling educational stations to share channels and time with commercial stations, has

An address before the Second Annual Institute for Education by Radio, Columbus, Ohio, June 9, 1931. Mr. Armstrong Perry is director of the Service Bureau of the National Committee on Education by Radio, and is associated with the Payne Fund.

resulted in continual encroachment of commercial stations on the privileges of educational stations, and the number of broadcasting stations operated by governmental agencies or educational institutions has diminished from one hundred and five in 1926 to fifty-eight in 1931.

Frequently the Commission declines to grant a license on the ground that it would exceed the quota of facilities allotted to the state or zone in which the station is located, yet one zone is more than one hundred percent over quota because of the number of commercial stations licensed.

The law states that radio facilities shall be divided equally among the states and zones with respect to channels, time, and power, yet the Commission ruled that the power of a station could be increased from 5000 watts to 50,000 watts without affecting the quota of the state or zone. This favors the larger stations, which already have clear channels, and tends to drive out educational stations.

Reaction—The following reports from colleges show what has happened:

Our station is sharing time on six hundred kilocycles with another station. The channel assigned would be quite satisfactory were it not for the interference. A beat with the carrier of the other station vitiates all efforts to reach listeners beyond a radius of forty miles from the station.

Our station has been on the air since 1922, but during the past three years we have had to share time with three other stations, two of them being educational stations. We find that it has been very difficult to get a different frequency assignment due to the fact that commercial stations have been able to get the best wavelengths available.

The history of our 100-watt station has its pathetic chapters also. We came on the air but a few years after KDKA and therefore belong to the earlier group of stations, but we have been buffeted and shifted around until we find ourselves in a frequency group where it is almost impossible to be logged five miles distant after seven PM. A recent order of the Federal Radio Commission compelled a considerable expenditure of money which we could ill afford in order to prevent what seemed an inevitable refusal of our license. That seemed like rather curt and summary treatment of a station that should at least have a few priority rights.

We have never complained to the Federal Radio Commission regarding assignments, because that is an expensive procedure, and we do not have the funds to do so. Twelve hundred and ten kilocycles is a very crowded channel, and has made reception by alumni in distant points (under best conditions, rare) impossible. Also, we do not find it nearly so convenient to share time for the reason that we frequently have good lecturers and musicians come to our college on evenings that must be

given over to the other station. Our program is severely handicapped because of the necessity of sharing time.

When the present Radio Commission took office in March, 1927, we were assigned to a frequency along with seventeen other stations. About May one, the same year, in the reallocation our station was put on the same frequency with another station, but with no requirement for time division. The other station would not compromise, hence, we heterodyned each other for two months and then our station was shifted, dividing time with a commercial station and with another station in the background. On December 1, 1927, our station was restricted to daylight operation because of interference. On November 11, 1928, our station began the present time division with another station, our station being allotted one-seventh of the time. This plan worked out quite satisfactorily until the other station asked for full time. After three months of negotiations in an attempt to solve the difficulty without a hearing we were compelled to attend a hearing at Washington. No decision has yet been rendered nor has the referee made his report. In the meantime, both stations continue to divide time on the same basis. However, the aftermath of the hearing has been injurious to our station. The other station is taking a very selfish attitude, refusing to grant the usual courtesies and seemingly has adopted a program of injuring us, so far as our radio audiences are concerned, and the flexibility of our program, at every opportunity.

In spite of the fact that the university radio station is the only one belonging to the people of the state and is the only means that we have of taking to the public the great wealth of material which is here in the form of educational talks and lectures, as well as the various musical treats, athletic contests, etc., we have been handled worse than the proverbial football by the Federal Radio Commission.

We received our first license to broadcast in March, 1922. We used that frequency until 1925, and then were assigned to another. When the new broadcasting structure, to become effective November 11, 1928, was first proposed, we were assigned to share time with two other stations. But before we could arrange a time division with those two, we received another telegram from the Commission saying that we were reassigned and would share with two other stations.

We were satisfied with this assignment, but immediately three commercial stations applied to be placed on this frequency. In spite of the fact that a clear statement was made in our behalf at the hearing in Washington and in spite of the fact that we require only on the average of one and one-half to two hours a day, this frequency has been assigned to its present holders, and we were put on a Canadian frequency, just twenty kc away from two stations, and with only 250 watts nighttime power. One of the stations uses 5000 watts and the other 50,000 watts. As a result, because the frequency on which we broadcast is so close to the one on which our powerful neighbors operate, we are overpowered by them in many localities.

Since the Radio Commission has been in control, this station has been assigned to a number of wavelengths and in general each

was less satisfactory than the preceding one. In all cases we have divided time with commercial stations. In some cases the commercial stations were given the preference in selection of time. . . .

. . . The station has been kept going mainly in the hope that at some future time more favorable treatment of college stations could be secured.

All and all, we do not have much complaint to offer.

In our endeavor to better the position of our station we have kept up negotiations with the Commission for over two years but so far without finding relief. . . .

The strategy of the industry was traced. One of its dominant leaders had stated in a public address during the infancy of broadcasting that eventually there would be but half a dozen high-power broadcasting stations, which would serve the entire country. The fact that the number of stations multiplied until there were hundreds appeared to be related to the fact that this man's company found it profitable to manufacture and sell transmitting equipment as well as radio receivers, and to issue licenses to other manufacturers, for the use of its patents, on terms to which the licensees frequently expressed violent objections.

Commission yields—When there were well over six hundred stations broadcasting, the Commission yielded to the point of view of this dominant radio group and cleared forty of the seventy-nine broadcasting channels used exclusively in the United States, awarding them to individual stations, the majority of which were associated with this group. The college stations were among the more than five hundred and fifty stations that were forced to crowd into the remaining thirty-nine channels. One of the pioneer college stations found itself on a channel with fifty-one stations broadcasting advertising and amusement.

There followed a demand for higher power from the stations favored by the forty clear channels. The maximum permitted at the time by the rules of the Federal Radio Commission was 50,000 watts, and that was all these favored stations asked. When the engineers got their heads together, however, they talked of powers of the order of 1,000,000 watts, which they expected to use as soon as the rules of the Commission could be changed. One station secured permission from the Commission to experiment with amounts of power far in excess of 50,000 watts.

A gentleman who, after a term of service on the Commission, became affil-

iated with a publishing business supported by advertising from the radio and associated industries, let the cat out of the bag by pointing out that granting 50,000 watts power to clear-channel stations would insure the sale of \$10,000,000 worth of transmitting apparatus and \$100,000,000 worth of receivers. His prediction may have been in line with the facts, for granting high power to a few stations forces all others to install new and more powerful equipment. It also forces listeners to purchase better and more expensive receivers if they wish to hear any except the high-power stations. This wellknown commercial game has somewhat the same effect as starting the nations of the world on a race to produce the largest and best navy. Colleges and universities will be at a disadvantage in such a game so long as they are left unprotected on channels where they may be attacked at any time by powerful commercial interests. Twelve out of thirteen commercial stations will likely be crowded out of the air, too, and the trend is likely to be as predicted by the monopolist in the early days of broadcasting, if his policies prevail.

When such facts are pointed out to members of the Federal Radio Commission, the majority take the attitude that the radio laws compel them to consider all stations as being on the same basis, whether they are operated for private profit or as public institutions. This does not agree with the point of view of the Congressmen who made the law. It relates rather to other phases of the strategy of the dominant radio group.

Early in the broadcasting era cases were taken into the courts and decisions were handed down which classified broadcasting as interstate commerce on the ground that radio waves could not be stopped at state boundaries. That was satisfactory to the commercial broadcasters because one federal agency is easier to deal with than forty-eight state agencies.

Sidestepping—The next step in the strategy was to avoid the responsibilities of common carriers or public utilities. Efforts to do this have been successful so far, and we have the anomaly of interstate commerce with no common carriers to carry it, no regulation of broadcasting rates by any governmental agency, no radio highways in the broadcasting band reserved for education or other governmental functions, and no power in the hands of any governmental agency to keep even profanity, obscenity, and the advertising of quack doctors and lot-

teries off the air unless the citizens themselves assume the responsibility for protesting and fighting the matter through the courts. A commercial station outside your state may blanket it with objectionable advertising while the Federal Radio Commission, which keeps the station on the air, denies the state itself the right to operate a station for the benefit of its citizens. Even telephone lines used in broadcasting, though they may be entirely within one state, are free from governmental regulation in most, if not all, states. Last year it was reported authoritatively that the Ohio School of the Air, conducted by the State Department of Education, was obliged to pay for a telephone circuit for broadcasting, five times what it would cost to use the same circuit for the same length of time for person-to-person communication, and that the Public Utilities Commission was powerless to go into the matter to determine whether the charge was just and reasonable.

Commission helpless?—The Federal Radio Commission maintains that its hands are tied by the law so that it is powerless to protect broadcasting stations owned by states or by institutions chartered by states. It maintains that if a commercial concern applies for facilities used by a state educational station, and insists on a hearing, the hearing must be granted and, regardless of expense, the state station must appear as a respondent if it wishes to protect its rights. No matter how many times it may be attacked in the course of a year, the state station, supported by tax money and operated for public benefit, must bear the expense of employing attorneys and sending witnesses to hearings in Washington. In February, 1931, applications of commercial broadcasters who wished to use radio channels for their own profit involved the rights of twenty-eight educational stations, about half the total number of such stations still on the air. In March, twenty-seven educational stations were affected by similar applications.

Protesting it is deeply interested in education, and that its hands are tied so it cannot protect educational stations, the Commission nevertheless objects to an appeal to Congress for reservation of channels for education. Two members have branded the bill, introduced by Senator Fess, for reserving a portion of the radio channels for educational purposes, as class legislation. If it is class legislation, the laws establishing the public schools are class legislation.

The one alternative suggestion emanating from the Commission is the same urged by commercial broadcasters; namely, that commercial stations shall be required to give a certain amount of time each day to educational programs in return for privileges granted. When asked who would determine what hours should be given to education, a member of the Commission who has been most active in arguing for this arrangement said: "Well, of course, commercial stations would have to have the hours they could sell to advertisers." In short, commercial broadcasters and the majority of the Commission deny the legal right of the states, responsible for public education, to have any control of any broadcasting channels, and advocate that education by radio be given in hours which have no value for the commercial broadcaster and advertiser.

Such an arrangement has more disadvantages than that of inconvenience and inefficiency. It would make commercial stations the exclusive radio outlet not only for education but also for the addresses of the elected representatives of the people. These stations have the right to grant or deny requests for time and, in granting them, to choose the time when they shall be broadcast. Also they have the right of censorship. By putting one speaker on at one hour and another on at a less favorable hour the owner of a station or a chain might swing public opinion during a crisis as might be desired. Also he could associate any public speaker with commercial advertising. A national chain associated the Lincoln Day address of the President of the United States with the advertising of a tobacco company, and, in spite of consequent protests, associated his Red Cross address three months later with the same advertising.

Camouflage—In trying to maintain their hold on the public air, commercial broadcasters often try to raise a smoke screen by criticizing college stations. The Federal Radio Commission has been befogged at times by these criticisms. But why should the Commission, or a commercial broadcaster whose object in life is to build up an audience which he can sell to advertisers, have anything to say about what the state does in education except what they have a right to say as individual taxpayers? What they say is usually highly inaccurate, as is proven by their own actions. In hearings before the Federal Radio Commission, commercial broadcasters declare nobody wants to be educated by radio, and officials of the

Commission back up the assertion. Ten minutes later the same broadcasters will be arguing for increased time and power, or better channels, on the ground that a large percentage of their time is devoted to educational programs, and the Commission lets them get away with it.

They state publicly that educators fail as broadcasters, and at the same time put forth every effort to make their commercial stations the exclusive radio outlets for state departments of education, and for colleges and universities. The station manager and chain official who spoke so disparagingly of educators at a recent meeting in New York is the same man whose station used its power of censorship with such outrageous effrontery that a state university discontinued cooperation with the station. And an official of the Federal Radio Commission, yielding to this man's plea that his station was rendering indispensable educational service, recommended that his station be granted an increase of 40,000 watts in power, while the Commission denied the right of a high school in the state to use two watts power to broadcast interesting school events to parents and taxpayers within the district.

College stations have not reached the acme of perfection in putting education on the air, but the reaction of listeners to radio advertising indicates that commercial broadcasters are just as open to criticism. Records of the college stations show they have rendered useful service to large audiences more interested in education than in mere amusement, and that the service is appreciated.

Status—The present radio situation is, as Judge Robinson of the Federal Radio Commission told us last year, one that threatens the foundations of our government. Would we be willing to have the printing presses of our country controlled by commercial concerns having power to determine what should and should not be printed? Would we be willing to have our public schools, colleges, and universities in the hands of commercial groups having power to determine what should be taught, and when these institutions should be used for public purposes? That is exactly similar to what the commercial broadcasters and certain members of the Federal Radio Commission advocate we do with education by radio.

Recently we heard a distinguished scientist, professor of an outstanding university, tell us over a national chain of broadcasting stations:

Any talk of the loss of liberty thru the monopolistic control of the ether at this time in the United States is too grotesque to need to receive more than a line in an address like this. Any high-school boy knows that it would be very simple now, and increasingly easy as research moves on, to break such a monopoly if there ever appeared to be the slightest danger of its being created.

Only a few days before, the parent corporation which owns that chain had been finally adjudged guilty of monopoly, and of violation of the antimonopoly laws of the United States. Why did he ignore this fact, and the fact that the Attorney General of the United States had instituted a suit against this same great corporation following investigation of its activities by the Interstate Commerce Committee of the United States Senate?

Vested rights—The effort to secure vested rights for commercial radio stations is a further step toward monopoly of radio. Congressional foresight has kept control of radio channels, theoretically, in the hands of the federal government. The Federal Radio Commission issues licenses to broadcasting stations for short periods. Every license holder has signed a waiver, agreeing that he has no rights to the use of a channel beyond the period specified in the license. Nevertheless, if the Commission attempts to restrict or withdraw from a commercial station the privileges granted by a broadcasting license, the owners usually take the case into court on the plea that their property is being confiscated. If such a case should happen to go to a court which believed that protection of an investment of money was more of a sacred duty than protection of the rights of citizens to keep their channels of education free from commercial censorship, a precedent might be established which could be set aside only by an amendment to the Constitution. This possibility has been foreseen, and a Senator who has done much in shaping present radio laws stated that he will introduce such an amendment if necessary, and work for its adoption. He points to the fact that the Eighteenth Amendment, although it affected the value of many millions of dollars worth of property temporarily, gave the owners of such property no right to claim damages on the plea of confiscation.

College broadcasting stations, which seemed to be in a desperate situation a few months ago, have now some new

hopes. Station WCAJ, Nebraska Wesleyan University, attacked by a commercial station which wanted to take away its rights, received a favorable decision from the Federal Radio Commission after a long and expensive struggle. Its brave fight under adverse conditions won the support of the state government of Nebraska, the state delegation in Congress, and influential organizations.

Wired radio will take away many listeners who tire of sales talks on the air if its owners deliver the service claimed, free from advertising, while making a moderate monthly charge to the listener, precluding the necessity of purchasing expensive equipment.

Newspapers, which brought radio broadcasting to the attention of the public and made it popular before the radio group revealed its purpose to enter the advertising business and sap the life blood of the press, are organizing to force advertising off the air. They are powerful and may succeed. They must succeed or many of them will die, for, according to their reports, already fifty-nine percent of their advertising income has been diverted to radio.

United action—Educators also are organized on a national basis, with headquarters and a service bureau in Washington. Key men and women in government, business, and the professions are receiving information, and many of them add their influence to the cause of uncensored education by radio as they begin to realize its significance.

If advertising is driven from the air, broadcasting must be supported as it is in all other countries—by appropriations from public funds, by philanthropy, or by a combination of the two. Already institutions of learning are so supported. When public funds are allotted for education by radio, what could be more logical than that broadcasting stations maintained by those institutions should be preferred to those that have been operated for private profit?

Anyone who has faith in our democratic form of government must believe that its citizens, when the facts are before them, will prefer to have education by radio controlled by men and women whom they elect to represent them, rather than by corporations which, while their aims and business may be perfectly legitimate, are interested mainly in using the public domain for private profit.

Below the Rio Grande

SENORITA MARIA LUISA ROSS

CONCEPTS OF MEXICAN CULTURE face revision in the light of progress made in education by radio by our neighbor below the Rio Grande. Mexico's use of radio for instructional purposes is described forthwith by Senorita Maria Luisa Ross, chief of the office of cultural radio, written at the request of officials of the Mexican Embassy in Washington. It is published in *Education by Radio* as an example of the interest held by other countries in radio as an instrument of public good.

Growing pains—The Department of Public Education of Mexico began its educational broadcasting service December 1, 1924. The first problem was one of procedure. On what basis was this service to be organized so as to be as successful, and, at the same time, as economical as possible?

At the outset the work was divided into two major groups: educational and artistic. These were subdivided as follows: educational work into elementary synthetic courses concerning foreign culture, small industries, advancement for teachers, scientific publication, and general information; artistic work into esthetic culture, publication and advancement of fine arts, and musical culture thru the medium of concerts.

The main objective of the broadcasts prepared by the office of cultural radio was to convey to thousands and thousands of resident foreigners, who knew us only in our dullest and ugliest aspects, a real and favorable concept of the culture of Mexicans, adding to it a more exact knowledge of our own scientific and literary values.

The first obstacle to overcome was the attitude of the Mexican radio listener. It is certain that radiotelephony interested him in 1924, but only from the standpoint of technical experiment. The marvel of the invention was impressed upon him and its mystery intrigued him, but the material transmitted left him indifferent. This was due, in part, to the fact that the broadcasts reached him only now and then thru lack of Mexican stations with sufficient coverage, and also because the Mexican receiving set was not yet developed and perfected.

This was a difficult period for us. First attempts at cultural work were frustrated

by listener indifference. The result was that observations made by our radio office to determine the tastes of the public, observations which should have been the base of future endeavors, were false, and a misleading path was followed.

The mistake made in these early attempts led us to believe the public was interested only in musical broadcasts. Nevertheless, we proceeded to broadcast the educational and informational work proper, interspersing short discourses between musical concerts. It was then that the artistic part took the preferred place in our broadcasts. As a result, education of the listener progressed more slowly than necessary, increasing the need for important and extensive conferences.

Finally, two years later, the first regulated course was established. This course was prepared by professors of the National School of Domestic Training, under the supervision of the director of the radio office. It was developed in fourteen conferences, and was called *How to Become a Good Housewife*. The most flattering success crowned this effort. It was only necessary to sow the seed and make it bear fruit. We expect to succeed fully in future efforts.

When a general plan of studies for broadcasting was formed, taking into consideration the diversity of desirable subjects for thousands of eager pupils, the subdivision of educational work was established by means of synthetic courses in different subjects according to the form indicated above.

Artistic work—This was easier to plan, encouraging, as it did, the natural inclinations of the Mexican people toward the fine arts. Notwithstanding, an attempt was made to inculcate perfectly a knowledge of art. The Department of University Extension of the National University helped very considerably in this work by holding conferences which debated the different themes of esthetic culture.

Experience has demonstrated that radiotelephony differs fundamentally from any other method of teaching in that artistic values should rank in importance with educational work, both cultural and social, in order to win the interest and appreciation of the public in all work offered by the broadcaster. The organization of our artistic broadcasts,

therefore, represents a compromise between the splendid rudiments which the Secretary of Public Education propounds, and the suggestions of the most distinguished artists who visit us.

Administrative organization—The broadcasting station began operation November 30, 1924. The work was exclusively in the field of technical experiment during the first two months after its inauguration. In 1925 the office of cultural radio was formed in two sections, namely, administrative and technical, the first annexing itself to the department of fine arts, and the second to the department of technical, industrial, and commercial training. The deficiency in this organization soon was made manifest, but there later was established the organization of the work of educational extension by radio which already had been thought of in the interior organization. The personnel upon which we had calculated was very much reduced, but enthusiasm ran high and the way each employee discharged his duties was notable. An economic organization resulted which, if not perfect, at least filled the most urgent needs, and was the fruit of a fitting and well organized work. The work succeeded in truly interesting its followers, and established the habit of receiving instruction by radio.

Personnel—In 1927 a slight increase in personnel was obtained, giving us a permanent staff as follows: a director and four assistants, an official reader, an announcer, an official pianist, an official accompanist at the piano, a helper of the former, and two professors assisting in the organization of concerts, besides the personnel of technical revision. With this personnel the work of the office was organized under an educational and an administrative section. The chief director at that time became chief of the educational section, which was subdivided into two departments—that of concerts, conferences, and programs of teaching, and that of broadcasting. The administrative section, under the direction of the first assistant, was subdivided into three departments: procedure, library, and correspondence. The department of foreign correspondence and the department of mechanics were increasing and varying their personnel. Extra hours of work were required to dispatch the great quantity

of affairs in progress. It was necessary to establish a time schedule embracing the hours between 8AM and 1PM, and 3PM to 8PM, during which the staff worked ten hours daily.

Program development—It became necessary to develop a varied work to meet the very diverse culture of the Mexican listener. We plan to develop conferences in cycles with especial consideration for the following groups: workers in the city, workers in the country, and housewives.

Workers in the city—To them we offer the opportunity of bettering themselves, giving them an understanding of practical utility, treated in a simple form suited to the capacity of their intellectual level. Broadcasts of such subjects as small industries, exercises, hygiene, and physical culture are given for this group, as well as selected discourses about social sciences, history, geography, fine arts, and sciences.

Workers in the country—For this group we broadcast conferences about agriculture, applied geography, and cattle-breeding. This work was perfected thru cooperation of the Secretary of Agriculture and Public Works. The following program was developed:

1—Agriculture and its importance as a factor in national progress.

2—Farmers' work in general.

3—Selection of seed with respect to climatic characteristics of the zone in order to obtain the best income.

4—Fertilization. National fertilizers, their preparation and use. Chemical and commercial fertilizers. How to improve cultivation of the soil with the benefit of its fertilization.

5—Classification of soils.

6—Use of farm machinery in the labors of the country.

Economic and social aspects of the education of the countrymen have not been forgotten. On the contrary this project is dealt with in actual study. Talks are given to the country people about farm affairs tending toward better cultivation of the soil, about breeding-places in general, about cattle-breeding, and bird culture. The object is to unite the countrymen socially under an agrarian head, faithful to the jurisdiction of the government. Other talks are given about thrift boxes, and cooperative societies of the producer and consumer. Countrymen who receive these talks are urged to found community houses, schools, libraries, and athletic fields in each agrarian community. They are invited to express their necessities and

problems in order that they may be fully known. They are given cultural talks in general.

Housewives—In our kitchen classes, broadcast from 11AM to 1PM, more than 3000 housewives receive daily instructions about how to prepare a practical and economical menu.

National work—Thru cooperation of the technical section of vocal music and glee clubs, we are developing an essentially nationalistic work with the welldefined purpose of counteracting the effects of American jazz. Mexican music, concluding the concert with the national anthem, is broadcast every Thursday.

A bulletin of news extracts is broadcast daily, confined solely to news of greatest importance.

Public discussions of the legislature are reproduced by remote control in the Chamber of Deputies of the Congress of the Union, carrying to the Mexican people a most faithful chronicle of the affairs handled by their representatives.

All civic ceremonies of great interest are transmitted by remote control. Such ceremonies include the anniversary of the independence of Mexico, reading of the presidential bulletins of Mexico, reading of the presidential bulletins of the Chamber of Deputies, inauguration of executive chiefs, messages from the Secretary and the Subsecretary of Public Education to the teachers of the Republic, messages from the President to the people of Mexico, important sessions of scientific and artistic institutions, and commemorative festivals organized by the Secretary of Public Education.

A course for the advancement of teachers has been given also, especially devoted to bettering the condition of rural teachers who work far from important educational centers, and lack the necessary means to take the courses offered in the cities during periods of vacation.

Another interesting aspect of the general program of education by radio is that which relates to teaching groups of students. The first attempts were made with a class of choral singing. Broadcasts were received and learned by more than 1000 children in different schools, this type of lesson being of great usefulness for rural schools without teachers of singing.

Teaching of small household industries is another of the special aspects of our work of extension education by radio. These broadcasts teach the manufacture of soap, perfume, mirrors, flowers, dresses, hats, lampshades, and other articles.

In some courses, as in that on crepe

paper, the practical progress of the pupil may be appreciated on examination of the work exhibited in the office of the secretary. More than eight hundred different pieces of work were sent for these exhibitions.

The social education of women has been considered also, and special courses and conferences in this subject are being broadcast.

International aspects—Our work began to be known and appreciated abroad. In proof of the quality of service performed, this station was chosen by the International Committee on Radio to represent Mexico in important transoceanic experiments. On this occasion our station covered a distance of approximately 7000 miles, carrying the voice of our country into the heart of Europe for the first time.

In some respects educational radio work in Mexico has surpassed the efforts of the European committees. They have obtained a systematic organization of different conferences and the formation of short courses, while Mexico has been successful in establishing a system composed of *fifteen* different courses. These are domestic economy, medicine and first aid, bird culture, bee culture, silk culture, radiotelephony, crepe paper work such as lamp shades, flowers, purses, dresses, and similar articles, physical culture, history, geography, applied geography, advanced work for teachers, elements of mouth hygiene, cultivation of the fields, and choral singing. Mexico is the first nation in the world which has transmitted a course of radiotelephony by radio, prepared in the best form for the student to secure the greatest profit with the greatest economy from his receiving set, while being initiated into the secret of broadcasting.

Critique—During the office of Citizen President Calles, Mexican educational broadcasting has been considered a triumph of major importance. This has been brought about in spite of the recent formation of the office of cultural radio which has taken root in a field of activity discovered but yesterday. Obstacles noted in preceding paragraphs have been overcome, and the reception of instruction by radio has become a routine matter in the daily habits of the people of Mexico. Listeners voluntarily come to the office of the director to register their names in the courses which suit them, providing real and positive data for the statistics of the department, and testifying to the popularity of the programs presented.

Where is Radio Broadcasting Headed?

GLENN E. WEBSTER

Former Chief Engineer, Radio Station WOS, Jefferson City, Missouri

EACH MONTH OF OPERATION continues to emphasize the fact that conditions are far from satisfactory in the broadcast field. We are gradually approaching a point where radio will be greatly curtailed in its usefulness, and it is realized that some serious thought should be devoted to bettering conditions.

Early in the development of radio broadcasting, the United States and the other nations of the world drew up an international agreement as to frequencies and bands to be used for various kinds of radio service. This country agreed to set aside frequencies ranging from 550 to 1500 kilocycles as the broadcast band. All domestic development to date has been in that band.

Woods obscure trees—When the Federal Radio Commission took over the task of radio administration in the United States, there admittedly was a bad condition existing with seven hundred and thirty-two stations operating in ninety channels.

The Commission proceeded to remedy matters by reallocating the stations, requiring them to share time, and eliminating those thought not to be operating in the interests of the public. This new setup was satisfactory neither to the many stations nor to the radio public, as evidenced by continual hearings and court cases which have been in progress since it went into effect. However, the Commission is not to be too severely criticized for this condition since its action was taken in accordance with decisions made by Congress.

Laissez faire—Since the reallocation the entire situation has become worse steadily, and the Commission recently has adopted the attitude that it has done the best it can, and those stations not satisfied must fight it out among themselves. This general order of the Commission, virtually authorizing one station to take another station's time, if it can, is doing a great injustice to the small broadcaster and the public.

We may draw an analogy to the present radio situation by supposing that we have a cake to divide between twelve boys of varying sizes. Suppose the cake is divided and the boys are told that if they are not satisfied with the size of the piece

they received they should then take the cake away from the others. What is the result? Naturally the biggest boy will get the most cake.

That is exactly what is happening in the radio broadcasting field today. The Commissioners cannot blame Congress for a condition which they themselves brought about. Large stations will take the most power, and small local stations will be forced out of the field.

Super-power—Apparently the Commission is trying to force out the small broadcaster and increase the facilities given to a privileged few. Its attitude in regard to super-power stations would seem to substantiate such a conclusion. The Commission now is considering licensing an additional group of super-power stations which will swell the list to proportions that will take about half the available channels with total power greater than all other stations combined. Each station desires a clear channel, which, if secured, denies the smaller stations a place in which to operate. The public should realize that the great majority of these super-power stations would be owned or controlled by the same group.

And its weaknesses—At first glance the listener might think such a super-power system perfectly satisfactory. A little thought, however, will disclose a number of weak points. If a super-power system is adopted, it would appear that the listener would have about twelve of these powerful stations, and a like number of regional and local stations, at his command. In all probability a great majority of these stations would be members either of the NBC or the CBS, and, instead of hearing twelve different programs, he probably would hear only four or five at the most. The present ownership of stations suggests that a trust or certain group of owners would control the super-power setup with the public at their mercy for the type of program received. It is logical to assume that educational programs would be dropped in favor of more profitable advertising programs, a process not for the good of radio.

Super-power will tend to create a legalized monopoly of the broadcast field by the same group which already rules the electrical industry. Neither the industry nor the public would benefit by such a

monopoly with its tendency to minimize the element of competition.

Super-power would place an additional hardship upon the advertiser using radio. He would be forced to resort to large chains or big stations at a tremendous cost, or to small local stations with a limited service area. He probably will do neither, thereby eliminating one of the most desirable features of radio, the local sponsorship of programs.

Other points might be brought out to show that super-power is not the solution to radio's problems, and that its adoption would lead into even worse conditions. Approximately two-thirds of the stations are not satisfied with their present assignments and do not approve the proposed super-power move of the Commission. Is there a better solution to the problem?

A way out?—The author has not discovered a panacea for radio's ills, but believes that some system *can* be worked out to better advantage than the one contemplated. Super-power, and the elimination of the small local station, *is not* the remedy. The writer has been in the radio field since its beginning, as an engineer, station manager, and observer, and feels that there is a more just and reasonable way to serve the public than thru a small group of centrally controlled stations.

At present there are a number of channels open that would appear to be helpful in a way that would not make use of a super-power system. Again, the synchronization project undoubtedly will make a more scientific separation of stations along with a reduction in power. It might be well to review the development of these two ideas to date and examine their possibilities.

Synchronization—Basing judgment on experience gained both at home and abroad, some definite statement may be made regarding the use of synchronization. The author was a member of the technical staff of the two synchronized stations enjoying the most success in this country, and is in a position to state that synchronization *can* be used successfully under certain conditions. It is suited best to metropolitan areas and is only fairly successful in rural districts.

At present there are two practical means of synchronizing stations—the matched-crystal and the wire-feed system. The two above-mentioned stations are using the matched-crystal system with a small tuning system which enables the operator to listen to a centrally located receiver and tune his transmitter until the beat note is eliminated. Greater accuracy is secured with use of the wire-feed system in cities and districts where stations are located close together. The matched-crystal is preferred in cases where the distance between stations is so great as to make wire costs prohibitive. In some cases it is possible to feed the control frequency over the same pair of wires that feed in the program. In all cases of station synchronization it is absolutely necessary that the same program be broadcast over all the stations.

Synchronization affects chain stations, which must, and undoubtedly will, oppose the plan. Use of synchronized transmitters would reduce outlets of chain systems from approximately fifty to about six or eight, although they would cover the same territory. Chain stations may be expected to object to the plan because it submerges their separate identities and limits their broadcasts to chain programs. In this respect the chain station faces all the shortcomings of the super-power project, a condition somewhat modified by the fact that only six or eight channels would be used for chain programs, leaving all other channels open for other program uses. Synchronization simply is a means whereby chain stations may be placed on six or eight channels rather than on two-thirds of the radio dial. Without going into a technical or detailed explanation of the system, let it suffice to say that it *can* be used with the result that more channels will be available for regional and local use.

Unscramble—The second suggestion offers a more scientific separation of stations and radio facilities than now used.

A glance at the map of stations shows a very scrambled picture which, with a little thought, could be arranged better. It is conceded that there is a place for a few high-power stations, a larger number of medium-powered stations, and a still larger number of local stations. Suppose there are from fifteen to twenty cleared channels set aside for as many high-powered stations, thirty channels set aside for about forty 5000 watt stations, thirty channels set aside for stations wishing to share time and having a power of from 500 to 2500 watts, leaving ten or twelve channels for local stations.

Discrimination—This article attempts to show that the Federal Radio Commission is moving in the wrong direction by fostering super-power, that mistakes already have been made in some orders issued, and that even greater mistakes are going to be made if more high-power stations are permitted on the air. *The smaller station must not be frozen out; broadcasting must not go into the hands of a privileged group.* Already there is a pronounced movement in that direction and it must be stopped. Big stations are beginning to realize they are the goats in this plan of apparently limitless power, and it is a known fact that larger stations are losing money. It seems that the only reason for the high-power fight is maintenance of station prestige, and that is costing some of them dearly.

The Commission has made many mistakes since its inception, but this "fight it out," super-power plan seems to be the most dangerous to date. There is discrimination against the small station, the small advertiser, educational interests, and the radio public, to the benefit of a select few backed by financial and political power. If the Federal Radio Commission cannot make improvements, it then remains for Congress to make such regulations that will protect the radio broadcasting industry and the American people.

THE size of the audience a particular radio program will attract is a poor measure of the desirability of the program.

Those in whose hands rests the future of radio might well consider the recent statements of Mr. C. V. Cowan, cinema reviewer of Pasadena, California. Mr. Cowan, who criticised 1125 motion pictures during the fiscal year 1930-31, recently made the following statement, which applies equally well to radio programs, movies, or the stage:

"The theater is a community institution, and should not be turned over to men concerned solely with box office receipts."

Applied to radio, this surely suggests that at least an adequate number of radio channels be preserved for the people. It is anticipated that some of these facilities will be used by state departments of education, educational institutions, and state governmental authorities.

Mr. Cowan further states: "Experience teaches that no permanent success has ever been achieved by anyone in the entertainment world who relied upon poor taste to sell his wares."

Tomorrow's radio will render its greatest service in this country based upon an ideal of raising the level of public taste by offering more worthwhile types of entertainment, rather than founded upon today's false criterion of popular programs. If we may judge the attitudes of commercial stations by the written and spoken word of their representatives on the subject, it develops that the majority of people in the United States do not want educational programs after six in the evening. The contention is offset by increasing evidence that the majority *does want* more digestible radio meals than those served by salesmen, jazzmen, and crooners. Educators have not yet lost, nor will they lose faith in the possibility of elevating the tastes of the people.

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 Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
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Radio During July and August

INVOLUNTARILY the Radio Corporation of America came back into the news during the summer months as the *Milwaukee Journal* asked the Court of Appeals of the District of Columbia to set aside the decision of the Federal Radio Commission returning 1409 communications' licenses to RCA. The *Journal* wanted but one of those licenses—that one permitting stations WENR and WLS to broadcast jointly on the 870-kilocycle channel. Its action reopened the entire case which began when the Supreme Court refused to review a lower court decision holding RCA guilty of violating the anti-monopoly laws. It ended, apparently, when the Commission by a three-to-two vote decided not to deny renewal of RCA's licenses in spite of the fact that section thirteen of the Radio Act commands it to refuse license renewal to any company "finally adjudged guilty" of violating the antimonopoly laws. Robert Mack

of the *Consolidated Press* described the latest development as follows:

Months and possibly years of litigation now face the Radio Corporation of America in the delicate situation involving possible cancellation of more than 1,400 radio licenses held by its operating subsidiaries.

It appeared less than three weeks ago that this case, considered the most important from the standpoint of possible consequences ever to develop in radio's short history, had been closed. On June twenty-four the Radio Commission, after weeks of deliberation, gave the RCA a clean bill of health, holding that Section 13 of the radio act covering antimonopoly violations did not require it to cancel the licenses of these companies, representing one-fourth of all outstanding in this country. It was a victory for the RCA, and the litigation before the Commission ended.

The case, however, was carried into the courts by the *Milwaukee Journal*, operating station WTMJ, reopening the whole controversy. There is a possibility that the Court of

Appeals, after it reconvenes next fall, will throw out the entire case on technical grounds, but if that does not happen it seems certain the issue will eventually get to the Supreme Court of the United States for final adjudication. The road to the nation's highest tribunal, legal experts state, will take at least a year, perhaps two or three, to traverse.

While the Commission's decision absolving the RCA of violation of Section 13 came as a surprise, the action of the *Milwaukee Journal* came as an even greater jolt. WTMJ is an applicant for the 870-kilocycle channel held by

Wisconsin carries on—Decisions of the Radio Commission are no more popular in the educational than they are in the commercial world. While the RCA-*Milwaukee Journal* dispute received more publicity, the case of WHA and WLBL versus the Commission was none the less significant in a consideration of education's progress in radio. On the one hand, if the Radio Corporation is rightfully divested of its communications' licenses because of obvious tendencies to monopoly, there will then be more room for broadcasters without something to sell; on the other hand, if a court overrules the decision of the Commission denying the two Wisconsin state-operated stations the right to unite in service of the people, there will then be a substantial precedent encouraging other all-state educational broadcasting service.

WHA, it will be recalled, is the station of the University of Wisconsin,

while WLBL is the station of the Department of Agriculture and Markets of the State of Wisconsin. These two sought a license to consolidate with sufficient power to permit programs sponsored by agencies of the state government to reach citizens in all parts of the state. Sustaining the findings of Examiner Elmer W. Pratt, the Commission denied the license. In its opinion the Commission contended, with medieval perspicacity, that "radio is not essential in the dissemination of education."

Not thus easily discouraged, Wisconsin has carried its case to the Supreme Court of the District of Columbia. John W. Reynolds, attorney-general of Wisconsin, filed notice of the appeal in the following words:

God Give Us Men!

JOSIAH GILBERT HOLLAND

God give us men! A time like this demands
Strong minds, great hearts, true faith, and ready hands;
Men whom the lust of office does not kill;
Men whom the spoils of office cannot buy;
Men who possess opinions and a will;
Men who have honor; men who will not lie;
Men who can stand before a demagogue
And damn his treacherous flatteries without winking;
Tall men, sun-crowned, who live above the fog
In public duty and in private thinking;
For while the rabble with their thumbworn creeds,
Their large profession, and their little deeds
Mingle in selfish strife, lo! Freedom weeps,
Wrong rules the land, and waiting Justice sleeps.

WENR and WLS, both in Chicago, the former station being operated by the NBC, while WLS is indirectly affiliated with it. It opposed the renewal of RCA licenses at the hearings held before the Commission, claiming that Section 13 commanded the Commission to refuse renewal.

The RCA itself is represented as welcoming the new litigation. The fact that the case now is in litigation probably will soften congressional reaction to the Commission's decision in favor of RCA at the coming session of Congress.

Senator Dill, Democrat, of Washington, and Representative Davis, Democrat, of Tennessee, co-authors of the radio act, criticized the Commission severely following its action. They said that when they wrote Section 13 it was meant to apply to just such a judgment as grew out of the RCA tube litigation involving monopoly, and they have promised fireworks on the subject when Congress convenes in December.

Please take notice that the University of Wisconsin (WHA) and Department of Agriculture and Markets of the State of Wisconsin (WLBL) appeals from the decision of the Federal Radio Commission in the above entitled action, Docket Number 984, filed June 26, 1931, for the following reasons:

That the Federal Radio Commission erred in finding:

1. That the applicant stations have not made full use of their respective assignments.

2. That the present location and assignments are such as to enable each of them to render good radio broadcasting service over a substantial part of the State of Wisconsin.

3. That the granting of this application would work a violation of Section 9 of the Radio Act of 1927, as amended by the act approved March 28, 1928.

4. That public interest, convenience, and/or necessity would not be served by the granting of this application.

What price injunctions?—Should the University of Wisconsin meet with the same fortune that greeted the University of Arkansas in a recent decision of the federal district court at Little Rock, Arkansas, considerable progress will have been made in the right direction. Tracy F. Tyler, executive assistant and research director of the Committee, describes the Arkansas situation in the following words:

Another instance of the unfair treatment received by certain educational stations at the hands of commercial stations came to light recently when the federal district court of Little Rock, Arkansas, granted an injunction sought by station KUOA of the University of Arkansas against KLRA, a commercial station of Little Rock.

These two stations had been operating on the 1390kc channel with a license issued by the Federal Radio Commission which provided equal time division. Because the university station was not using all its shared time, it concluded a three months' agreement with KLRA, permitting the latter to broadcast on the unused time of KUOA. A clause, providing that the agreement could be terminated on thirty days' notice, was duly invoked by the university, which proposed to renew its broadcasts on the old arrangement of equal time division. KLRA refused to comply with this request and notified KUOA of its intention to continue use of all time except twelve or fifteen hours per week reserved by the university in its temporary agreement.

University authorities appealed to the Federal Radio Commission and were told:

That the two stations were to share time equally, agreeing mutually on definite hours of broadcasting;

That if an agreement could not be reached, a statement to this effect was to be filed with the renewal application, and the case would then be set for hearing;

That, meanwhile, the stations should continue to operate on the schedule previously agreed to and filed with the

Education by Radio

The National Education Association believes that legislation should be enacted which will safeguard for the uses of education and government a reasonable share of the radio broadcasting channels of the United States. — Resolution adopted by the Representative Assembly of the National Education Association at its Sixty-Ninth Annual Convention in Los Angeles, California, July 3, 1931.

Commission, and not on the temporary schedule agreed upon by the two stations.

The commercial station still refused to allow the University to use the time given it by the Commission, which, in turn, refused to act until November first when it considered the matter of license renewal. Virtually forced to bring suit against the Little Rock station, the university was granted an injunction which divided time equally and fixed hours of operation.

The National Committee on Education by Radio welcomes this decision as an example of the tendency on the part of the courts to do justice to educational stations, but deplors the fact that present radio law makes it possible for a publicly-owned station, operating solely in the interests of the people of a great state, to be forced into expensive litigation to protect its rightful share of broadcasting time.

Berlin and Baireuth—With considerable shame one realizes that it is more than likely that the United States is the only country in the world that forces education into court to secure a place on the air. Other countries, *au contraire*, have restricted commerce on the air. First place is given to informative, cultural programs, which, in the United States, are incidental to salesmanship.

Armstrong Perry, specialist in education by radio, sailed for Europe early

in August to make extensive inquiry into the success of education by radio abroad. During a three months' visit, he plans to interview the representatives of cultural radio in all Continental countries and Great Britain. An index to the position adopted in Germany regarding commercial radio was revealed in the following cablegram received August eighteenth at Committee headquarters:

ALL GERMAN STATIONS COMBINED GIVE ONLY TEN MINUTES DAILY TO ADVERTISING AND LISTENERS DEMAND SHORTENING THAT PERIOD STOP GOVERNMENT CONTROL INSURES SATISFACTORY EDUCATIONAL AND ENTERTAINMENT PROGRAMS WITH ASSURED FAIR PROFIT TO BROADCASTING COMPANIES

Mr. Perry's statements are confirmed in an article which appeared in the *New York Times* the day after the cablegram was received, describing the traditional performance of *Tristan and Isolde* at Baireuth. The painstaking, spare-nothing manner in which famous operas are brought to the German people cannot but strike a responsive chord in the hearts of discriminating American people. The *Times* article follows:

Baireuth, Germany, Aug. 18—The performance of *Tristan and Isolde* here today was broadcast to three continents, opening a new chapter in the history of Baireuth with the breaking of old tradition.

The painstaking preparations had included repeated tests during rehearsals to obtain the least deformed reproduction, the Munich broadcasting station finally recording the transmission phonographically and comparing the records with the score, providing against faulty sound elements.

From four microphones, two each on the stage and in the orchestra, the performance was transmitted over an amplifier to Munich, which transmitted it to Western Germany, Belgium, France, Switzerland, England, and Berlin, whence it was sent on eastward to the Balkans and by short-wave sender to a hundred senders in the United States.

All Germany listened in for the exceptionally fine reproduction, the high quality of which was due partly to the fact that all other broadcasting thruout the country stopped during the performance.

Resolutions—That such worthwhile broadcasts are appreciated is evidenced in the resolutions adopted by the World Federation of Education Associations, meeting at its fourth biennial conference, Denver, Colorado, July 27 to August 1, 1931.

The W. F. E. A. records its appreciation of those governments which use their radio broadcasting facilities for the education of their citizens, and urges all national governments to include a representative of their respective education administrations in the delegations sent to the International Radio Convention to be held in Madrid in 1932, in order that these official

representatives of public education may participate in the formulation of the regulations which will govern the distribution and use of radio facilities thruout the world.

The W. F. E. A. recognizing the possibilities of promotion of international understanding and goodwill thru such agencies as the radio and the cinema, hereby requests the directors to appoint a committee to study the best utilization of these agencies for this purpose, to make recommendations to this effect, and to cooperate in organized efforts having this end in view.

That in view of the possibilities of its use in developing greater mutual understanding and friendliness among nations, the W. F. E. A. commends the study of the feasibility of international radio broadcasting of educational programs for school children of other nations, to the national educational authorities, and to those in charge of radio broadcasting in each country in the hope that a plan of cooperation to this end may be worked out.

Vienna—A second cablegram was received from Mr. Perry on August twenty-four. Its own eloquence precludes the necessity of elaboration here.

DURING WORST DEPRESSION IN MODERN HISTORY AUSTRIAN GOVERNMENT FROM THIRTY CENTS MONTHLY LICENSE FEE ON RADIO RECEIVERS INCREASES REVENUE MATERIALLY WHILE BROADCASTING COMPANY PAYS TWELVE PERCENT ANNUAL DIVIDEND AND GIVES GOVERNMENT HALF OF NET INCOME AND HAS SAVED ENOUGH TO ERECT NATIONAL HEADQUARTERS BUILDING WITHOUT BORROWING STOP PROGRAMS EXCELLENT STOP AUSTRIAN AND CZECHOSLOVAKIAN GOVERNMENTS AND LISTENERS WILL NOT TOLERATE BROADCAST ADVERTISING STOP WORLD RADIO CONFERENCE OVERWHELMINGLY FAVORS EXCLUSION OF ADVERTISING STOP AMERICAN RECEIVERS EXCLUDED FROM CZECHOSLOVAKIA BY RCA CONTRACT WITH EUROPEAN MANUFACTURERS

The World Radio Conference, to which Mr. Perry refers, was held in Vienna, August 20-22, under the auspices of the World Association for Adult Education. Levering Tyson, director of the National Advisory Council on Radio in Education in the United States, was chairman of the conference.

Legal racketeering?—An interested observer present at the Vienna conference was Mr. Louis G. Caldwell, chairman of the committee on communications of the American Bar Association. The committee's report, published soon after Mr. Caldwell had sailed for Europe, vehemently denounced the Fess bill for the reservation of fifteen percent of the radio facilities of this country for educational broadcasting. To the extent that the report represents the opinions of Mr. Caldwell, such denunciation was to be expected. Perhaps no other lawyer in the United States accepts larger retainer fees from commercial broadcasting companies than Mr. Caldwell.

The report foresaw "havoc" created and "wreckage" of the "finest broad-

casting system in the world," if the Fess bill was passed. It is not unnatural for Mr. Caldwell to subscribe to such statements, but this question should be answered frankly: Is it ethical practice or is it legal racketeering for a man with a selfish interest at stake to use a great

WE FAVOR legislation reserving to education a reasonable share of radio channels. The Association commends the efforts of the National Committee on Education by Radio in behalf of the freedom of the air.—Resolution adopted by the National Catholic Educational Association at its twenty-eighth annual convention, Philadelphia, June 22-25, 1931. It was introduced by the Rev. Bernard P. O'Reilly, of Dayton, Ohio, chairman of the College Department.

civic organization like the American Bar Association to promote his gain contrary to the public good? The report will be discussed in open session at the annual meeting of the Association, September sixteenth, at Atlantic City.

Texas talks—Gifts unsolicited are cherished more highly than favors glibly asked and received. The National Committee on Education by Radio deeply appreciates the interest in its work expressed in a letter from Judge William Hawley Atwell of the United States District Court of Dallas, Texas, to Joy Elmer Morgan, chairman of the Committee. Judge Atwell has kindly consented to publication of the letter in *Education by Radio*. The Committee has reason to believe the letter fairly well represents a growing feeling among thinking persons who realize the need of **DOING SOMETHING** about radio in the United States. Judge Atwell wrote:

I am thoroly openminded as to methods, but it seems to me that the channels of the air should be definitely apportioned by congressional act.

Private business—and no one would either speak or think unkindly of it—is thoroly wide awake to the advantages of the modern radio. Entree is bidden into nearly every home by the installation in that home of the receiving set. A voluntary apportionment of the channels of the air among those who broadcast for immediate profit, to the exclusion of the people's common agent which should treat of the people's government and the people's education, is hardly wise, when the same people are worship-

pers of and preservers of so many other forms of liberty.

The alertness of business to the advantages of all sorts of power, whether electric, air, water, forests, or whatnot, should not be permitted to lull into more contented sleep the servants who are on guard, supposedly, for the people at large.

Bellowing—Judge Atwell, obviously, is not among the "fourteen million on the whole wellsatisfied set owners whose wrath would be provoked if Congress enacted legislation changing the basis of the American broadcasting system."

That quotation is from an address by Henry A. Bellows, vicepresident of the Columbia Broadcasting System, delivered at a recent meeting of the National Association of Broadcasters held in San Francisco.

Excerpts from Mr. Bellows' address, following close after publication above of Judge Atwell's letter, places side-by-side the reasoning of a straight-thinking, unprejudiced, and disinterested mind, and the conjurations of a mind warped by too long association with the dollar sign. Mr. Bellows said, in part:

Remember that back of all the efforts of special interests to secure wavelengths for themselves is a tremendous amount of pressure on Congress to destroy commercial broadcasting entirely. I don't think I need tell you where most of this pressure originates. Competing media, having tried vainly to discredit broadcasting as a profitable method of advertising are now trying to strike deeper, and to create a sentiment in favor of a tax-supported, advertising-free broadcasting system.

I do not think Congress will, for the present anyway, enact legislation changing the basis of our broadcasting service. Such action would instantly provoke the wrath of fourteen million on the whole wellsatisfied set owners. The danger lies, not in legislative overturning, but in legislative chiseling. Take away a frequency here, a frequency there, crowd the survivors a little more closely together, put seven stations on a wavelength where now there are four, this is the program of the enemies of American broadcasting. More than this, disgust and weary the listeners by forcing them to listen to hours of propaganda, dreary lectures, interminable reports—this is the best possible way to kill off public interest in broadcasting, and to lessen its value commercially.

H. L. Mencken—Editor, author, newspaperman, Mr. Mencken has become the American symbol of iconoclasm, his caustic pen hitting straight-from-the-shoulder. While he has acquired many enemies, all of them respect his pungent, vigorous writings, his abhorrence of minced words. In spite of all recriminations heaped upon him, his followers number thousands. What he says of a subject of current interest, therefore, is regarded as news by journals thruout the country.

Subscribers of the *American Guardian*, a newspaper of Oklahoma City, Oklahoma, might have read these Menckonian paragraphs over their coffee cups on August seven:

The contrast between the American air program . . . and the English program is heartbreaking. In proof whereof I turn to the announcement of the *BBC Talks* (British Broadcasting Company, the national radio monopoly) for April-July of this year.

What strikes one at once is the high competence of the speakers. The man who discusses music every Friday is not a banal newspaper concert-trotter, but Ernest Newman, the best music critic now living in England, and perhaps the best in the world. The theater is not handled by a press-agent, but by James Agate, a recognized authority, and, what is more, an honest man. And the reviewers of the new books are not advertising agents employed by publishers, but Desmond MacCarthy, an excellent critic, and the Hon. Mrs. Sackville-West, a competent novelist.

Many of the best books that have come out in England of late have been made up of just such radio talks. I offer as examples Sir James Jeans' *The Stars in Their Courses*, and Dr. C. Leonard Woolley's *Digging Up the Past*.

Both books now are being read very widely in the United States, and deservedly so, but nothing even remotely comparable to their contents is ever heard on the air on this side.

Instead, we have an almost unbroken series of propaganda harangues by quacks with something to sell, and of idiotic comments upon public events by persons devoid of both information and ideas.

Two of the most valuable and interesting of a series of talks are devoted to foreign languages. Every Monday at 8PM there begins a half hour's lesson in French, and every Wednesday at the same time there is one in German. Suitable textbooks are recommended. The French course has now gone so far that "listeners who are completely ignorant of French would be well advised not to join at this stage." Hundreds of thousands of persons listen in on these courses, and they have been widely imitated on the Continent. In Austria one teacher of English by radio is said to have 150,000 listeners.

The BBC is a government agency, and is supported by a small annual tax on radio receiving sets. It sends nothing shabby, cheap, or vulgar onto the air. There is no bad music by bad performers; there is no sordid touting of tooth-pastes, automobile oils, soaps, breakfast foods,

soft drinks, and patent medicines. In America, of course, the radio program costs nothing. But it is worth precisely the same.

And Others—H. L. Mencken is not the only person in the United States who feels that radio by the British plan is superior to radio as it is known in this country. Radio development in Amer-

The Issue

Shall special interests have control and censorship of all radio channels or shall the officials elected by the people to administer civic affairs have the right to use some of them?

ica has followed customary commercial paths which mark the growth of any new industry here. An Englishman looks at growth from an angle different than that provided by physical size alone. To him growth means mental and spiritual size. He knows the treacherous sand which undermines a physical foundation, and builds his radio house on rocks represented as well by an appeal to culture as pleasure.

Radio programs in England are superior to those in the United States if we accept the testimony of Judge Charles N. Feidelson, associate editor of *The Age-Herald*, Birmingham, Alabama, who recently returned from a European trip.

Judge Feidelson's statement, which first appeared in *The Age-Herald*, was reprinted by *The Christian Science Monitor*. It is as follows:

It would be difficult to think of a more direct contrast than that which exists between the British and American broadcasting systems. In England, the BBC is supported by funds obtained thru taxes on radio sets, and that means that it is at least a semi-public enterprise. In the United States, the chains and the local stations rely on revenue from advertising and are subject to only the mildest sort of regulation from federal authorities. Even those of us who have no relish for government opera-

tion must, in the light of realities, wonder whether radio over here might not be socialized with beneficial results.

Perhaps I can make my point clear by offering the following comparison of British and American programs broadcast on October 1, 1930:

LONDON ALTERNATIVES

PM

- 7:45 A baritone sings.
- 8:00 Concert or German language talk.
- 8:30 Dance orchestra.
- 9:20 A war play.
- 9:40 Weather forecast; general news bulletin.
- 9:55 "The Imperial Conference," by the Prime Minister.
- 10:05 Dance orchestra.
- 10:10 Financial reports.
- 10:20 Orchestra.
- 10:30 Hotel band from Manchester.

NEW YORK ALTERNATIVES

- 7:45 Entertainers, or jazz orchestra.
- 8:00 Dramatic sketch, or a yeast advertisement.
- 8:30 An oil concert, or radio tube singers.
- 9:00 A bond house program, or a symphony orchestra.
- 9:15 A mop and oil advertisement.
- 9:30 A soap hour, or a cigarette hour.
- 10:30 A soft drink program, or a male quartet.

It is, of course, unthinkable that the situation in America will ever be so free from puffery as it is in Great Britain. But one has to see some such deadly parallel as the above to realize to what an extent we are deluged with a blatant crying of wares. One has to see some such parallel, furthermore, to be convinced that it is possible to have considerable variety without indulging in the cheap vaudevillism which infects the air in this country, that it is possible to meet many needs and diverse appetites, while striking the popular note and avoiding "highbrow" austerity.

The comments of Mr. Mencken and Mr. Feidelson are not to be taken in any casual manner. Each holds an important position in the social life of the United States—the former, editor of *The American Mercury*; the latter, associate editor of *The Age-Herald*, one of the most influential journals in the South. The reactions of men of their character have a barometric significance, warning of approaching storm clouds hanging over the American radio horizon.

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- J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
- Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
- H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Advertising Invades the Schools

THE COMMON SCHOOLS belong to the people. They are managed by the people thru carefully chosen representatives. They are in charge of teachers licensed by public authority. They are financed by public taxation. In America they have been kept remarkably free from corrupt political influences. The exceptions have merely proved the rule that the schools shall be run purely on the basis of efficiency and public interest. The best people of the community have made large sacrifices to serve as members of Boards of Education.

Every effort to misuse the schools for selfish ends is a menace to their integrity and success. These efforts have been particularly pronounced during recent months. Radio advertising both direct and indirect is making great efforts to get into the schools. Of course it will be kept out of the schools just as advertising has been kept out of textbooks. But just now teachers, parents, and citizens need to be alert to protect the classrooms from this vicious tendency.

The appended correspondence explains itself. Such projects may be undertaken with the best intentions in the world. School people may sometimes agree to them. Even whole school systems may sometimes make this mistake, but experience is a forceful teacher and sooner or later the school comes to realize that it is distorting truth, giving a false sense of values, giving special favors to privileged interests, or sacrificing its freedom to operate in the interest of all the children. The National Committee on Education by Radio will appreciate having its attention called to other examples of this effort to use the schools for special commercial projects.

Louisville, Kentucky, June 23, 1931.
 Mr. Joy Elmer Morgan, 1201 Sixteenth Street, N. W., Washington, D. C. Dear Mr. Morgan: This will be a long letter, but I wish you might take time to give it due consideration for the reason that it may affect education not only in the whole state of Kentucky, but also in southern Indiana.

The Courier-Journal and *The Louisville Times* have been dedicated by their present publisher to unselfish service to the state of Kentucky and the rest of their territory. We promote the National Spelling Bee, the Kentucky division of the National Oratorical Contest, the State-wide Essay Contest for vocational agricultural pupils and presentation of effort medals to hardest working pupils in the schools of Louisville and immediate vicinity.

I am given to understand that our newspapers are spending approximately \$25,000 a year to obtain the grades of our one thousand carriers in Louisville, Jeffersonville, and New Albany with a view to keeping no boys on our routes who do not keep up their school work satisfactorily. Our carriers who do the best school work are rewarded at the end of the school year with cash prizes for scholarships.

In educational rating Kentucky generally is ranked as worse than fortieth among the forty-eight states of the Union. There are definite reasons for this, which our papers probably will be years in overcoming.

The Courier-Journal and *The Louisville Times* own the largest radio station in the state. It is WHAS, which affiliates with the National Broadcasting Company network. Just because Kentucky is fortieth or worse in general education is no reason why Kentucky should not be first in radio education and if not first, at least close to the top.

It has occurred to me that our radio station should get in touch with you and the facilities of the National Education Association and with such organizations as might give constructive advice with a view to organizing our programs so that they may be used extensively in the schools. The first step toward this end was taken two or three years ago with the establishment of a remote control station at the University of Kentucky in Lexington, eighty miles from Louisville, from which WHAS radiocasts regularly, and by means of which the University of Kentucky has been able to increase the value

of its extension department and to arouse more interest in its extra-curricula activities.

I have written every city and county school superintendent in Kentucky and in twenty-six counties of southern Indiana asking them the number of elementary and the number of secondary schools in their system, the names and addresses of schools having radio sets, of schools not having radios but easily accessible to electric light lines, and of schools not having radios but which are too remote from power lines to have electric lights.

I asked whether it was the belief of superintendents that they could work in radio programs on designated hours into their curricula for elementary and secondary schools, whether or not they believed the people of their sections would be sympathetic with placing a radio receiving set in every school, and for their suggestion as to the subjects and programs that should be featured as of most value to their schools.

These questionnaires have a twofold purpose. One is to get at the situation as to the number of schools having radio sets or exact number of schools that do not have radio sets. The other purpose is to obtain information and suggestions and possibly new ideas as to what might constitute valuable radio education programs. This information is only general, so we may get an idea as to our situation. I thought later we might prepare a more comprehensive questionnaire regarding suggested programs and ask for new ideas of all the school principals in Kentucky and southern Indiana.

As soon as we get this information in good shape and have your cooperation, no doubt we can take our findings and the complete set of suggestions obtained from all sources to the Kentucky and the Indiana departments of public instruction and to the University of Kentucky and University of Indiana with a view to working out a comprehensive plan for radio education.

The early answers to our questionnaire indicate that many sets will have to be placed in schools not now provided

THE SAFETY OF THE STATE IS WATCHFULNESS IN THE CITIZEN
 —Legend over the new capitol in Lincoln, Nebraska

with receiving facilities, if radio education programs are to be worked out for schools generally. There is a possibility that *The Courier-Journal* and *The Louisville Times* may be able to offer each school district in this state a method of obtaining a highclass, suitable radio receiving set for their schools. It always has been the policy of these newspapers in offering prizes of any kind to give those of the highest quality and I realize that it will be most essential to offer sets that have good tone quality and volume. Possibly we might offer the boys and girls of a school district a set for turning in so many new subscriptions to either of our newspapers. This could become a community project in which all the communities might be interested. If this plan is adopted it will be because our newspapers are interested in placing a set in as many schools as possible, and there would be no compulsion, of course, for any school to obtain its set thru our subscription plan. This would be the most practical way for many of the school districts to obtain their sets.

While there would be a selfish purpose in our building our subscription lists higher, I want you to know that *The Courier-Journal* and *The Times* are not fighting for a tremendously increased circulation at this time and our offer would be as altruistic and public-spirited as it would be selfish. Of course, we are interested as dominant newspapers in building goodwill, and if you wish to regard our ambition to obtain goodwill as selfishness, this program to that extent might be called selfishness.

On the other hand what three greater forces could be mustered into a cooperative plan to work for a state's progress than the school, the only two dominant newspapers of general circulation in a great state, and the oldest, biggest, and most powerful radio station of the state?

Let me give you an example of Kentucky's situation. In Jackson County there are seventy-two schools with \$54,000 income from state and county taxation to pay for administration, teachers' salaries, new buildings, equipment, and supplies. This is an average of \$667 annually for each school. How can we expect anything in the way of citizens as products of the schools in that county? Let's assume that in each of these seventy-two schools we might be enabled to place a radio set.

If it were possible to give an hour a day to skilled professors in such subjects as art, picture setting, music, geography, history, reading, story telling, citizenship,

homemaking, (I am reading to you from some of the suggestions on our educators' answers to questionnaires) and health education, would not the result in those seventy-two schools be much better at the

FRIENDSHIP, Maine, August 12, 1931. My dear Mr. Morgan: Your reply to Mr. McWain of Louisville is in my opinion exactly right and in line with the policy that ought to be followed with reference to all commercial and promotional enterprises of the radio.

Nothing should be allowed to come in over the air that would not be approved if presented by the teacher or in textbooks. The report of Mrs. Dorsey in California is splendid. Sincerely yours, Randall J. Condon. [Former superintendent of schools, Cincinnati, Ohio, and president of the Department of Superintendence of the National Education Association, 1926-27.]

end of the year than as though the pupils were left entirely to the instruction of teachers who have positions in those \$667 a year schools?

There also is another important angle to consider. I think I am safe in assuming that in many of Kentucky's remote counties there are no radio sets. Supposing we could announce in a country paper a week in advance that Hoover or William John Cooper or some noted clergyman were to speak at 7:30 or 8 o'clock on a given night a week later, what would there be to prevent the school's being made the social and civic center for the school district where patrons might go at that hour and listen to the message these leaders might have?

Probably there are scores of angles that I have not touched, but I wish to request you to give our condition some thought and to make to me such suggestions you might have for a list of subjects and schedule for a series of radio education programs. If you have no objection, there is no doubt but what a letter of indorsement from you for our objects along this line might prove helpful later in getting the set-up arranged. This program I realize is a tremendous undertaking, and all the suggestions you can give us for a series of radio education hours will be

greatly appreciated. If you have any suggestions for a better development of the plan than the one I have outlined, it will be welcomed, because what we are seeking is a broad survey that will give us intelligent information.

No doubt you also will know one or two persons or organizations to whom I might write and set forth the plan as I have to you and in return receive valuable information and suggestions for the launching of our program. It is probable that you know of organizations or persons who have undertaken similar work and have the advantage of experience in radio educational programs. Their cooperation would prove helpful to us, and I should like the names and addresses of any such persons or organizations.

Anything you can do or recommend will be greatly appreciated. Very sincerely yours, Donald McWain, promotion manager, *The Courier-Journal*, *The Louisville Times*.

Los Angeles, California, July 1, 1931, Mr. Donald McWain, Promotion Manager, *The Courier-Journal*, *The Louisville Times*, Louisville, Kentucky. My dear Mr. McWain: Mr. Belmont Farley has given me your letter of June twenty-three, in which you propose that radio station WHAS, owned by your newspapers, shall engage in an education service to the rural schools, for which you ask our indorsement.

There are several considerations involved in such a proposal which we cannot ignore.

1. That the schools are public agencies, not to be used for commercial advertising or promotion purposes. The fact that the sponsored programs are fine in themselves does not change the situation. An able committee in California has recommended a law to shut all such material out of the schools.

2. The management of education under our system is a state function. As a national agency, we are not in a position to attempt to influence educational policies in any state. That is a matter for your state educational authorities to work out.

3. The development of educational programs—if they are to be more than mere "stunts," which may do the cause more harm than good, is a difficult task—more difficult by far than entertainment. It requires careful planning and sustained effort, which school people and appropriating bodies will not be willing to undertake without the assurance of some such permanent arrangement as inde-

pendent channels for education would assure.

There are many attempts just now to use the schools for selfish, commercial purposes. Some of these are very subtle, but they all have the same tendency—to subvert the schools from their basic educational objectives and to destroy their integrity. Many of the proposals from commercial sources to reach into the schools are undoubtedly made with the finest intentions, but the school is not in a position to discriminate between one commercial proposal and another. It is a public institution, whose obligation is to serve the entire community with an unbiased educational program.

We note that you propose to give radio sets as prizes to schools in return for the service of children in securing subscriptions. This may be good promotion, but it is bad education. "Prizes" are seriously questioned by the highest educational authorities, and the use of school children by outside commercial agencies would be condemned by the best educational thought of the country.

I shall be in Washington the latter half of July and would be glad to go over this matter with you further, if you wish. Very truly yours, Joy Elmer Morgan, Chairman of the National Committee on Education by Radio.

THE FOLLOWING STATEMENT WAS ENCLOSED WITH THE ABOVE LETTER:

The attempt to misuse the schools for selfish or commercial purposes has become a persistent nationwide campaign. Unscrupulous advertisers, having failed to accomplish their purposes thru other

channels, are looking with longing eyes at the children.

The California Commission for the Study of Educational Problems, under the able chairmanship of Mrs. Susan M.

SACRAMENTO, California, August 27, 1931. Dear Mr. Morgan: I believe your letter very adequately states the situation in which schools find themselves. With the local pressure of newspapers, radio dealers, and commercial interests, our school administrators are going to need a forceful and concerted backing to prevent embarrassment and missteps.

Our parent-teacher groups should be made aware of this problem in order to help in preventive work. Good wishes for a continuation of your service and congratulations on your cleancut, definite stand. Cordially yours, Mrs. Hugh Bradford, president of the National Congress of Parents and Teachers.

Dorsey, has met this issue squarely in Vol. I of its most able and thoro report which was submitted to Governor C. C. Young on January 5, 1931. This report contains the following statement:

Radio advertising invades schools—in the same way, it has always been a fundamental principle of American education that the schools must protect their chil-

dren from exploitation; that no interest shall be permitted directly or indirectly to advertise in the classroom. The commission regrets to report that this principle is being flagrantly violated in many California schools and that the regular work of the children is being interrupted, largely because modern methods of advertising have insinuated themselves into the school system.

By donating to the public schools fine radio and motion picture programs, and cleverly enlisting support therefor from teachers, parents, and school officials, a number of California business firms today are inducing the schools to grant them advertising time in the schoolroom. The commission is unable to see any practical difference between printing the words "Brown and Company are good merchants" on the blackboard and permitting the words "Brown and Company are making you children a present of this fine program" to be spoken repeatedly in the classroom or to be flashed upon a motion picture screen.

The admission into the schoolroom during school hours of radio and film programs carrying "goodwill" publicity establishes precedents which naturally lead other firms to try to gain admission for their own advertising. Granting one firm such a privilege while denying it to others confers an unfair trade advantage.

The Committee then makes the following recommendations: That by amending Article V, section 3.53 of the 1929 School Code, the introduction into the schoolroom of any radio program or film, however fine its quality, which is so announced or so titled as to gain "good-

Children First

IN THE FACE of danger or disaster on a sinking ship we would strike down anyone who attempted to save himself at the expense of a child. Children come first not only on sinking ships but in our hearts, our homes, our schools, and our churches. They are first. The race can save itself—can lift itself higher—only as children are lifted up. In this unique period of depression, with its extreme want on the one side and its extreme fortunes on the other, many schools are carried down to disaster—their doors closed—their funds cut off. Boards of education and other public officials are often hard pressed financially but they cannot afford to give up the idea of children first. ¶ To do justice by the child it is necessary to do justice by the child's teacher. Teachers have never had full justice. Their salaries have always been low when compared with their training and their heavy responsibilities. They have never been able to maintain the standard of living which the character of their work calls for. We have never given to our American rural communities the leadership of a stable, wellpaid, well-trained teaching profession. Teachers in cities have never received salaries in keeping with the pivotal importance of their service to the community. It is the common school to which we must look for the training in skill and in character to enable us to rise above present conditions. ¶ This is a time when the homes need to keep close to the schools, when every parent needs to realize the human significance of educational service, the value of the teacher's work. It is for the parent to protect the rights of the children. *Let's keep the children first.*—J. E. M.

will" or "name publicity" for its sponsor, or which advertises a sponsor's wares, be forbidden by statute.

That in view of the growing importance of radio and motion pictures as educational media, the legislature authorize the appointment of a special commission to report at the 1933 session how the schools may properly utilize these two new means of public instruction.

From Vol. I, pages 36, 37, 38, 39, Report of the California Committee for the Study of Educational Problems. Sent out by the National Committee on Education by Radio, 1201 Sixteenth Street, N. W., Washington, D. C.

Madison, Wisconsin, August 19, 1931. Dear Mr. Morgan: Thank you for your correspondence with reference to the radio situation. I'm glad you've taken this position. Very sincerely, Edgar G. Doudna, secretary of the State of Wisconsin Board of Regents of Normal Schools.

Raleigh, North Carolina, August 18, 1931. My dear Mr. Morgan: I have your letter of August fourteenth, together with a copy of the letter from *The Louisville Courier-Journal*, a page from the report of the California Committee, and your reply dated July first. I agree most heartily with the attitude expressed in your reply to Mr. Donald McWain.

I am very glad that you are giving some publicity to this kind of thing. It is one of the very difficult problems to keep promotional advertisements out of the schools, and it is well that your Committee is giving attention to it and acting in such a judicious and sane manner. I appreciate your sending me this material. Very truly yours, A. T. Allen, state superintendent of public instruction.

Dover, Delaware, August 19, 1931. Dear Mr. Morgan: I wish to thank you for your letter of August tenth, enclosing Mr. McWain's letter and your reply

thereto. It seems to me that your reply meets the situation exactly. Sincerely yours, H. V. Holloway, state superintendent of public instruction.

Manhattan, Kansas, August 14, 1931. Dear Mr. Morgan: I have your letter of August ten containing a letter from Mr. Donald McWain, promotion manager of *The Courier-Journal* and *The Louisville Times*, and also a letter from the California Commission for the Study of Educational Problems. This is another example of subtle propaganda to which advertisers are resorting, not only in the schools, but in various educational fields.

I am certain that in extension work there is far more of this being done than many extension directors realize. Information is furnished, prizes are given, campaigns are conducted by associations or interests, and these are all invariably for the purpose of creating goodwill by indirect and subtle propaganda. The indirect method is probably more dangerous than specific name advertising. The latter is so obvious that those toward whom the propaganda is directed are on their guard; but the indirect is never so obvious and passes for substantial information. Yours very truly, H. Umberger, director of the extension division of the Kansas State College of Agriculture and Applied Science; member of the National Committee on Education by Radio

Montgomery, Alabama, August 25, 1931. Dear Mr. Morgan: I have looked over with interest your recent letter to Dr. Harman, our state superintendent, in which you enclosed material concerning efforts in Kentucky to use the radio for advertising purposes. I wish to thank you for the material sent me and your helpful suggestions. With all good wishes, I am, Very truly yours, W. L. Spencer, director of secondary education, Department of Education.

Madison, Wisconsin, August 20, 1931. Dear Mr. Morgan: I have your

letter of August fourteenth, together with the enclosures, and I wish to congratulate you on your answer. I think it covers the situation very well. Sincerely yours, John Callahan, state superintendent, Department of Public Instruction.

Akron, Ohio, September 3, 1931. Dear Mr. Morgan: I wish to express my full indorsement of the course you have followed in connection with the proposal made to you by the promotion manager of two of the Kentucky newspapers. It is of the utmost importance that the complete integrity of the schools be maintained. I hope you will hold fast to your resolve. Yours very cordially, Thomas W. Gosling, superintendent of schools.

Carlinville, Illinois, September 3, 1931. Dear Mr. Morgan: Thank you sincerely for the copy of the McWain letter which you sent me. I agree with you that some of the advertising people are the greatest "moochers" on earth, and we must be on our guard constantly against their insidious plans. I have read with interest the action by the California Association in regard to protecting their children from exploitation. I shall send this sheet on to the chairman of our resolutions committee. Yours very truly, R. C. Moore, secretary of the Illinois State Teachers Association.

Salt Lake City, Utah, September 1, 1931. Dear Mr. Morgan: I have been reading your reply to the letter of Donald McWain, containing a proposal to engage in a certain educational service to rural schools. It seems a very thoughtful reply. Considerations involved in such proposals call for an exercise of diligence in order to keep our schools free from commercial advertising or promotion. I note that you will likely have an opportunity of discussing this matter face to face with Mr. McWain. Very truly yours, C. N. Jensen, state superintendent of public instruction.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

- Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
- R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
- J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
- Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
- James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
- H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Will There Be Freedom of the Radio?

KENNETH M. GAPEN
University of Wisconsin

ARE WE who as a people are always justly insistent upon the rights to freedom of speech and freedom of press, to be denied freedom of the radio?

This question faces us today whether we like it or whether we recognize it. For we realize that just as freedom of speech and freedom of the press have been bedrock foundations of this great democracy, just so freedom of the radio may become more and more essential to our progress as a free people.

Freedom of speech, freedom of the press, and freedom of the radio can be secured only when the use of the platform is not denied; when the right to publish is guaranteed and protected; and when a sufficient portion of the broadcasting opportunity is available to educational and public agencies without hindrance or commercial control. Education which is under commercial control—no matter how beneficent—is not independent, does not make for independence nor for an independent people.

It is entirely natural, then, that education should be asking for its rightful place on the radio. Its claims are being disputed, however, thru a wide range of technicalities, largely by those who would acquire the use of the air for private advantage, and who, for the present, are willing to make many professions of high intent and alluring promises of service.

Radio development, always fast and sometimes furious, has made rapid strides in respect to its use in the educational field. More and more we take for granted the use of radio as a part of our educational system, as a method of disseminating helpful information for the various agencies of the state, and as a general informational medium. It is no longer difficult to envision radio as a part of the state educational machinery. This assumption leads naturally to the very proper claims being made for education for the right to a certain percentage of the ninety radio channels now

set aside for broadcast purposes in the United States. Finally, this all seems fundamental to our theory of state rights.



JAMES N. RULE, state superintendent of public instruction, Harrisburg, Pennsylvania, who recently accepted appointment as representative of the National Council of State Superintendents on the National Committee on Education by Radio. Dr. Rule takes the place made vacant by the retirement of Dr. J. L. Clifton from the committee upon expiration of his term as director of education of the state of Ohio.

The problem of state rights and the question of what is the business of the state have been the cause of much argument and debate for many years. Until late years, the rights of a state, as separate from the sovereign powers of the federated union, have been the central plank in many political platforms.

"State rights" is a term generally used to denote those governmental rights which belong to the individual states of a federal union, there being a certain sphere of authority in which these states may act without interference from the

central government. Thus, when our Union was formed by the original states, certain rights were reserved by the states which the central government was bound to respect.

Perhaps the most fundamental idea in the whole American system of government has been to confer upon the federal government only those relatively few specified duties of concern to the whole country in which uniformity is necessary, and to reserve to the states all other powers. This has been called America's greatest contribution to the science of government.

In the Constitution, the right of jurisdiction in all matters not given to the national government is preserved for the states. This right has existed ever since the formation of the Union, and it likely will survive as long as a federal form of government is maintained.

If, after long and patient trial and experiment, it is found that the states are incapable of properly exercising a power reserved by them, then the power should be transferred to the federal government.

States choose to use radio—What is the business of a state? The business of a state may include the promotion of health, education, commerce, agriculture, and service to the people of the state in other ways of public concern. The power to govern, control, and regulate public school systems and educational facilities is one not delegated to the federal government by the Constitution, nor prohibited by it to the states. It is, therefore, reserved to the several states. Since a state has this power, it follows that it also has the right to make use of such facilities as it may choose to carry out efficiently its educational plans and programs. Among such facilities the radio is the newest way, and may prove to be one of the most efficient ways of reaching the public.

The Conference on Radio and Education which met in Chicago on October 13, 1930, recommended that Congress

Shall special interests control and censor all radio channels or shall officials elected by the people to administer civic affairs have the right to use some of them?

enact legislation which would permanently and exclusively assign to educational institutions and to educational agencies of the state fifteen percent of all radio broadcasting channels which are, or may become, available to the United States. The conference desired that these channels be so chosen as to provide satisfactory educational service to the general public.

Education wants its rights protected—What the conference wanted, and what states and educational institutions are asking today, is that the rights of sovereign states to a fair share of the radio broadcasting channels be protected for the development of education and other state projects.

Can be allocated within the fifteen percent—Many of us may have questioned the technical possibilities of allocating every state within the quota asked for by the committee on radio education. It may be asked what will happen if one state is granted a wavelength with sufficient power to cover its area effectively? Won't every other state also demand the same thing? And, if they do, is it possible to grant the requests?

With a background of some thirty odd years experience in general radio and transatlantic radio communication, a wellknown radio engineer of sound judgment recently said that in his judgment every state in the Union could be allotted a frequency within the fifteen percent asked, and given enough power and time to enable the state radio station to reach its entire population without interference with other state stations.

It is easily seen that legislation is needed to equalize the situation—freedom of radio is needed right along side of freedom of speech and freedom of press. It would seem that the very right to free speech guaranteed the American public should be expanded to include the use of the radio.

If we are to retain freedom of speech, it would seem desirable and necessary to parallel such right by securing and preserving freedom of radio for the state in which is vested the educational policies of the public and the responsibility of serving the people of the state in an educational way.

Radio as a public utility—Broadcasting has been classed as a utility and was considered as such when the radio law of 1927 was passed. The 1927 Radio Act provides that licenses will be granted to stations only if proposed operations

will promote the public interest. If radio broadcasting is considered a utility, a state educational program should be a leading reason for granting license to a state for a channel of broadcast commu-

Building a Temple

A builder builded a temple,
He wrought it with grace and skill;
Pillars and groins and arches
All fashioned to work his will.
Men said as they saw its beauty,
"It shall never know decay,
Great is thy skill, O builder,
Thy fame shall endure for aye."

A teacher builded a temple
With loving and infinite care,
Planning each arch with patience,
Laying each stone with prayer.
None praised her unceasing efforts,
None knew of her wondrous plan,
For the temple the teacher builded
Was unseen by the eyes of man.

Gone is the builder's temple,
Crumbled into the dust;
Low lies each stately pillar,
Food for consuming rust.
But the temple the teacher builded
Will last while the ages roll,
For that beautiful unseen temple
Is a child's immortal soul.

The NEA Journal, October, 1926.

nication. Service to the public should be sufficient reason for granting more power or an adequate frequency to a state station.

All this means that the business of a state would be seriously and vitally hampered by the failure of certain branches of the federal government to recognize the use of radio by the state in its general educational policy.

Units occupied by educational stations—The educational institutions of the United States and the various state stations together occupy only 23.16 units of the possible four hundred units available to the United States, while two commercial chains alone occupy two hundred and sixty-eight units. About two-thirds of this allotment is given to the National Broadcasting Company and about one-third to the Columbia Broadcasting System.

Someone has said that whoever controls radio will, in the end, control the development of the human race. It is unthinkable that it should be monopolized by private enterprise against education.

A generous and fair division, a just and reasonable distribution are the safeguards to which we must look for freedom of the radio.

Must have power as well as allocation—The question of state rights or

business of a state in regard to radio does not end there. The question is not answered by designating a *frequency* to a state or to an educational institution. The state must have broadcasting *power* to serve its people effectively. It is the business of the state to do anything *effectively* that is *worth* doing for its citizens. Why shouldn't there be an educational quota of power to meet sufficiently the needs of the population? There is a commercial quota for regions or states, and one middle western state has several times its quota centered in one city while surrounding states are held under quota, because of, and in spite of, this excess allotment.

Freedom of the press, freedom of thought, freedom of religion, freedom of speech—actually we have it all by the will of the sovereign people. Perhaps we will have to wait for the will of the sovereign people to give us freedom of the radio. The discovery of radio is like Columbus' discovery of America—it opens up a vast new continent of rights and possibilities. To see that this new gift is used constructively and wisely to promote education, public affairs, and human welfare is the concern of all citizens.

During 1930, as well as during the previous years, committees were appointed by various educational bodies to investigate the possibilities of obtaining power and allocation for education. These several committees, for the most part, have been able only to survey and recommend. Lack of general, nationwide organization has handicapped education in its appeals to the Federal Radio Commission. And, of course, it is theoretically impossible for education to do as one of the chains recently did—buy up two government-granted broadcast licenses for very large sums.

Analysis of non-commercial broadcasting—Following is an analysis of the present non-commercial radio broadcasting situation:

In 1926 there were one hundred and fifty-two non-commercial radio broadcasting stations. The latest manual, issued by the Federal Radio Commission, indicates that there are about seventy-four, less than half the number there were in 1926. In this list of seventy-four non-commercial stations, there are thirty college and university stations (not including agricultural college stations), one high school station, eleven agricultural college radio stations, thirty church, police, educational company,

and miscellaneous non-commercial stations, and two state stations.

The average daytime power of these seventy-four stations is slightly more than 1000 watts, and the total is slightly more than 105,000 watts. There are several with five and twenty thousand watts power each which makes the average of 1000 watts seem larger than it really is as far as state and educational stations are concerned. Certain of these stations recently have increased their power slightly while others have stayed where they were.

Individual state and land grant institution radio stations have been affected in various ways. Practically all have come up to their full licensed strength and several have sought to obtain power sufficient and adequate to serve the people of their respective states.

Another peculiarity of the state or educational broadcast station licenses is the lack of uniformity in the conditions surrounding frequencies on which they broadcast. Certain stations divide time with other non-commercial or, more frequently, with commercial stations, and others are on the typical regional channel with only daytime privileges. In either case many programs of vital interest to state listeners might be broadcast, but arrangements must be made for this purpose with the commercial station, or permission asked of the Federal Radio Commission for time on the air. Few educational stations have the splendid cooperation of the time-sharing commercial station that KSAC, the Kansas State College, has with WIBW at Topeka, Kansas. Even with this cooperation, those directing the agricultural college programs from the Kansas station find it an inconvenient and rather unsatisfactory process of serving the state.

As yet Congress has not passed legislation directing allocation of channels and power to educational stations. The Supreme Court of the United States may assist eventually in settling the question of the business of a state, the right of a state to use adequate radio facilities in its educational system. In the past, both Congress and the Supreme Court have aided in guaranteeing freedom of speech and freedom of the press, and likely will do similarly in the field of radio. Several bills before Congress and several Supreme Court decisions indicate opposition to attempts to monopolize radio.

Some pertinent questions—In connection with the present radio situation,

several pertinent questions may be asked and among them the following:

Can the Federal Radio Commission continue to exercise the right to revoke

America's Making

God built him a continent of glory and filled it with treasures untold;
He studded it with sweet flowing fountains and traced it with long winding streams;
He carpeted it with soft rolling prairies and columned it with thunderous mountains;
He graced it with deep shadowed forests and filled them with song,
Then he called unto a thousand peoples and summoned the bravest among them.
They came from the ends of the earth, each bearing a gift and a hope,
The glow of adventure was in their eyes, and in their hearts the glory of hope,
And out of the bounty of earth and the labor of men;
Out of the longing of hearts and prayer of souls;
Out of the memory of ages and the hopes of the world,
God fashioned a nation in love, blessed it with purpose sublime and called it America.

—Rabbi Silver

a station's license, and then plead lack of authority to censor programs and to license educational stations for adequate power and allocation?

What will be the attitude of the Supreme Court toward the right of states to use radio in their educational systems and toward radio manufacturing trusts? It already has made four decisions against radio monopoly.

Will educational institutions permit the needs of the respective states to be neglected by having squatter rights of yesterday become property rights of today?

Does a station, by the assignment of a wavelength, obtain a property right to that wavelength of which it cannot be deprived under the Fourteenth Amendment?

Will public opinion, changing from disinterest to interest and restlessness concerning the type of radio programs and amount of advertising heard, make any difference as to the advancement of educational radio broadcasting?

The question will arise sooner or later as to which shall be given preference—state or private enterprise.

We believe it is the business of a state to serve its people with a general educational program, and that the right of the state to exercise this privilege as its needs dictate should be recognized

by the federal government. I already have pointed out that this is true in every other phase of education and communication. Why shouldn't it be true in radio broadcasting? A system of state-owned and operated radio stations serving the various states might properly be guided, assisted, and supplemented by the federal government. The different habits, traditions, ideals, and topographical conditions of the several states seem to point to a state system of educational radio stations. The many reasons for this fact are evident.

A state government for state affairs and a national government for national affairs is the foundation rock upon which our institutions rest.

Already there has come to our attention too many instances of encroachment of advertising upon education. A state educational institution accepted courtesies from a commercial broadcasting station until attempt after attempt was made to censor radio talks in the interest of the advertiser rather than in the interest of the farmers of the commonwealth which that institution is supported to serve.

Right now commercial stations the country over are cultivating educators. The commercial group are under attack, and if they can show a fine service to educators, they can use this as an argument that education needs no channels of its own but can be served adequately by existing commercial stations. If educators are lulled into a false sense of security by these gestures, and once are retired from operating their own broadcasting stations, then programs likely will be arranged to suit the plans and policies of the commercial group. This censorship will inevitably cause educators to retire entirely from appearing before the microphone, and one of its most promising tools will be lost to education.

Doesn't all this clearly indicate that large stations and chains would, in the end, allow educational institutions to broadcast only at such times as meet their own convenience, and only such subject matter as might be acceptable to their advertisers?

May we summarize our views on educational broadcasting in the following:

1. States have a decided need of the radio in connection with their educational systems.
2. Educational broadcasting should have an assured standing and adequate facilities.

3. Sufficient talent is available to most state stations to enable applicants to broadcast high-grade, satisfactory programs.

4. Most of such applicants have the financial resources, engineering and research facilities to enable them to construct and operate the proposed stations according to approved standards.

5. At least some of these states are under quota.

6. The granting of such applications will not result in making the state over quota, neither will it materially increase the quota.

7. It is only fair that recognition be given of the right of the individual states to a fair division of available power and allocation to cover effectively their respective territories.

STEREOTYPES

Apologists for things as they are in the field of commercial radio have a stereotyped response which they always make to any suggestion that educational radio stations be given more power or more security so that they may develop what power they have without being called on every ninety days to defend it from the demands of some "up-and-coming" commercial station. The first point in this stereotyped reply always is that educational stations do not make full use of the facilities they now have (full use being measured solely by time on the air and not at all by the quality of material that is broadcast). The second never-failing remark is that some educational institution has been offered time by some commercial station and has not taken advantage of the offer. I should like to make three points concerning this answer:

1. *One cannot measure the value of a radio station's service to the public by counting the number of hours that it is "on the air" each day.* On such a scale a

speakeasy would rank much higher than a cathedral; a senator who fillibusters with a twenty-hour speech would take precedence over a Lincoln at Gettysburg. Here the commercial broadcaster has set up a standard which the educational station cannot, and should not, meet.

In the next breath we get from the same sources the statement that there are too many stations on the air. Why then should we object if one elects to remain quiet part of the time?

2. *One cannot fairly judge what an educational institution would do with a large and efficient station by what it has been able to do with a small and inefficient station.* Educators cannot be expected to be as enthusiastic about speaking over a station that covers only a small radius, as they would be about speaking to a larger audience. The labor involved in preparation in each case is the same.

3. *One cannot judge a university's interest in radio-education by its response to invitations from commercial stations to put on educational programs.* Such invitations are usually made under the following conditions: (1) the educational programs must be given in the time that is least salable; (2) if this time can later be sold, the educational program will be moved to another hour or discontinued; (3) when the Federal Radio Commission has granted the station's petition for favorable wavelength, power, and other requests, there has often been a marked diminution of enthusiasm on the part of the station for educational programs; (4) the commercial station has the power to discontinue the programs if the speakers present points of view which conflict with the beliefs or interests of the owners of the station. There are some educational institutions, too, which do not care to have their programs sandwiched between the dog-biscuit advertising and hair tonic hours.—H. L. Ewbank, chairman of the radio committee of the University of Wisconsin.

IN CANADA, the movement to nationalize the radio broadcasting facilities recently has gathered great force under the leadership of the Canadian Radio League, which is a listeners' organization. It has been stimulated, on the one hand, by the backward state of radio itself, reflected in sparse program hours and low transmitting power; and on the other, by patriotic fear of submergence under the high-powered air propaganda of American broadcasters. The group working for public ownership has obtained a favorable government report and won many adherents to its proposal for a federal chain of stations, charging a license fee of \$3 a year to each owner of a receiving set and guaranteeing in turn, noncommercial musical, dramatic, and educational programs of high quality. Mr. Graham Spry, chairman of the Canadian Radio League, in a recent address at Columbus, Ohio, pointed to the success of small publicly-owned stations in certain provinces of Canada, as well as the government monopolies in England, Germany, and twenty other countries. Our own commercially-operated radio stations, as everyone knows, remain for the most part on a low intellectual level and continue to devote much of their time to nauseating sales-talk on behalf of the advertisers who keep them alive. Incidentally, Americans should be humiliated to know that, according to Mr. Spry, powerful broadcasting groups in this country are engaged in active propaganda against the public-ownership movement in Canada. It is bad enough that we should permit a medium which clearly should have been devoted to the finest human arts to be degraded for the distribution of soap and toothpaste. It is far worse that our radio capitalists should exert pressure, thru the air, upon the opinion of a neighboring country, in an attempt to enforce our own dull, merchandizing spirit upon it.—*The New Republic*, August 12, 1931.

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Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street Northwest, Washington, D. C., National Education Association.

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Radio From the Citizen's Point of View

IN THIS ISSUE *Education by Radio* presents radio from the point of view of a senator, a listener—an eastern representative of a western newspaper, and the research director of the National Committee on Education by Radio. They are respectively, Senator Clarence C. Dill, of Washington, S. Howard Evans of the *Ventura Free Press*, Ventura, California, and Tracy F. Tyler.

THE SENATOR

FIRST: Senator Dill answering questions asked by Judge John C. Kendall, attorney of Portland, Oregon, representing the State College of Washington before the Federal Radio Commission. Representatives of the college were called to Washington, D. C., to defend its radio station, KWSC, against KFPY of Spokane, Washington, a commercial station seeking the 1220 kilocycle channel occupied by the college station. The case was never heard because of the withdrawal of KFPY on the eve of the hearing. Had it sensed impending failure in the strength of its opponent's case as reflected in the material published below?

Senator Dill's defense of KWSC was incorporated in a deposition which was to have been inserted into the record. All, except the first few paragraphs dealing with Senator Dill's qualifications as a radio authority, is published herewith.

Question: With relation to the college station KWSC, from your observation both personally and in meeting the people, the radio listeners thru your state, what would you say as to the work that this station has done in the past with relation to the question of whether it is operated in the public interest?

Answer: The words public interest must always be construed according to the person's view on what the public expects or desires. The college station at Pullman, as most of the college stations thruout the country, is not a station run for hire, and consequently does not attempt to put on certain elaborate programs such as are put on by many other stations. It puts on programs of peculiar interest to people who are interested in educational work, and particularly the

work of this state college. No commercial station will put on such work. There are two reasons for it: in the first place they are putting on programs for advertisers,



THURBER M. SMITH, *director of Station WEW, St. Louis University, St. Louis, Missouri, who has accepted appointment as representative of The Jesuit Educational Association on the National Committee on Education by Radio. He succeeds Father Robinson, transferred from the radio field to another department of St. Louis University.*

and these advertisers are trying to please their public and make themselves popular with the general crowd; and in the second place, they do not have available the people to put on the kind of expert information or to give forth the expert information that the college does.

The greatest weakness of radio in this country today is the lack of educational and informational broadcasting. My study of the radio situation in Europe convinces me of one thing, and that is that from the standpoint of general entertainment and general popularity radio in Europe is five years behind America, in fact it is not as good as it was here five years ago, but from the standpoint of information to the people, from the

standpoint of actual education, at least four or five European countries are so far ahead of the United States there is no comparison. That comes as a result of the fact that the governments there run radio and they have functional powers and they give over a certain number of hours every day to actual educational work, and for that reason they are doing a service in education that is not being done in this country.

There is a growing demand, I think, in this country for less commercialization of radio, and it is my judgment if the Radio Commission does not recognize this, and if the commercial stations themselves attempt to destroy the educational radio that is being put on, they will bring down the wrath of the people upon themselves in the form of legislation from Congress.

I think this station should have the time it needs on the air and whatever it wants, and that any proposal to take away its wavelength is unthinkable here in the northwest. If the Radio Commission does not recognize this public demand for educational information on the part of our people in the northwest, it will become necessary for Congress to legislate on things it ought not to legislate upon.

The commercialization of radio has reached the highest point in this country it has reached anywhere in the world. I recognize that it has. As a result we get many popular programs, but just because somebody spends a lot of money and wants to make a lot of money is no reason that the other part of the public that wants to hear other things shall not be served. I have no interest in any commercial station's application, for or against it, but I am interested in seeing that the educational stations that already exist shall be maintained, and if possible improved, and that no commercial station shall be allowed to encroach upon them and take away anything they have already got, and especially they should not be allowed from either Spokane or Seattle.

The Radio Commission ought to re-allocate the wavelengths in this state and several other states. The city of Seattle

I would be delighted if radio could be devoted to cultural interests only.—Ira E. Robinson, member Federal Radio Commission.

has five full-time radio stations; the city of Spokane has three full-time radio stations; and the city of Tacoma does not have any full-time radio stations. Now, there is not any defense for any continuation of any such condition, and for that reason to me *it would be unthinkable to take away any educational radio facilities; they ought to be enlarged and increased.* I say that not so much in the interest of this particular station as in *the interest of a listening public* that wants to hear and likes to hear other things than just the ordinary entertainment. I do not belittle entertainment, but I say that the state is full of stations and the northwest is full of stations sufficient to supply all the kind of entertainment that anybody that wants entertainment wants to ask for. They could not ask for any more. It would seem the most inequitable allocation of stations to in any way handicap the educational stations that are now broadcasting.

Q. From your personal contact with the people of your state, Senator, do you believe that the facilities that are now held by KWSC and that have been operated by the college in the past are necessary to the welfare of the agricultural and rural population of this state?

A. Well, I think they are highly desirable and necessary in any equitable distribution of radio facilities for purposes of satisfying the needs and the demands of the agricultural population, and of the town population. There are a great many cities, there are a great many people in the cities who want to hear the information that comes over this college station particularly. This particular station ought to have more power so it could reach all over the state and over the entire northwest. The Commission, instead of considering the advisability of lessening its facilities, ought to grant larger facilities.

Q. And do you maintain that view in the light of the general policy apparently adopted by the Commission of requiring as a measurement of public service the number of hours of operation, rather than the quality of the programs?

A. Well, that sort of a regulation may be entirely proper in the case of a commercial station, but *educational stations ought to be put in another class.* Educational stations ought to be given all the time that they need to operate to reach the people, whether it be full time, or whether it be certain hours, but they ought to be given the hours that they need to reach the people, and *undoubtedly the evening hours, the early evening*

hours especially, ought to be available to any educational station. I do not see any reason if they wanted to provide that from midnight on to morning some other station may use the same wavelength in the city to broadcast all night; I see no objection to something of that kind.

I think this laying down of a rule or a regulation and then trying to make it apply to all the conditions that exist in the United States about radio is rather amateurish, to say the least, if not a foolish method of regulating radio, and I say again that such a rule may be desirable as to commercial stations, but *educational stations ought to be placed in an entirely different category.*

Q. Do you feel that the Commission should recognize the possibility and the probability that educational stations, and particularly our state college will develop its ability to send out educational programs and therefore reserve facilities for them?

A. Well, I think the Commission ought to encourage this particular station, because it is the only educational station in the northwest. They ought to give them such time and such power as will enable them and will justify them in building better programs, in securing talent that can be used, because of the broad coverage that their station will get, and at the hours when the country people and the people who are interested in information on educational broadcasts will be listening.

MR. KENDALL: That is all. Thank you, Senator.

THE LISTENER

SECOND: S. Howard Evans, a friend at court representing a newspaper out of sympathy with the trend of radio toward commercial monopoly. *Education by Radio* forthwith makes public a paper delivered by him at the open hearing of the Communication's Committee of the American Bar Association, Atlantic City, September sixteenth. It presents radio from the point of view of the listener. His discussion of the fallacies of the basic assumptions upon which commercial radio built its case meets the issue with irrefutable facts.

Gentlemen of the Committee, I wish to congratulate you and the American Bar Association on the skill and clarity with which your series of reports on radio has been prepared. So far as I know, there is no better introduction for the average layman to the field of radio than the report you submitted at the Memphis meeting of your Association in 1929. That report has been followed by

others of great merit. Indeed, for anyone who can accept the fundamental assumptions on which your work has been based, these yearly publications present an almost perfect case.

Unfortunately, I am one of those to whom your basic assumptions are not acceptable. And I want to call attention to the importance of basic assumptions. They underlie the whole case you have built. If they are false your case is worthless. It cannot be stronger than the foundation upon which it rests.

It seems to me that you are facing a predicament similar to the one which confronts Owen D. Young and his plan for German reparation payments. The plan was perfect as a plan. But it was based upon certain assumptions which have since proven to be false. As a result the whole effort is today pretty much in the discard.

It is my sincere conviction that the radio structure in the United States, like the reparations settlement in Europe, has been grounded in false assumptions; that these assumptions will have to be overthrown sooner or later, and that therefore the case you have so carefully built in your reports to the Bar Association will be without value.

Radio is vastly different from any other means of communication. This is particularly true of the broadcast band where the transmission of programs is dependent upon four separate elements. First, there is the broadcasting station which is privately owned and in which the program originates. Second, there is the air channel which theoretically belongs to the public, and is by far the most valuable link commercially in the chain. Then there is the receiving set which graces millions of American homes. A final, though no less essential part of this technical line of communication, is the listener who turns the dial on the receiving set and actually brings in the program.

What are the rights of these different interests concerned with radio? If you look at the circuit of communication from the sending end, you get a picture totally different from that if you accept the receiving end as your point of view. *I can readily understand that your reports should favor the broadcaster for the very pertinent reason that some of the members of your committee are receiving attractive legal retainers from broadcasting stations.* For my own part, I cannot escape the conviction that *the rights of the public in radio must be supreme.* The people own the air. They own the receiving sets. It is not enough to say that they

are protected because they do not need to listen to programs they do not like. *They should be entitled to a positive control over the kind of programs which are broadcast.*

At the present time the broadcaster, the advertiser, dominates radio. And yet there is no denying that it is the listening public which pays the bills and makes broadcasting possible. Have we got to wait until the receiving sets of the nation become silent before the rights of the people will be recognized? Are we going to let the sending station defeat the possibilities of this new art? Or, are we going to change our basic assumptions and protect the rights of the individual listener in radio, by preparing programs which are truly in his interest?

Let us turn to the report which is up for discussion this afternoon and become more specific in my objections to the premises on which your Committee works. Beginning on page thirty-five there is a discussion which begins with the sentence, "No more formidable legislative issue faces the next Congress in the field of radio regulation than that raised by proposals to require the Commission to set aside and reserve broadcasting facilities for particular groups or interests." You list the Fess Bill which would set aside fifteen percent of the air channels for education as one of these specific proposals. While I appreciate your recognition of the formidable character of the educators' claims, I resent your statement that the Fess Bill is the clamor of a special interest.

Education is a governmental function and as such is more closely allied with the interests of the American people than advertising or any other service now supplied by radio. While it may not mean so much in dollars and cents to broadcasters, it has a real relationship to the character of the social structure under which our children will live. Democracy is unsafe without education. The one is no more a special interest than the other.

I know that you draw a distinction between educational broadcasting and educational broadcasting stations. You can well insist that the commercial stations which certain of your members represent, are perfectly willing to carry educational programs. *Such a proposal is foreign to the whole tradition of free education.* For years we have resisted the efforts of public utilities thru textbooks and special services, to get their propaganda into the schools. One of the leaders in that effort is now the president of a great broadcasting company. When he was connected

with the utilities business, he saw fit to address a group of executives as follows:

"I would advise any manager who lives in a community where there is a college to get the professor of economics interested in your problems. Have him lecture on your subject to his classes. Once in a while it would pay you to take such men, getting \$500 or \$600 a year, or \$1000 perhaps, and give them a retainer of \$100 or \$200 a year for the privilege of letting you study and consult with them. For how, in heaven's name, can we do anything in the schools of the country, with the young people growing up, if we have not first sold the idea of education to the college professor."¹

Now that this gentleman is in the radio business do you suggest that we allow him to put on educational programs for the schools? I say that *it was necessary to put him and his fellow propagandists out of the schools at one time, and I am firmly convinced that it is necessary to keep them out of the schools now.* And the only way that this can be done, and that our schools can be free from innumerable insidious influences, is thru radio programs broadcast from stations which are owned and operated in the name of education itself.

The Fess Bill raises another issue of supreme importance in radio—the question of states rights. Education is, and always has been a jealously guarded function of the individual states. There is no power under any constitutional provision for the government of our people, which can take away this right. Commercially sponsored educational programs such as are being broadcast over chains of stations with national coverage, are a definite threat to this fundamental premise upon which our educational structure has been founded. States are becoming aware of this and are beginning to insist upon stations of their own which can serve their sovereign needs. I understand that the National Committee on Education by Radio is simply proposing that adequate facilities be set aside so that as all of the states become aware of the tremendous possibilities of radio in education, they will have air channels reserved for their use. They propose to carry this battle to the Congress of the United States, and to the legislatures of the individual states. They intend to keep hammering away until the rights of the individuals who constitute the radio audience, and of the states whose rights in radio cannot be denied, have received adequate protection. In their name, and in the

name of Justice which the law represents, I call upon you as representatives of the American Bar Association to revise the fundamental assumptions upon which your bulletins have been based, and to give recognition to these interests, which more than any others, represent the true public interest, convenience, and necessity.

THE RESEARCH DIRECTOR

THIRD: Tracy F. Tyler, executive assistant and director of research for the National Committee on Education by Radio, prepared a paper in defense of station KUAO of the University of Arkansas whose representatives appeared before the Federal Radio Commission to settle a difference of opinion regarding time-sharing with station KLRA, Little Rock commercial station. Examiner Walker, presiding at the hearing, refused to admit the paper as part of the testimony, declaring it to be too general in nature. Marked as an exhibit for identification only, it will not be considered by the examiner in making judgment on the case. If, however, KUAO counsel takes exception to the eventual report of the examiner, it may declare him in error for not having considered the paper. It follows in full.

When one goes back to the early days before the invention of the printing press, he finds that practically all education was of necessity of the mouth-to-ear type. The effectiveness of the teacher was limited to the distance at which his voice could be heard. The material the student received was all given by the instructor and received thru the ear. For this reason, the masses were largely uneducated.

Following the invention of the printing press and the perfection of the art of printing, the words of the master teacher thru the medium of the printed page could be put in the hands of the pupils and their instruction guided by the classroom teacher. This has resulted in enormously raising the educational level of the masses. It now became possible for persons to partly instruct themselves by home reading in various branches of science, culture, and the arts.

The desire to advance themselves both vocationally and culturally under the direction of qualified instructors, led to the demand that colleges and universities provide courses that would be available to adults, unable to attend the regular class periods. Out of these demands grew correspondence and extension courses. Registration for this type of work grew from 45,116 in 1919-1920 to 286,341

¹ Social Service Bulletin, Methodist Federation for Social Service, Vol. 20, No. 11, p. 2.

persons in 1927-1928 according to Bulletin No. 38 (1929) of the United States Department of the Interior, Office of Education. This is a small number when compared with the population of the United States, but shows the demand even for a type of instruction that loses much of its human appeal, depending largely as it does on the printed page.

With the advent and perfection of radio, educational institutions, proceeding cautiously began to extend their services to persons at distances from the campus. The electrical engineering departments of these institutions had started broadcasting early in the history of this new art, but conservative management had kept them from going ahead with program development as had the stations operated for profit. These institutions had long seen that their responsibility in education did not end when they had provided training for those who presented themselves at their doors, and now at last they have in radio a tool thru which they can reach every segment of the population. If their service is restricted whenever they are attacked by commercial stations with claims of larger audiences for the amusement type of program, it will be hard for them to do their part in increasing the dissemination of education. That adults are seeking and are interested in further training is evidenced by the growth of the National Congress of Parents and Teachers from 189,282 in 1920 to 1,511,203 in 1931. This organization is largely for the purpose of parent education.

In various parts of the country there are outstanding examples of the use of radio in many fields of education. In Cleveland for three years arithmetic instruction has been given to third grade children by radio, supplementing the work of the regular teacher. In the State of Ohio a school of the air has offered courses covering rural, elementary, and

secondary schools. This institution is financed by the state and is under the direction of the State Department of Education. According to the results of a study recently completed for the National Committee on Education by Radio, in 1930-31 it had 118,950 student listeners.

At the Oregon Agricultural College, where one of the most extensive programs of educational broadcasting is being carried on, over five hundred persons registered in a radio course in poultry management, alone.

The radio as an educational tool has almost unlimited possibilities but its development must of necessity be slow. It takes far more time to prepare a fifteen minute talk than fifteen minutes of music. Legislative bodies are slow in increasing appropriations to new university departments. Experiments so far conducted have proved the usefulness of the radio in both formal and appreciative subjects, in elementary schools, junior and senior high schools, in broadcasting directly from the classrooms of our universities into the homes, and in especially prepared talks for various adult groups. Regular courses for credit are being broadcast by Oglethorpe University, Georgia, six days a week from 8AM till 9PM with periods of one and one half hours at noon and at night as radio entertainment hours.

The University of Arkansas has been gradually increasing its services thru correspondence and extension courses and its radio service. It has built carefully as it went and therefore it has not had the mushroom development that the commercial industry has experienced. It is operating in a field that is not now nor is there any assurance that it will be served by any other type of station. The university radio station is the only forum of facts, free speech, and free discussion available to this great state and should

be allowed to continue without being handicapped. Rather stations of this kind should be given better assignments so as to enable them to serve as large a segment of the states' population as they can.

One of the many examples of either the inability or unwillingness of even the large commercial chains to render the type of public service our educational institutions and governmental bodies render, occurred only last week when the series of four talks arranged by the Emergency Committee for Employment appointed by the President were scheduled at a midafternoon hour when few heads of families, to whom they would have been of the most importance, were able to listen. These important addresses included the United States Commissioner of Education, a former President of the National Education Association, the President of the American Federation of Labor, and the chairman of the Committee on Unemployment of the Philadelphia Chamber of Commerce, and were broadcast over one of the great commercial chains. During these critical times of unemployment these talks were of enough importance to have been scheduled for the best of the early evening hours in preference to the usual commercially sponsored advertising programs. In the same situation educational institutions would have only the timeliness of the subject to consider and could give broadcasts of this importance the best time that their station had on the air.

Educators, then, offer radio a unique service which, to be of most value, must be developed by them, slowly and carefully that a measure of permanence may be assured. Unlike those who operate stations for profit, the educator's only purpose is to render an unselfish service. He should be allowed to develop this important service in his own way.

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- Thurber M. Smith, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
- H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
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Broadcasts to Schools in England

SCHOOL BROADCASTS in England have the support and cooperation of the strongest education leaders in the land. The Central Council for School Broadcasting is presided over by Herbert Albert Laurens Fisher, Warden of New College, Oxford University, England, former president of the Board of Education and wellknown in America for his vigorous and farsighted educational leadership during the World War crisis. In the introduction to a pamphlet entitled *Broadcasts to Schools* from which much of the material in this bulletin is taken, Mr. Fisher writes as follows:

The Central Council for School Broadcasting, to which in 1929 the BBC entrusted the supervision of this branch of their service, have now entered upon their third year of office. During the past year they have exercised, thru their Subject Committees, a large proportion of whose members are teachers who use the broadcast lessons, a definite responsibility for the educational value of the school program and for the material provided in the pamphlets relating thereto. They have sought also to enlist the cooperation of teachers, Local Education Authorities, and Training Colleges, by arranging meetings and demonstrations at which special attention has been called to two of the most important problems which arise in the use of broadcasting in schools. These problems are [1] the efficiency of the receiving apparatus and its suitability for school use, and [2] the place of broadcast lessons as a part of the activities of the school.

In connection with [1], the Council have appointed a Technical Subcommittee. This body is engaged in the effort to devise proper standards of reception, and it is expected that before long it will be in a position to furnish advice on the provision and maintenance of receiving apparatus. The value of the Committee's work will be greatly enhanced if every school which desires to experiment, and every Local Education Authority which is willing to allow the schools in its area to conduct experiments, will cooperate in the endeavor to ensure that the apparatus used does not fall below the standard approved by the Council. This cooperation should extend also to individual investigators who may be trying to assess the value of the Council's work. In the Council's opinion, it is possible for any school to obtain for an expenditure of from twelve to twenty pounds a quality

It is suggested that readers refer to pages 62-3 of the May 28, 1931 issue of *Education by Radio* where an unusually good description of English school broadcasting is given by Earl Y. Poore in *Radio in the Schools of England*, an article taken from the April 1931 issue of the *School Executives Magazine*.

of reception which will avoid any strain upon the listening class.

Concerning the use of broadcast lessons in the school, the Council take the view that they should be regarded as supplementing and not in



THE RIGHT HONORABLE H. A. L. Fisher, Chairman, the Central Council for School Broadcasting, Warden of New College, Oxford, former president of the Board of Education, Member of Parliament, and author of the famous Fisher Act of 1918, which is recognized as being one of the two great democratic measures which England has passed for the education of the people.

any degree supplanting the efforts of the class teacher. It is hoped that this view will be accepted by all teachers, inspectors, and Local Authorities, and that the school broadcast lesson will always be regarded as a collaboration with active effort on both sides. The part taken at the listening end will depend very largely as in ordinary lessons, upon the personality of the teacher and the circumstances of his school and pupils. Certain general principles are already coming into view, and these will be more precisely defined as the work of the Council is extended. It is hoped that during the coming year much assistance will be received from teachers in schools and from Training Centers in which experimental work is being done. In this way a body of tested experience will gradually be built up, which will serve as a guide to teachers in the use of this new medium.

The Aims of the Central Council—The Central Council for School

Broadcasting is a body of representative teachers and others engaged in education. They have no desire to make broadcast lessons compulsory or to suggest that they can be used to replace personal instruction by competent teachers. But, after careful inquiry, they are convinced that broadcasting may be brought in to furnish forms of stimulus and first-hand information such as are beyond the resources of any school.

School broadcasting is in the stage of experiment and inquiry. Before any valid conclusions can be drawn as to scope and methods in broadcast lessons, it will be necessary to enlist the cooperation of many teachers and to gather the experience of many schools and authorities. The Council hopes to accomplish this and to institute inquiries on specific problems.

Broadcasting Period—School broadcasts in England extend from September to June and are divided into three terms. For 1931-32 the Autumn Term includes from September 21 to December 11, the Spring Term, January 18 to March 24, and the Summer Term, April 18 to June 17.

[The material which follows is a brief outline of each of the subjects shown on the program of broadcasts. These descriptions cover only the work of the autumn term—the only syllabus available in detail at this time. It should, of course, be noted that these descriptions cover only school talks. There is also a council which arranges adult education broadcasts and presents them over the stations of the British Broadcasting Corporation.]

The World History course covers *Empires, Movements, and Nations* and is given by Norman H. Baynes and Rhoda Power. The twelve lessons have the following titles: [1] Babylonia and Egypt [2] A Report to Pharaoh [3] Israel and Assyria [4] Nineveh and Babylon [5] Persia [6] Salamis [7] Greece [8] A Day in the Amphitheatre at Athens [9] Rome [10] Hannibal [11] The Roman Empire and the Triumph of Christianity [12] Constantine. The odd numbered titles will consist of talks by Mr. Baynes, while the even numbered ones will be in the form of dramatizations by Miss Power.

The British Broadcasting Corporation estimates the intelligence and appreciative ability of the people on a very high level—an example which might well be emulated by radiocasting interests in America.—Eugene Goossens, noted English composer, in a recent talk rebroadcast from London.

The Stories for Younger Pupils are entitled *Stories from Everywhere*, and are for nine and ten-year-olds. The titles for the entire series are [1] The Seven Supperless Boys [2] Turkle [3] Why the Blackbird has a Yellow Bill [4] Mrs. Racundramundradramundi [5] The Four Friends and the Hunter [6] The Yams [7] The Stuffed Ox [8] Snake Postman [9] King Frost and Marooska [10] Gingy Fly [11] King Solomon and the Hoopoes [12] Mrs. Five. Miss Power gives the odd numbered ones and Mrs. Williams-Ellis the even numbered.

The French Readings are given on alternate Mondays by Mademoiselle Vière, who is an educated native Frenchwoman. They will be selected from *An Anthology of French Verse: From Villon to Verlaine* by Ritchie and Moore. The French dialogues which occur on the other Mondays will be between Mademoiselle Vière and Monsieur E. M. Stéphan. Their titles are: [1] Allons faire un Tour à la Foire [2] Marie Reçoit [3] Louis chez son Tailleur [4] La Fête de Marie [5] Louis a une Attaque de Grippe [6] L' Année tire à sa Fin: Voici Noël et le Nouvel An.

The Nature Study talks are given by Eric Parker and have the following titles: [1] A Stubble Field [2] Wild Fruit [3] Autumn Migrants [4] Rats and Voles [5] Birds that Change their Habits [6] Squirrels [7] Wind [8] Birds of Prey [9] Going for a Walk [10] What is Coal? [11] Easy Stars to Know [12] The Moon.

The Music Period is divided into two parts. In the first half hour is the junior course. This consists of [1] Lesson on the subject of the week [2] Reading practise [3] Short concert or playing of scholars' weekly tunes [4] Song-singing. The senior course occupies the last half hour and consists of [1] Song-singing [2] Lesson on the subject of the week [3] Advanced reading practise [4] Short concert or playing of scholars' weekly tunes.

The Tuesday French lessons by E. M. Stéphan are divided into four parts so that the younger pupils may stop listening at the end of fifteen minutes if the teacher so desires. [1] Pronunciation and Intonation [five minutes] [2] Lecture Expliquée, or some form of Practise in Comprehension [ten minutes] [3] Singing of a simple French song [three minutes] [4] Dialogs, alternating with Readings or Recitations of French Poetry [seven minutes].

Scientific talks have been arranged

for older pupils on six different dates during the term and will be given by Gerald Heard. The titles are as follows: [1] The object we wish to study; the way we try

on the Silent Film [2] That the Reading of Detective Stories is a Waste of Time [3] That Disarmament is Impractical at the Present time [4] That it is Better to be a Contented Pig than a Discontented Philosopher [5] That it is against the Interest of the Community that Motor Traffic should Destroy the Railway [6] That Professionalism should be Abolished in all Sport.

The Biology and Hygiene lessons on Wednesday by Winifred Cullis are for senior schools and will present the following subjects: [1] Living and Non-Living [2] How the Body is Made Up and Works-I [3] How the Body is Made Up and Works-II [4] The Body as an Engine [5] How Breathing Changes the Air-I [6] How Breathing Changes the Air-II [7] The way we Breathe [8] The Transport System of the Body: the Blood [9] The Red Corpuscles and their Work [10] The White Corpuscles and their Work [11] The Blood and its Oxygen Supply under difficulties [12] The Importance of Air and Light.

The English Literature Course will be given by Mr. S. P. B. Mais. It has been arranged by a committee consisting of specialists, Council members, and teachers. It will consist of the following talks: [1] Gulliver's Travels [2] The Heroes, and Tanglewood Tales [3] Huckleberry Finn [4] Treasure Island [5] The Pilgrim's Progress [6] Peter Simple [7] The Cloister and the Hearth [8] Puck of Pook's Hill [9] Robinson Crusoe [10] Travels with a Donkey, and An Inland Voyage [11] The Wind in the Willows [12] Hans Andersen's Fairy Tales. The object of these talks is simply to communicate, if possible, some of the delight that Mr. Mais himself takes in these books, and to explain where and how they especially appeal to him.

Tracing History Backwards is given by Brian Tunstall and is for pupils fourteen years of age or above. The speaker will take some aspect of life today, will look at it from a broad point of view, and will trace it back historically. Modern problems as varied as transportation, banking, the cooperative movement, methods of communication, and housing, will be dealt with separately, each in its appropriate historical background.

King's English is the title of a course in speech training which will be given by A. Lloyd James. In general the purpose of this course is that pupils "May be able to lay aside dialect and impose upon their own local speech that other which is known as standard English."

The German Dialogs and Read-

PROGRAM OF BROADCASTS	
September 1931—June 1932	
MONDAY	
2:30-3:00	World History
3:05-3:20	Stories for Younger Pupils
3:25-3:40	French Readings and Dialogs
TUESDAY	
2:05-2:25	Nature Study
2:30-3:30	Music [Elementary and Advanced]
3:35-4:00	French
4:05-4:25	Talks and Debates for Older Pupils
WEDNESDAY	
2:30-2:55	Biology and Hygiene
3:00-3:25	English Literature
THURSDAY	
2:05-2:25	Tracing History Backwards
2:30-2:50	Speech Training
3:50-4:05	German Dialogs and Readings
FRIDAY	
2:30-2:55	Rural Science
3:00-3:20	Geography
3:25-3:40	Friday afternoon Stories and Talks
3:45-4:30	Concerts and Dramatic Readings

to look at it; the instruments that help us [2] Sun, Moon, and Stars; Astronomy [Mathematics and Optics] [3] The Earth-I, Geology [4] The Earth-II, Its Weather; Meteorology; Geophysics; Terrestrial Magnetism [5] The Earth-III, Petrology and Mineralogy [6] The Earth-IV, Chemistry.

The Debates for Older Pupils are of the unfinished type. One speaker opens the debate from the studio with a talk on the affirmative side occupying about seven minutes, which is followed by a similar presentation of the negative argument. The broadcasting then ends and the listeners may either continue the debate or make any other use they wish of what they have heard. The topics which have been selected for debate are: [1] That the Talkie is No Improvement

ings will be given by Dr. Ernst Deissmann with the assistance of Fräulein Cläre von Both and Dr. W. Friedmann. [1] Unterhaltung beim Tee [2] Wir gehen ins Theater [3] Eine Viertelstunde mit deutschen Gedichten [4] Plauderei über deutsche Sprichwörter und einige deutsche Lieder [5] Deutsche Schriftsteller der Gegenwart [6] Wir fahren zum Wintersport. The Readings which alternate with the Dialogs will be taken from *Rübezahl und sein Reich* by Joseph Klapper.

The Rural Science Course is divided into two parts broadcast on alternate Fridays. The first part given by C. E. Hudson entitled *The School Garden* consists of [1] How shall we Plan our Garden? [2] The Propagation of Plants [3] The Planning and Planting of Fruit [4] The Winter Pruning of Fruit Trees [5] Soils and Cultivation [6] Manures and Manuring. On the other Fridays Sir John Russell will give the series, *How Science came into Farming* consisting of [1] Farms in Olden Days [2] The New Crops and How We Got Them [3] Science Shows how to Feed the Plant [4] Science Shows How to Change the Plant [5] Diseases of Plants [6] Germs and Plants.

The Geography lessons consist of travel talks on *Life and Work in the British Isles*. These talks to be given by various speakers were planned by James Fairgrieve and Ernest Young. The titles to be presented are: [1] Life in the Fens [2] A Trawler in the North Sea [3] Fruit and Hops [4] Market Gardening in Bedfordshire [5] The Chair Bodger of the Chilterns [6] The Black Country [7] The Potter and the Potteries [8] In and Around a Bradford Mill [9] The People who Manufacture Cotton [10] Sheep Farming in the Lake District [11] Down a South Wales Coal Mine [12] Snowdon Slates.

The Friday Afternoon Stories and Talks are designed to provide the pupil with something less formal than the ordinary school lesson. The stories will be interspersed with occasional talks on current events and will be given by Mr. Frank Roscoe and others.

The Concerts and Dramatic Readings are given on alternate Friday afternoons. Efforts will again be made to include in the programs of the concerts short items so far as this is consistent with imparting during the session as complete an idea as possible of the simpler forms of sonata and symphony. Special

study will be made during this term of minuets and trios. There will also be songs with solo and chorus in which listening schools will be asked to join, and solos will be played on certain instruments of the orchestra to illustrate their distinctive range and color. The Dramatic Readings will last but half an hour and will at most present half a dozen voices at the microphone. The intention is not to present plays but to give the pupils the opportunity of hearing Shakespeare and other authors well read: [1] Twelfth Night [2] Julius Caesar [3] Nicholas Nickleby [4] Richard II [5] The Merchant of Venice [6] The Christmas Carol. Phonograph records are given for fifteen minutes following each reading.

School Pamphlets—In connection with each of the courses, except those of English literature, nature study, the stories for younger pupils, and those on Friday afternoons, an illustrated pamphlet may be secured, which is designed with the double object of furthering the collaboration between the listening class and the broadcast teacher, and of providing diagrams and illustrations to which the pupils can be referred from time to time during the lessons. Their use by individual children is essential to the full success of the lessons.

BANDMASTERING BY RADIO

At the end of six half-hour radio lessons a Michigan grade-school band showed their instructors a thing or two about playing band instruments. The statement isn't as figurative as it sounds. The first five lessons were given by a University of Michigan band, using one instrument of each type taught, playing and singing each song several times during a broadcast. The sixth broadcast was given by a band recruited from among the grade-school students, who, before the lessons began, had not played any instrument. Slight difference was detected between the playing of instructors and students.

This interesting story of instruction by radio is told in detail by Joseph E. Maddy, professor of music at the University of Michigan, writing in the September issue of *School Life*, official publication of the Office of Education, Interior Department.

Groundwork for the course was laid out in booklets sent free, containing fifteen wellknown songs. Furthermore, the advance booklets gave general instructions and explained what would be ex-

pected of each student. Interest was aroused, and nearly four thousand school children awaited the first lesson by radio.

Classes were held during school hours at two o'clock in the afternoon. Radio demonstrations were given by University of Michigan student musicians who were instructed to hold notes long enough to permit listeners-in to match them on their instruments. Pupils sang along until the tune was memorized. Soon studio band and students were playing together, the former harmonizing the latter's melody. All instruments were taught except drums.

Students played softly in order to hear the originating band over the sound of their own instruments. As a result it was discovered that radio students produced better tone qualities than those who had not received such instruction. It was Professor Maddy's observation that age seemed to make no difference, but as far as numbers were concerned, twenty students comprised the best working units.

Because band leaders or band players had ideas of their own about instruction, they made the poorest class teachers. The regular grade school teacher or music teacher, skilled in handling children, proved the best class supervisor. Home supervision also was made possible thru parents listening in and aiding their children on coming home from the lesson.

Criticism cards, enclosed in the instruction booklet, were returned to Professor Maddy after each lesson, advising him what changes were necessary to facilitate the student's progress.

Education by Radio was particularly interested in Professor Maddy's statement that "radio education must not be combined with, or confused with, radio entertainment or both will fail."

"I felt that most of the pupils . . . learned more in the five radio lessons than they would have learned if I had taught each class in person," he said. "The pupils were tremendously enthusiastic over their accomplishments. Every class that I visited had arranged to continue as a school band.

"I thoroely agree with the educator who once said that 'radio education begins when you get pencils and paper in the hands of students and the pencils begin to work.' Whether it be pencil, ruler, or band instrument, the psychology is the same, and the measure of success of all radio education can be determined by the amount of wholehearted participation by the pupils."

Shall Public Servants Serve the Public?



IT IS not surprising to find the representatives of commercial monopolies pleading that education shall be subordinate to the commercial stations, but it is a bit surprising to find members of the Federal Radio Commission going out of their way to plead on behalf of these same commercial stations in spite of the fact that the organized educational and civic groups after wide experience have taken a decisive stand for independence and freedom for education on the air. If the members of the Federal Radio Commission would spend as much energy trying to find out the real needs of education as they have spent trying to subordinate education to the radio monopoly, recently discredited by the Supreme Court, they would be performing a large public service. Such an attitude on the part of a public employee properly raises the question as to whether he represents the interest of the public by whom his salary is paid or some narrower more limited point of view. When a member of a public body charged with judicial responsibility takes such an attitude on behalf of commercial stations can the educational station appearing before him expect a fair and impartial consideration of its case?



From an address by Joy Elmer Morgan, chairman of the National Committee on Education by Radio and editor of *The Journal* of the National Education Association, before the Second Annual Institute for Education by Radio, Ohio State University, Columbus, Ohio, June 8, 1931.

The Ohio School of the Air

R. DEAN CONRAD

Superintendent of Schools, Delaware, Ohio

OFTENTIMES a course of study is built in a swivel chair or in the halls of a university, missing the most important contact and viewpoint, that of the classroom teacher. In these days of integrating a new and better democracy, the child shall be the centre of the school and the classroom unit shall be our basis for thinking. The question that has concerned me in the Ohio School of the Air is, what does it contribute to the child at work in school? On the answer to that question hinges the importance or lack of importance of education by radio.

We do not have to go to the open places to find schools devoid of maps, books, and other equipment pertinent to the vitalization of the education of the children in attendance. People are beginning to realize that the school is a workshop for the child in which he meets life situations and attacks his problems as do the older folk out in life, except that the child's problems are much simpler in nature. The day is passing when the teacher just hears her children recite. The rule of assign, learn by heart, and recite is over as far as teaching to educate the child is concerned.

Radio vs. spoonfed learning—Now you will say, what has all this to do with the Ohio School of the Air? It has just this to do with it. In the teaching program of formality—assign, learn by heart, and recite—education by radio has no place. It can be of no value in such a school. It might cause them to discuss things, try to think them thru, and change the old school to a vital workshop in which the child initiates, creates, and is interested in his school and life, because it is more interesting to him and more meaningful as to what education is about.

Radio's educational triliium—Now how does it contribute to the child at work in school? In three ways:

1. It vitalizes the curriculum.
2. It enriches the curriculum.
3. It promotes the activity school.

How does the School of the Air vitalize the curriculum? The School of the Air has presented one hundred thirty-five

hours of work this past year, opening on Monday, September twenty-two and closing on Tuesday, April twenty-eight. These lessons have been distributed nearly equally between the elementary



BEVERLY O. SKINNER, who as Director of Education of Ohio is now responsible for the Ohio School of the Air. Dr. Skinner, former president of Wilmington College, succeeds Dr. John L. Clifton.

school which included a primary and intermediate division, the junior high school, and the senior high school. Each hour period was divided into three periods of twenty minutes each. These periods have been brief enough to bridge the span of interest of the children and of such nature as to both vitalize and enrich the regular school program. In order to tell you how the school work is vitalized I shall outline two of these lesson periods.

Ohio's inaugural by radio—The first was presented on Monday, January twelve. It was the inaugural program of a new governor. Music was scheduled for 11AM, and the oath of office was to be administered at high noon. For this particular day, in our city, announcements were sent out in advance to the homes telling them of our plan to listen in on

this special program. Attendance was voluntary as it came at the dinner hour. This included grades from five to twelve inclusive, about 1000 children. All remained except for the few who could not so plan. At eleven all classrooms were tuned in. The Marietta Band had already been playing, for we could hear it in the distance. The school-master of the air, B. H. Darrow, was at the microphone for the most part and we were given a vivid picture of the maneuvers about the capitol building as the program developed.

Few of us had ever attended an inaugural before. Only a few of our children ever will, unless it be by radio. A half-dozen students from our journalism class had been sent down to Columbus to cover the program and report back. The other thousand of us in Delaware City and the other thousands thruout the state were in classrooms and at home listening in.

A superintendent substitutes—I happened to be teaching a section of the eighth grade that day in the absence of the regular teacher. Well do I remember how we listened with great expectation, thrill, and silence. We hastily drew a map of Ohio on the blackboard and located Columbus, the capital. This locating had new meaning and specific significance to the children. Now the capital meant inauguration, the seat of state government. Before, it was just the capital. Next a map of Ohio was drawn which showed the town of Marietta. This had new meaning and greater significance than that it was the first settlement in Ohio. It was now the home town of the new governor. Next, a rough sketch of Columbus was drawn showing an enlarged view of the capitol building, its lawn, the four bounding streets, one of these streets extended up to our city, which is directly north of the capital. Next the governor's mansion was located out on East Broad Street and the American Insurance Union tower on West Broad. Some pupils thought the governor's home was in the capitol building. Some children, for the first time, learned about the location of the Senate Chamber, the House of Representatives, and the governor's suite. This, for the first time, meant something to them. We then turned back to the program again.

An address before the Second Annual Institute for Education by Radio, Columbus, Ohio, June 10, 1931.

And enjoys it—We visualized the placements of honor on the west steps, the movement and excitement as it was all given us by the master announcer. Then the governor's party arrived. We were all tense. The Marietta Band seemed to be our favorite, the 166th Infantry was in the picture as the body guard to the governor. We were intensely interested in the brief, lovable prayer of Mr. White's own minister from Marietta as he pronounced the invocation. Then came the presentation of Governor-elect White's life, by Mr. Warner, the presentation of the governor's commission by the retiring governor, Mr. Cooper, a word about the fine service Mr. Cooper had given to the state as governor in the past two years—then came the moment when the oath of office was to be administered.

An oath that meant something—It meant more than words, meant more than a textbook story. It was now a real living thing, vital to the inauguration of a new program in government. In order to give meaning to the oath, Chief Justice Marshall had opened the Bible, which had been given Mr. White by his parents forty years ago, to II Samuel, twenty-third chapter, and the third verse, which read:

He that ruleth over men must be just, ruling in the fear of God.

Chief Justice Marshall told us these words were among the last words of King David. He said he uttered them as he was laying down the sceptre of life, and they were spoken from an experience of forty years as a ruler of a great nation. He said further the words were just as true today as they were three thousand years ago. Then he said to Governor-elect White: "You will place your left hand on the text and repeat after me the words of the oath." We were in breathless silence as the solemnity of the occasion reached us.

I, George White, do solemnly swear to support the Constitution of the United States and the constitution of Ohio, that I will honestly and faithfully discharge and perform all the duties evolving upon the office of the governor of Ohio to the best of my ability and understanding, this I do as I shall answer to God.

With his right hand raised toward heaven, and with the words of this oath still ringing on his lips, George White of Marietta, Princetonian, banker, one time Klondike gold digger, and Pennsylvania oil prospector, became the forty-eighth governor of Ohio. Then Governor White told us: "A public office is a public trust."

Did that lesson vitalize the school work, and interest in the school, and in-

terest in government because it now had new meaning?

The Buckeye tree—Briefly I would like to give you another outline of a lesson of the Ohio School of the Air in vitalizing school work. It was Tuesday, April seven; time: 2:40 to 3PM; subject: nature study; special topic: *The Buckeye Tree*; H. E. Eswine, radio teacher. This lesson was specifically planned for the intermediate grades. Our fourth grade at North Building was listening in. I was visiting there for the period and decided to stay for the radio broadcast. Some pupils were taking notes on paper, others were just listening. The teacher was tabulating notes at the board. After the broadcast there was a lively discussion as to who had seen a buckeye tree, where was the nearest tree, how many buckeye trees were there in our city? What was the difference between a horse-chestnut and a buckeye tree? Where do buckeye trees grow? What use were they to the early settlers? Before I left, and in the space of the next ten minutes, a boy located a buckeye tree within a half block of the school and was on his way to get permission of the landlady to let his room go and see it. The next morning on my desk was a note from this room telling where several other buckeye trees were in the city, how I could see them, and further that they had found a small tree, had it given them, and that they were going to plant it on the school grounds on Arbor Day.

The results of these two lessons with the additional hundreds of such lessons given in the past year by the Ohio School of the Air have given new vision to the classroom teacher, and make the regular school program a vital thing in the child's experience.

Out to Aunt Mary's—How does the School of the Air enrich the curriculum?

The lessons on The Inaugural and The Buckeye Tree not only vitalize the work but offer an enrichment program, not always found in books and libraries. The radio program has included weekly visits Out to Old Aunt Mary's, where we meet Uncle John and Aunt Mary. They live on a beautiful farm, equipped with ideal farm buildings. On this farm is level and hilly ground, cleared land, and land still in forest. Here is a beautiful stream of clear water fed by never-failing springs on the hillsides, and runs from the woods thru the pasture field. The farm is stocked with all kinds of sleek stock. There are plenty of chickens, turkeys, and ducks. A fruitful orchard stands on the hill back of the house, there's the

apiary, the garden with its vegetables and flowers. The children are privileged to make weekly visits to the beautiful home where they study with the radio teacher, Professor Harry E. Eswine, the mosquito, the wasps, the grasshopper, the corn plant, the galls, the ants, the dog, the cat, the cow, the horse, the snow and trees in winter, insects in winter, birds in winter, birds' nests, snakes, wild ducks and wild geese, toads and frogs, European corn borer, the fish, the buckeye tree, some freshwater dwellers, the seventeen-year locust, and spring wild flowers. Would you not like to take that trip Out to Old Aunt Mary's if your school work was like that? In a very fine way this material has enriched our course in nature study.

Peoples and countries—Shall we turn a moment to the enrichment program in geography? Dr. W. R. McConnell is radio teacher. Here this great teacher and traveler tells us in a most wonderful way about:—

Nature of Man in New England—New York, the Empire State, and the City of New York—From New York to Philadelphia—In Pennsylvania, the Keystone State—The Atlantic Coast Plain and the Piedmont Plateau—A Study of Florida—The Cotton Belt—Rice and Sugar Cane—Texas, Our Largest State—Nature and Man in Ohio—Over the Ohio River to Kentucky and West Virginia—The Great American Corn Belt—Winter Wheat—Spring Wheat—How the Great Lakes Help the People in the North Central States—The Rocky Mountains—Our Rich Pacific Lands—Canada—and Nature of Man in Central and Western Canada.

Then there were the studies in foreign lands which space will not permit me to list here.

In a similar manner the following fields were presented by great teachers: Story Plays and Rhythmics, Current Events, Our Government, General Science, History Dramalogs, Studies in Botany, Guidance, Physics, Health, Literature by Living Writers, Stories, Citizenship, Art Appreciation, and Modern Adventure.

School means something—How does the Ohio School of the Air promote activity work?

Just this way. With the vitalizing and enriching material, the school becomes a laboratory for work. School is meaningful to the child. He gets the viewpoints of people now active in government and all walks of life. His own citizenship is more than so many pages in the text. It

is a living thing, for he can see it thru the eyes of others as well as his own. His ideas he can no longer copy from the book, but he must construct them. The program thus tends to lend itself to greater activity on the part of the learner.

In addition to vitalizing and enriching the curriculum, and affording life situations for better activity work, radio education offers rare opportunity for the schoolroom to contact the first citizens of the land, from the President, his cabinet, and men of state and local government to the great scientists who would discover a north or south pole either by air, on land, or under the sea. To this list would be added men of other achievement, industry, and citizens of rank in all walks of life. How we counted that day in remembrance at school when some outstanding personality came to our room and said a word to us! Now, the schoolroom thru radio may contact the great personalities of the wide world from a President of the

United States, to a King of England, and to a Mussolini in Italy.

Supplement not substitute—In this group of personalities will be great teachers by radio, rich in experience, great in personality and voice, who will project themselves into the thinking and the very lives of the children in the classroom. Who can estimate the value in educational and vocational outlook? These great teachers, of course, will never replace the regular classroom teacher, nor in any way detract from her personality, but will enrich it, magnify it, and give it greater power.

In our schools the pupils have become better listeners. The radio program has, somewhat to our surprise, developed unusual concentration and attention. We consider this of great value.

Radio education has great possibilities for the teacher as well as for the child in the classroom. The teachers of the state

can become one great live and growing normal school under the leadership of great teachers of teachers. We had four teachers' forums last year with much profit to the several thousand teachers who were listening in. This picture grows on one as he sees the great Ohio Education Association becoming interested in this dynamic movement in training and keeping teachers alive and growing on the job.

Home and school—I might add that the Ohio School of the Air touches the home as well as the school. One home out of every five in our city listened in on these programs. Who can estimate the value of this home contact in relation to greater interest in education, to better understanding of children, and to the promotion of better schools?

One greater hope for better schools, better teachers, better homes, and a better democracy in which we live, lies in the great possibilities of education by radio.

Prussia Surveys Educational Radio

KARL FRIEBEL

RESULTS of a recent survey in Germany well illustrate how Prussian schools are using radio as an educational aid. The Prussian ministry for Science, Art, and National Education put ten questions to the entire governments and provincial boards of education. These questions were:

1. How many schools have receivers?
2. How many schools receive the school broadcasts regularly?
3. What are the principal stations received?
4. What subjects are most listened to?
5. Can the school children follow the presentation?
6. What experiences were obtained from the school broadcasts; above all, were the presentations an enrichment of the instruction?
7. Based upon the experience obtained from these broadcasts, what can be said for the further elaboration of the school radio programs?
8. What experience of a technical nature was gained?
9. [A question on "Der Schulfunk"]
10. Do the people of the community take any part in listening to broadcasts received by school apparatus?

I. Fifteen thousand sets for education—Altho any estimation of the number of school sets is complicated by the question of who owns the set, a total of 15,000 school and teacher sets is supposed to be the best approximation.

Education by Radio is able to make the above article available to its readers thru the courtesy of Dr. F. H. Lumley of the Ohio State University. It is a free translation of an article taken from the June 15, 1931 issue of *Der Schulfunk*, entitled *Der Stand des Schulfunks in Preussen*.

II. Problems like our own—In answer to the second question some of the factors preventing regular reception were given. These are reminiscent of our own difficulties in the United States. They were:

1. Lack of correlation between the broadcast material and the regular school program.
2. Unfavorable broadcasting hours.
3. Lack of special rooms for receiving sets.
4. Technical difficulties.

In general, elementary schools listened to the broadcasts with more regularity than schools of higher level.

IV. Subjectmatter—It is necessary to keep in mind the fact that selection of subjects for reception by schools was governed by the available choice. The following list gives some indication, however, of the subjects which were especially valuable for elementary and intermediate schools. The figures refer to the number of times each subject was specially mentioned.

Musikalische Darbietungen	[music]	29
Deutsch Kunde Darbietungen	[German culture]	25
Erd kundliche Darbietungen	[geography]	25
Naturkundliche Darbietungen	[nature study]	23
Fremdsprachliche Darbietungen	[foreign language]	21

Geschichtliche u. Kultur geschichtliche Darbietungen	[history]	17
Staatsbürgerkundliche Darbietungen	[civics]	12
Reportagen	[reports, news]	11
Aktuelle Darbietungen	[current topics]	8
Heimat kundliche	[community study]	7

V. Meeting the child halfway—In the majority of cases the children were able to follow the presentations, altho the special problem of suiting broadcasts to both city and country schools was mentioned repeatedly. In addition, several criticisms were directed at the vocabulary and content level of the presentations, stressing the fact that they were adapted to the upper grades. Almost all reports mentioned the fact that some of the speakers talked too rapidly, and did not present the material in a clear manner.

VI. Pro and con—It was the consensus that the broadcasts without doubt were an enrichment of instruction and of great value. The following adverse comments were made, however, with reference to these school broadcasts. They were:

1. Lack of personal touch.
2. Nothing for the school children to do.
3. Lack of visual reinforcement.
4. No consideration of the individual school child.
5. Only entertaining.

Some criticisms showed real concern for the effective use of the broadcasts,

the preparation made for them, and the attitude which the teacher brings to the broadcast lesson. On the other hand many varied reasons were given for favorable judgment on broadcasting to schools. Such statements as inspirational, vitalizing and completing, training attention, giving knowledge of everyday affairs, and making the child feel a part of them, broadening, stimulating thought, and training hearing repeatedly were encountered.

VII. Experientia docet—The following types of suggestions were received in reply to question number seven concerning the results of experience in using the school broadcasts. These suggestions give evidence of close observation of the effects of the broadcasts on the children. [Many of the suggestions will be found identical with those listed in the Ohio School of the Air reports.]

[A] Subjectmatter

1. School broadcasts must be only a supplement to, not a substitute for classroom instruction.
2. They must offer what the teacher cannot offer.
3. No broadcasts should be made of material where vision is essential for the full effect.
4. More time should be spent on modern language.

[B] Method of Presentation

1. Material should not be too difficult.
2. The method of expression and the style should not exceed the comprehension of the children.
3. The presentation must be popular and stirring.
4. When difficult ideas are given, time should be allowed to think them over.
5. Broadcasts should fit the vocabulary of the child.
6. The material should be concrete and clear.
7. Persons who are trained in understanding children should present the material.
8. Foreign texts should be given by foreigners schooled in teaching methods.
9. The presentation must have a recognizable planned sequence.
10. Serial presentations on a single subject are preferable.
11. More short stories in foreign language broadcasts instead of dialog would be helpful.

12. Presentation should not be too long at present not longer than twenty minutes.

13. Longer presentations should have pauses for relaxation.

14. There must not be too much material packed in the presentation.

15. The presentation should be divided into welldefined parts.

16. Repetitions should be made—perhaps by means of questions.

17. Frequent summaries are desirable.

18. There must be a time during the broadcast for activity.

19. The speaker should remember to speak slowly.

[C] Publicity

1. Programs must be announced in plenty of time.
2. A literature index, pictures, and special methods of using the programs should be given.
3. The age levels of the programs should be announced.
4. Notification of program changes should be made, and released well in advance of the broadcast.

[D] The Teacher's Part

1. The teacher must choose the broadcasts carefully.
2. The teacher must prepare for them.
3. Visual aids should be used.
4. Children should be equipped with pencil and paper to make notes, write figures, and names, and be active in other ways.
5. The teacher must follow up the broadcast with a discussion and test.
6. Children must be accustomed to listening to the radio.

In addition to the suggestions listed above, certain benefits of the radio were mentioned. The possibility of hearing music broadcasts in remote places and the stimulation from hearing first-class actors were two points emphasized in the case of children not having access to these cultural advantages. Language teaching was reported to be aided by children hearing the voice of another person besides the teacher, and the hearing of correct pronunciation and intonation. Broadcasts also were reported to break the monotony of foreign language teaching thru the increased interest engendered.

X. School and home relationships
—The upper schools reported scarcely

any community listening with the school apparatus. Where attempts were made to bring parents to the program, early interest vanished as soon as the parents themselves obtained sets. In the country, however, the school radio set often became a gathering point for the neighborhood. Much of the success of this community listening was influenced by the relation of the school teacher to the people.

In small shutin villages the participation was always good, especially on the part of the poorer class. The radio therefore has become a new means of bringing parents and school together. Newspapers cannot be obtained, and so the radio is an important source of culture. The country people especially were glad to hear the radio programs and showed great interest in political economy [Volks-wirt-shaftlich] and musical programs. The interest in reports, dialogs, and occasional talks by officials also was great. A growing interest on the part of the people in the radio was plainly marked.

In some places the villagers were invited by the teacher to come on certain evenings; in other places they liked to get together Sunday for the radio programs. The report came from a certain small village that every Sunday forty or fifty persons gathered at the school to listen to the radio. It was the same in other places, so that one may say that the radio brings the school and the home into closer relationship.

In reports from twenty-three governmental departments the significance of radio for parent evenings, listening evenings, evening courses, singing groups, and other organized groups was made clear.

This survey by Prussian education authorities presents an admirable picture of the problems which Prussian schools have discovered in using school broadcasts. It illustrates the progress made in radio as an educational adjunct.

E DUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
R. C. Higgy, director, radio station WEOA of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

What's Happening in Radio?

CONGRESS *shall regulate*—Once more the courts of the United States have given notice to commercial interests that where radio is concerned the people will be served. The United States Circuit Court of Appeals for the Seventh Circuit has just handed down an opinion which declares the regulation of broadcasting stations to be within the expressly delegated power of Congress to regulate interstate commerce. Furthermore, the court held that a station surrendered all claim to property rights when it applied for a license under the Radio Act of 1927.

These momentous, just, and far-reaching opinions were handed down on a petition for rehearing the case of the American Bond and Mortgage Company and Trianon, Incorporated, versus the United States. The story, as it appeared in the October seventeen issue of the *United States Daily*, is published herewith:

Regulation of broadcasting stations is within the expressly delegated power of Congress to regulate interstate commerce, the United States Circuit Court of Appeals for the Seventh Circuit has just ruled in an opinion handed down on a petition for rehearing of the case of American Bond and Mortgage Company and Trianon, Incorporated, versus the United States.

Congress having the power to regulate broadcasting, the court further held that "it could exercise its power in the only manner which would accomplish the desired end, which was thru elimination of a plurality of broadcasting stations operating on the same wavelength in the same territory at the same time."

The court upheld Congress' exercise of its power in the enactment of the Radio Act of 1927 and amendments thereto.

In its original opinion in the case, handed down several months ago, the court did not consider the attack on the constitutionality of the Radio Act, it is stated in the opinion on petition for rehearing just handed down, because of the stated misunderstanding of the court that the appellants had waived the assignments of error relating to this question.

The owner and operator of the broadcasting station claimed that the construction of the station with the attendant large expenditure of money and its use antedating the enactment of the Radio Act created property rights in the owner and lessee which Congress was powerless to confiscate.

The court rejected this contention, pointing out that any rights enjoined were surrendered when application was made under the act for a license.

"Every investment in broadcasting stations," the court states in its opinion, "was subject to this exercise of reasonable and necessary regulation by Congress. As against such possible regulation there existed no vested right in favor of investors."

LAST JUNE, Thomas A. Edison spoke to the nation over the radio. It was his last public utterance and was marked by his usual brevity. He said:

"My message to you is: be courageous! I have lived a long time. I have seen history repeat itself again and again. I have seen many depressions in business. Always America has emerged from these stronger and more prosperous.

"Be as brave as your fathers were before you.

"Have faith! Go forward!"
—An Associated Press dispatch from New York, October 19, 1931, as published in the *Christian Science Monitor* for that date.

The cumulative effect of radio decisions rendered by the courts of the United States during 1931 will act as a powerful weapon against the selfish greediness of commercial entrepreneurs. Already these decisions are building a case for justice which soon will be wellnigh impenetrable even by the highpriced counsel of the commersites—a word formed somewhat of commerce, somewhat of parasites. The regular fall of the bench's gavel is tolling the knell of commercial reign. It was heard on

APRIL 27, when the Supreme Court of the United States denied the petition of the Radio Corporation of America which asked a review of the decision of a lower court which held the corporation had violated the antitrust laws of the country. It was a severe blow to RCA which was to hear the gavel drop again on

MAY 25, when the same court declared invalid the Langmuir high-vacuum tube

held by the General Electric Company, a subsidiary of RCA, and on

OCTOBER 19 the court again demonstrated its genuine regard for the rights of the people by refusing the General Electric Company a rehearing of the case.

THE SUMMER MONTHS brought another decision against commercialism on the air when the federal district court at Little Rock, Arkansas, protected an educational against a commercial station attempting to appropriate time belonging to the former. The stations involved were KUOA, of the University of Arkansas, and KLRA, of Little Rock, both operating on the 1390 kilocycle channel.

NOW COMES the opinion of this circuit court representing the great states of Illinois, Indiana, and Wisconsin. Congress *shall regulate* broadcasting stations; commerce *shall not* claim property rights on the air. It's a mailed fist, and its blows will hurt selfish commercialism.

In spite of the great good the courts are doing, their work is almost undone by the Federal Radio Commission. Only at this door have the special interests knocked successfully. The highest court in the land held that the Radio Corporation had violated the antitrust laws of the country. Under the Commission's own statutes such violation should have been punished by denial of further licenses to operate broadcasting stations. Whereupon the Commission, altogether shamelessly, declared the section of its statute did not apply in the case. Thus the work of Congress which had set up the Radio Act of 1927 was totally nullified. Literally thumbing its bulbous nose at the Supreme Court, the commersite walked out thru the door, held open by the Commission.

IT CAN'T GO ON FOREVER. As the regular beat of the court gavel falls against the block, another weight is added to that side of the scales which holds the case for justice. In the other side rests the case for commercialism. Can there be any question as to which side will ultimately overbalance the other?

Just off the press—The second year-book of the Institute for Education by

BE ASHAMED TO DIE UNTIL YOU HAVE WON SOME VICTORY FOR HUMANITY.—Horace Mann

Radio, *Education on the Air*, has just been published by the Bureau of Educational Research of Ohio State University, Columbus, Ohio. It is a 300 page, cloth-bound book and sells for \$3.

At this Institute, which was held June 8-12, 1931, papers were read by representative persons from the Federal Radio Commission, the National Committee on Education by Radio, the United States Office of Education, college and university broadcasters, the National Advisory Council on Radio in Education, commercial broadcasters, radio engineers, and the Canadian Radio League. In addition, the latest achievements in schools of the air, chain broadcasting, and television were described.

RCA wilts—One of the most encouraging bits of September news came with the RCA announcement of the twenty-second, stating that that giant of radio had reached an "understanding" for settlement of antitrust suits involving \$47,000,000 brought against it by independent tube manufacturers.¹ Such an announcement was foreshadowed as far back as April 27 when the Supreme Court of the United States denied the petition of RCA asking a review of the decision of a lower court which held that the giant had violated the antitrust laws. The company had fought the suits to the last ditch, hoping it would find sympathy somewhere along the line of courts. Finally, RCA wilted ingloriously when it became evident that the handwriting on the wall was scrawling the word *defeat*.

The settlement terminates the seemingly interminable litigation between RCA and a host of independent manufacturers for a decision as to whether the giant's greediness did not constitute a monopoly. Years of court action retarded the full development of the radio industry, redounding to the disadvantage of the public, and loss of public goodwill for the Radio Corporation of America. The De Forest Radio Company, which bore the brunt of the attack on RCA, announced that it had received \$1,000,000 in settlement of its suit.

Commenting editorially on the settlement, the *Washington Star* in its issue of September 24, 1931, said in part:

The lay public's interest in the reported settlement of litigation over radio patents will lie principally in that part of the optimistic announcement by C. G. Munn, president of the De Forest Radio Company, which declares that "The radio public gains by this settlement thru having the radio industry concentrate once more on the development and production

of new and better radio products, in place of the long litigation which has severely strained the resources and attentions of the contestants during the last few years."

The lay public may interpret this action as meaning not only cheaper and better radio

BUNCOMBE OR BOOKS?—Because it has been bought by a national advertiser, the time formerly donated by stations WOC and WHO can no longer be used for a weekly booklovers broadcast sponsored by the Des Moines and Davenport public libraries. Thus does advertising displace a cultural program which has been on the air at 10:15 every Thursday night since August 13, 1928. The broadcast will be discontinued until a suitable period is available. Many letters from enthusiastic listeners have been received from such distant points as Shand Creek, Saskatchewan, Canada, 875 miles from Des Moines by air line; Lufkin, Texas, 675 miles; Yoakum, Texas, 895 miles; Carlisle, Pennsylvania, 840 miles; and Akwenasa, Wyoming, 860 miles.—*Book Marks*, Vol. 6, No. 1, Fall 1931, published by The Public Library, Des Moines, Iowa.

sets, but possibly better programs. If the settlement of the extensive litigation involving the Radio Corporation of America, the De Forest Radio Company, a score of independent manufacturers and \$49,000,000 will enable the manufacturers to spend more time and money on research and material, thus producing better sets, the broadcasting industry should be made to sit up and take notice and produce better programs. In many respects it has fallen to a bad state.

The settlement of the suits may lead to the establishment of a radio patent pool, making available to all manufacturers, on equal terms, any radio patent. This would relieve the industry of the interminable and expensive litigation over patent rights. Radio Corporation, heretofore unwilling to join any such pool because of its control of the vast majority of patents, will probably be willing to join now.

Settlement of the suits, however, did not deter the government from pursuing its case against RCA, GE, Westinghouse, AT&T, and certain other companies, whose intra-agreements, in the opinion of federal authorities, were designed to suppress competition. Early in October representatives of the Department of Justice

met with the defendants in New York City in an effort to settle differences out of court. Altho the defendants denied the charges brought against them, it developed at the conferences that, regardless of the legality or illegality of the agreements, the defendants were willing to take steps necessary to make them unobjectionable to the government. There had been some mention of an open patent pool, into which all patents would be dumped and made available to the public. It was understood that the government looked with favor upon such a pool if it were practicable.

On October nine, however, the *United States Daily* headlined a story as follows: PLAN TO SETTLE RADIO ANTITRUST SUIT FAILS. It continued, in part:

An attempt to settle out of court the antitrust suit brought by the Department of Justice against certain companies in the radio industry charging provisions of agreements between them were illegal as designed to prevent and suppress competition between the parties, failed at a conference between department officials and representatives of the defendants, it was announced orally October eight by William D. Mitchell, Attorney General of the United States.

Mr. Mitchell did not state whether the department contemplates going ahead with the suit or attempting further to arrange a settlement.

Let the government realize its position in this matter. Let those who occupy their seats *by the people* know that they must act *for the people*. Either the government has a case or it has not a case against these companies. Let there be no bargains when the welfare of the people is at stake.

House-organ—Volume one, number one, of *Broadcasting*—the *Editor and Publisher* of radio—made its public debut on October fifteenth. Announcing itself as THE MAGAZINE OF THE FIFTH ESTATE [radio], *Broadcasting*, thru its editor, Martin Codel, dedicates itself to "the American system of free, competitive, and self-sustaining radio enterprise." Its columns will be devoted to "the news of radio, particularly to bringing the various elements that make up this great art and industry to a greater awareness of each other." Withal, *Broadcasting* gives unmistakable evidence of becoming the house-organ of things commercial in radio.

Mr. Caldwell explains—While the Federal Radio Commission drew up its forces to withstand onslaughts promised during the winter, radio's history was being moulded far from Washington. At Atlantic City, during the annual conven-

¹ *Education by Radio*, Vol. 1, No. 15, May 21, 1931.

tion of the American Bar Association, there occurred several interesting events which centered around the report of the association's communications committee. Chairman of this committee is Louis G. Caldwell, whose fees have been estimated as among the highest paid any lawyer retained by commercial radio interests.

The committee's report vehemently denounced the Fess bill for the reservation of fifteen percent of the radio facilities of this country for educational broadcasting. It likewise disapproved the Glenn bill sponsored by organized labor and designed to give labor a definitely allotted space in the air.

Mr. Frank P. Walsh, chairman of the power authority of New York State, went to Atlantic City on September eighteenth as the unofficial representative of organized labor. He challenged the report on the ground that it had not been written with an impartial pen because Mr. Caldwell, at one time, had represented the *Chicago Tribune* before the Radio Commission in litigation with the Chicago Federation of Labor as to which should be allotted a wavelength desired by both. Also at Atlantic City that day was the *New York Times's* correspondent who wrote in part:

After charging that the communications committee's report, if approved by the association, would react unfavorably to the interests of labor, Mr. Walsh, by a process of persistent questioning of Mr. Caldwell in the face of repeated efforts by Chairman Long to silence him, compelled Mr. Caldwell to admit that he was the counsel for the newspaper in question.

"What is the purpose of this forty-seven page report?" demanded Mr. Walsh, as Chairman Long tried to assure him that it did not have the approval of the convention. "I charge that this report which outwardly has all the appearance of a document of the American Bar Association, is designed to deceive the public and members of Congress and the Federal Radio Commission that this association stands for certain things which obviously are to the interest of private enterprises as against public interest. I demand that the convention take no action on this report at this time."

Mr. Caldwell took exception to the story in a letter to the *Times*. It was published under the caption "Mr. Caldwell explains." He declared that the newspaper account "gives the impression that Frank P. Walsh had some difficulty in eliciting from me an 'admission' that I represented the *Chicago Tribune* . . ." Mr. Caldwell said further that "in the first reply I made to Mr. Walsh I acknowledged without hesitation and without pressure from him that I represented

the newspaper in question." However, the true significance of the letter resided deeper in its context, when he wrote:

Mr. Long, as chairman, did not attempt to silence Mr. Walsh. Mr. Walsh was under the erroneous impression that we were asking for

SPECIAL RADIO INTERESTS FEAR CONGRESS—The Congress of the United States is a mighty body. It represents the people. It is close to their aspirations and needs—the protector of their liberties and rights. The American Congress is the finest legislative body in the world. It is a bit absurd therefore when Henry Adams Belows, vicepresident of the Columbia Broadcasting System—who resigned membership on the Federal Radio Commission after four months service in favor of a commercial affiliation—suggests in a recent magazine article that Congress should let radio alone and permit the Federal Radio Commission to continue its policy of the public be damned. Certainly when a public body like the Federal Radio Commission denies to education—the greatest single tax-supported enterprise of the nation—its rights on the air, it is high time for Congress to take a hand.

the approval of our report, and the positions taken therein, by the American Bar Association. This was not the fact; no action was sought by us from the American Bar Association other than the adoption of two resolutions on formal matters [neither of which implied approval of the report], and the report remains merely what it purports to be—the views of the members that signed it.

Is it sound public policy for men who have large selfish interests at stake to use great civic bodies like the American Bar Association to promote their private advantage and to mislead the public as to the facts?

Correction—Referring to paragraph four, page twenty-five of *Education by Radio*, the Canadian Marconi Company in a courteous letter calls attention to the fact that it is not a subsidiary of the Radio Corporation of America, which holds a financial but not a voting or con-

trolling interest in the Canadian company.

High-power—For the time being, at least, the high-power question has been answered. On October first the Federal Radio Commission recommended the following stations for increases in power to 50,000 watts:

In the first zone: WOR—the Bamberger Broadcasting Service, Inc., Newark, New Jersey; second zone: WCAU—the Universal Broadcasting Company, Philadelphia, Pennsylvania; third zone: WSM—the National Life and Accident Insurance Company, Nashville, Tennessee, and WSB—the Atlanta Journal Company, Atlanta, Georgia; fourth zone: WCCO—Northwestern Broadcasting Inc., Minneapolis, Minnesota, and WHO-WOC—the Central Broadcasting Company, Des Moines, Iowa; fifth zone: KOA—the National Broadcasting Company, Denver, Colorado, KSL—the Radio Service Corporation of Utah, Salt Lake City, Utah, and KPO—Hale Brothers Stores, Inc., and The Chronicle Publishing Company, San Francisco, California.

At the same time the Commission boosted the power of the following stations to 25,000 watts: WHAM—the Stromberg-Carlson Telephone Manufacturing Company, Rochester, New York; WHAS—the Courier-Journal Company and Louisville Times Company, Louisville, Kentucky; WBT—Station WBT, Inc., Charlotte, North Carolina; WAPI—Alabama Polytechnic Institute, University of Alabama, and Alabama College, Birmingham, Alabama; KVOO—the Southwestern Sales Corporation, Tulsa, Oklahoma, and KFAB—KFAB Broadcasting Company, Lincoln, Nebraska.

The Commissioners disagreed with recommendations of Examiner Ellis A. Yost in the first and fourth zones. He recommended WJZ—the National Broadcasting Company, New York City, New York, in the first zone, and WCCO and WGN, the latter operated by the Chicago Tribune Company, Chicago, Illinois, in the fourth zone.

There are now twenty stations in the United States operating on high-power—four in each zone. The Commission is on record as being opposed to further extension of high-power. Its hands have been forced, however, and when the big guns of commercial interests next besiege the Commission, they will find its fortress already cracked, easier to subdue.

Last year when the commercial stations dropped their pleas into the high-power grab-bag awaiting the Commission's draw, the National Committee on Education by Radio read a dissenting paper into the record. It decried the obvious tendency toward monopoly as reflected by the avaricious aggressiveness on the part of commercial interests to grab up the greatest number of channels with the greatest amount of power.

Numbers count—When the Federal Radio Commission reconvened in September it adopted the 1930 population figures as the basis for calculating its

ZONE 1

State	Population	Due	Assigned	± Units
N. Y.	12,588,066	35.07	39.20	+ 4.13
Mass.	4,249,614	11.84	9.98	- 1.86
N. J.	4,041,334	11.26	11.53	+ 0.27
Md.	1,631,526	4.55	4.10	- 0.45
Conn.	1,606,903	4.48	3.55	- 0.93
P. R.	1,543,913	4.30	0.40	- 3.90
Maine.	797,423	2.22	2.20	- 0.02
R. I.	687,497	1.91	1.40	- 0.51
D. C.	486,869	1.35	1.30	- 0.05
N. H.	465,293	1.29	0.80	- 0.49
Vt.	359,611	1.00	0.60	- 0.40
Del.	238,380	0.67	0.70	+ 0.03
V. I.	22,012	0.06	- 0.06
Total...	28,718,441	80.00	75.76	- 4.24

"quota system," governing distribution of broadcasting facilities. Changes brought about by the census were insignificant—the greatest gain for any one state being five one-hundredths of a unit, New Jersey; the greatest loss, four one-hundredths, Kentucky. A unit is the equivalent of one station of 1000 watts

ZONE 2

State	Population	Due	Assigned	± Units
Pa.	9,631,350	27.63	20.24	- 7.39
Ohio	6,646,697	19.07	18.65	- 0.42
Mich.	4,842,325	13.89	11.40	- 2.49
Ky.	2,614,589	7.50	7.62	+ 0.12
Va.	2,421,851	6.95	9.50	+ 2.55
W. Va.	1,729,205	4.96	4.95	- 0.01
Total...	27,886,017	80.00	72.36	- 7.64

ZONE 3

State	Population	Due	Assigned	± Units
Tex.	5,824,715	16.22	22.77	+ 6.55
N. Car.	3,170,276	8.82	7.82	- 1.00
Ga.	2,908,506	8.10	7.95	- 0.15
Ala.	2,646,248	7.37	6.22	- 1.15
Tenn.	2,616,556	7.29	12.83	+ 5.54
Okla.	2,396,040	6.67	9.00	+ 2.33
La.	2,101,593	5.85	8.50	+ 2.65
Miss.	2,009,821	5.60	3.00	- 2.60
Ark.	1,854,482	5.16	4.40	- 0.76
S. Car.	1,738,765	4.83	1.70	- 3.13
Fla.	1,468,211	4.09	8.35	+ 4.26
Total...	28,735,213	80.00	92.54	+12.54

power operating full time on a regional channel. The net amount each state is over or under quota is listed under the column marked "± units."

ZONE 4

State	Population	Due	Assigned	± Units
Ill.	7,630,654	22.52	34.67	+12.15
Mo.	3,629,367	10.71	12.05	+ 1.34
Ind.	3,238,503	9.56	7.48	- 2.08
Wis.	2,939,006	8.67	7.95	- 0.72
Minn.	2,563,953	7.57	9.04	+ 1.47
Iowa.	2,470,939	7.30	11.45	+ 4.15
Kans.	1,880,990	5.55	4.71	- 0.84
Nebr.	1,377,963	4.06	7.26	+ 3.20
S. Dak.	692,849	2.05	3.01	+ 0.96
N. Dak.	680,845	2.01	2.99	+ 0.98
Total...	27,105,078	80.00	100.61	+20.61

ZONE 5

State	Population	Due	Assigned	± Units
Calif.	5,677,251	36.86	36.43	- 0.43
Wash.	1,563,396	10.15	15.80	+ 5.65
Colo.	1,035,791	6.72	9.42	+ 2.70
Ore.	953,786	6.19	9.15	+ 2.96
Mont.	537,606	3.49	3.00	- 0.49
Utah.	507,847	3.30	6.60	+ 3.30
Idaho.	445,032	2.89	2.60	- 0.29
Ariz.	435,573	2.83	2.60	- 0.23
N. Mex.	423,317	2.75	4.03	+ 1.28
Hawaii.	368,336	2.39	1.40	- 0.99
Wyo.	225,565	1.46	0.20	- 1.26
Nev.	91,058	0.59	0.80	+ 0.21
Alaska.	59,278	0.38	0.70	+ 0.32
Total...	12,323,836	80.00	92.73	+12.73

Hats Off to the Courts!

Hats off to the courts! They have helped to protect the American public in its rights to radio as has no other agency. Congress, with the best intentions in the world, turned over to the Federal Radio Commission immense and almost unlimited power over the greatest natural resource the nation has ever had. The Radio Commission—composed chiefly of army men, technicians, and legalists—proceeded to turn this priceless resource over to commercial monopoly groups. Had it not been for the protecting power of the courts freedom of speech on the air would have been practically lost and the greediest monopoly of all history would be in a position to dominate the distribution of ideas!

The Radio Octopus

DANE YORKE

IN THAT same fall of 1920 which saw the appearance of Sinclair Lewis' *Main Street* there were also offered the American public the first commercial radio receiving-sets. With earphones tightly clamped to heads a few fortunate owners of those early crystal sets carefully and wonderingly adjusted the cat's whisker and listened to radio's first big program: the Harding-Cox election returns as broadcast from Pittsburgh by the station later known as KDKA. Thus simultaneously were ushered in the decade of selfcriticism of which *Main Street* was the detonator and the first decade of a new business which was to epitomize American industry as *Main Street* epitomized American Philistinism.

The radio business began humbly enough. Of the \$30,000,000,000 spent at retail by the American public in 1920, it has since been estimated that radio received only about \$2,000,000. Most of that was not for complete sets but rather for parts with which ambitious amateurs assembled their own home-made receivers. The first vogue was for the crystal detector, but in 1921 the vacuum tube began to come into favor thru its greater power and range, and retail purchases of radio goods mounted to about \$6,000,000. The year 1921 also saw the new craze spread from Pittsburgh to Metropolitan New York, and station WJZ in Newark, thru the diverting mischance of a fat soprano who balked nervously at the ladder leading to the microphone atop a factory roof-tower, was led to invent radio's first great drawing card: the Bed-Time Story. Then Major Andrew White, momentarily famous for his announcing of the Dempsey-Carpentier fight, further pioneered by coaxing his theatrical acquaintances of Broadway to broadcast [gratis!] over WJZ, altho some Westinghouse officials shook doubtful heads at his enterprise in the fear of a possible

smirch to radio's pristine purity thru such association with the stage. Soon WJZ moved its microphone from the ladder-approached tower to the more accessible and commodious quarters afforded by what had formerly been a rest-room for women factory-workers. The new room, draped in Canton flannel, was grandly called a studio. Thus quickly, and casually, radio took on the semblance of an art.

The progress of broadcasting soon brought about a great increase in public interest and during the winter of 1921-1922 retail purchases of radio goods were estimated at \$6,000,000 a day—and perhaps reached that figure for one day, at least. The tube factories of the Radio Corporation of America stepped up production from an average of 5000 tubes a month in 1921 to an output of 60,000 for January 1922 and 77,000 for March, with 150,000 planned for April and 200,000 for June. As to commercial receiving-sets, a then much-revered authority, Herbert Hoover by name, "reasonably estimated" the current sale at 100,000 sets a month and put the total sale to be expected that year at more than 1,000,000 sets. It was about this time, too, that the same authority gave voice to the bon mot: "There is no such thing as over-production; there is only underconsumption." His figures on radio were issued in March. In April the representatives of five hundred department stores met in New York in an effort "to improve the grade of radio merchandise" being offered the public. That same month the business suddenly slumped, for the market was glutted, and by the end of the year "literally thousands of manufacturers had been swept into financial ruin."

It may have been "underconsumption." Yet, curiously enough, the public's purchases had grown a full 1000 percent—from a retail radio volume of \$6,000,000 for 1921 to \$60,000,000 for 1922. And Amos 'n' Andy were still unknown!

II

IF EVER an American industry was born with a silver spoon in its mouth, radio was that industry. The early telephone, the laughed-at horseless carriage, and particularly the early phonograph that sounded "like a parrot with a cold in its head," had all had to struggle hard against public disbelief and derision.

But radio was born as an accepted wonder child. Its spectacular rôle in sea disasters, its transmission of voices [even before the war] to Honolulu and Paris, had given it a remarkable press and an even more remarkable public interest and approval. Commercially speaking, 1920 marked its entry into the field of home entertainment. In that field radio had been preceded by the phonograph, which in twenty-five years of effort had progressed from the mere side-line of the small bicycle shop to the dignity of a serious musical line, supporting many exclusive shops and enjoying a public patronage of around \$150,000,000 a year. The phonograph, in gaining entrance into 9,000,000 American homes, had blazed the way for radio's merchandising distribution, and the telephone, the electric lamp, and the electrical equipment industries had blazed a way thru the manufacturing problems that it confronted. The so-called art of advertising had developed to a high point not merely its powers of persuasion but also its convenient lawyer-like code of seeing nothing but perfection and truth in its clients' claims of virtue. Thus radio, as an industry, stood as the full heir of what has been called American progress and American business efficiency.

Nickel-stealing—The first slump of 1922 was perfunctorily attributed to the effect of summer static on broadcast reception. But the thing really lay deeper: in what might be called the nickel-stealing aspect of American business. The after-the-war boom of 1919 had collapsed in May of 1920 and in 1921 corporation

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IT WAS my intention and interpretation of the Federal Radio Law that it should always be construed to favor the public and educational institutions versus commercial broadcasting. I believe other members of Congress almost universally held the same views.—Representative John W. Summers of Washington in a letter to Dr. E. O. Holland, President of Washington State College, Pullman, Washington.

profits fell to less than a billion dollars [from eight billions in 1919] with "more than half of all companies going in the red." Commercial failures increased from 6500 to 19,700 and bankrupts' liabilities from \$113,000,000 to \$627,000,000. Frantically hunting for some stop-loss panacea, manufacturer after manufacturer leaped into this new indoor sport of radio. In three months, it is said, there were more than 1250 new corporations organized. Shoemakers, jewelers, hair dressers, cloak and suit manufacturers, all rushed madly in until by the beginning of 1922 the number of radio set and radio parts producers had grown from about thirty [in 1919] to around 5000, of whom the *Nation's Business* later declared that "ninety-five percent had no right to enter the business." Badly designed, carelessly manufactured products were dumped on the radio market by the carload.

A similar development went on in the retail field. In Newark, before WJZ went on the air, there was just one shop handling radio sets and parts, and these merely as a side-line to general electrical equipment. But within a few weeks after WJZ started, the number of Newark dealers had jumped to two hundred. In New York City they rose to 1500, as compared to less than five hundred for the phonograph trade, with its then much greater volume. Faced by the famous buyers' strike of 1921, hardware stores, stationery stores, drug stores, florists, plumbers, and even [in one instance, at least] millinery shops, took on the new side-line of radio. Almost every type of merchant, without regard to the fitness or unfitness of putting in radio by the side of his regular line, either bought a few commercial sets or else busied himself trying to merchandise the handiwork of some mechanically-minded son or kid brother. But the public soon discovered that the sets for which a range of two hundred miles or more was claimed usually had an effectiveness not exceeding fifteen. Beyond that were merely squeals and whistles.

All over the country the story was the same. Broadcast stations were springing up like toadstools. In December, 1921, there were only five stations on the air, but by September, 1922, there were five hundred and thirty-two more. Each new station served as a focal point for a new retail development, until more than 20,000 dealers were grabbing at the radio dollar. How absurd the situation was becomes more clear on analysis. The estimated retail volume for 1922 was \$60,-

000,000 [and the estimate is generous]. Cut in half to arrive at the approximate manufacturer's sale price, it averaged just \$6000 gross for each of the five thousand manufacturers, and a few hundred dollars net profit to a manufacturer. On the retail side that same sixty millions averaged a gross sale for the year of \$3000 for each of the 20,000 dealers, which in turn yielded a gross profit of perhaps \$1200 and a net profit that averaged not over \$25 to \$30 a month. Just about Army doughboy pay!

So much for radio's first demonstration of American business vision. It was a blind nickel-hunting scramble.

III

THE DEBACLE of 1922 was feelingly declared to have taught radio a great lesson. It dissuaded nearly 2000 manufacturers from further participation in the field, and it burnt the fingers of a vastly greater number of dealers who saw the radio merchandise on their shelves depreciated tremendously in value as the result of the great cut-price centers which now sprang up in New York, Chicago, and elsewhere to become a fixture of the business. In those centers so-called standard commercial sets and parts, bought from financially embarrassed manufacturers at bankrupt prices, were offered to the public at from one-third to one-fifth of their original list prices. A new industry sprang up within the industry. It was the industry of the wrecking gang clearing away the debris of overproduction.

Radio mania—Yet public interest certainly did not wane. President Harding installed a receiving-set in his White House study. Jackie Coogan broadcast. A small Maine factory made the first page of the New York press by shipping a carload of toothpicks to Japan on an order received by radio. The newspapers, reflecting the popular interest, gave any story with the word radio in it the news-value of the man biting a dog. The *New York Times* featured an article on the possibility that radio had actually been foreseen by Shakespeare, and a distressed wife was headlined as seeking divorce on the ground that her husband had made life unbearable with his "radio mania."

There was really a mania of public buying. The retail sales for 1923 doubled those of 1922, and reached the remarkable total of \$120,000,000. Yet the trade was not happy. The crystal set had been supplanted by the tube set; the blatant loud speaker had come in. The neutrodynamic circuit threatened the existing cir-

cuits, and the superheterodyne was announced. The manufacturer was priding himself on the multiplicity of knobs and gadgets with which his sets were equipped, but the public was calling for a single-knob control. Women resented the unsightly batteries; and inventors were racing to find some means of using power from the ordinary light socket. The dealers, aghast at the constant changes in designs, bitterly cursed the industry as an engineers' plaything in which there was no commercial stability.

It was all a mad race between manufacturers, wholesalers, and dealers to keep the merchandise moving and not be caught with dead stock when some new development appeared. Even that budding colossus, the Radio Corporation of America, felt the strain and in the summer of 1923 jettisoned 20,000 sets [having, by newspaper report, an original retail value of more than \$3,000,000] in a great half-price sale that made department store history. Wrote a trade observer at the time: "The outfit that is the latest word today is obsolete three to six months hence . . . you must [continually] put your effort into getting something new [to sell]. This is the secret of the radio business." To recall Mark Twain's shabby hero, that principle was also the secret of the great Royal Nonesuch who was finally ridden on a rail.

The year 1924 was a gaudy one for radio. On two successive days the *New York Times* found space in which to chronicle for posterity how the Coolidge cat, presumably strayed after some errant love, was sought and found by radio. In that year, too, the industry was discovered by that great pundit, Roger W. Babson, LL.D. In a published survey, based upon "hard business facts," Dr. Babson revealed the existence of 3000 radio manufacturers, 1000 jobbers, and some 26,000 dealers of various types, all of whom, by his figures, were to divide an estimated retail volume of \$350,000,000 for the year, an increase of nearly 300 percent over 1923, thus placing radio thirty-fourth among American industries and almost level with shipbuilding. "The future is indeed bright [for radio]," ran his survey. . . . "There is little danger of the industry becoming top-heavy and suffering serious results." Thus, with Dr. Babson's approval, radio became Big Business. Soon the New York Curb broke out in a rash of radio stocks and the Radio Corporation of America, all dressed up with a former major-general at its head, took its place

on the quotation board of the New York Stock Exchange, there to begin its career as a leader in the Coolidge-Hoover bull market of lamented memory.

The story of RCA—The official story of the organization of that corporation is rather interesting. During the war, it seems, the General Electric Company put into use a very valuable wireless device known as the Alexanderson alternator. After the war, impressed by the device, the British Marconi Company offered General Electric a \$5,000,000 contract provided it were given exclusive rights. The deal was nearly closed when President Wilson, then in Paris at the Peace Conference, sent two high officers of the Navy to protest against the granting of exclusive rights to the British Marconi Company. So fundamentally important was the Alexanderson device to wireless transmission that without its use the United States would be effectively barred from the radio field. The cable systems of the world, argued President Wilson's representatives, were already under complete foreign control; to surrender air communication also would be a tragic mistake.

But Owen D. Young and his associates of the General Electric Company pointed out that much money had been spent in developing the Alexanderson apparatus. Save for the Marconi Company there was no real market for it, and thus no seeming hope of any return on General Electric's investment. Here the official story grows vague. Between patriots who could mention *quid pro quos*? Perhaps there was no mention. But at any rate, when the official story clears again Owen D. Young ["with the sympathetic cooperation of our government"] had begun negotiations which ended in October 1919, with the formation of the Radio Corporation of America to pool the patents and wireless interests of General Electric, American Telephone and Telegraph, Western Electric, and the United Fruit Company. Then the property and rights of the American Marconi Company [which had been practically a subsidiary of the British Marconi] were acquired and station-by-station a world network of wireless was begun, centering in the United States and dominated by American interests. Each station, of course, was equipped with the Alexanderson apparatus. America had control of the air; radio was saved for democracy. General Electric had a market for its product. Everybody seemed happy.

But in all this there was no thought or vision of domestic broadcasting such as is

now known. That vision and development came from outside the Radio Corporation group—from two officials of the Westinghouse plant in Pittsburgh. In continuance of their wartime experiments, one of those officials began to broadcast from the garage of his home occasional speeches and phonograph records. His concerts attracted attention and a Pittsburgh department store shrewdly advertised them and thereby increased its sale of radio parts to amateurs. This advertising, in turn, suggested to another Westinghouse official a new market for Westinghouse products. He had the vision of the possibility of mass entertainment. Accordingly the garage station was removed to the Westinghouse plant and became the famous pioneer, KDKA.

But in its efforts to exploit commercially the new development, Westinghouse ran into immediate difficulties. The company controlled various radio patents of its own, but other basic patents, fundamental both to broadcasting and to the manufacture of broadcast receiving sets, were now controlled by the Radio Corporation of America. The Westinghouse laboratories spent considerable money and time in the effort to develop a receiving-set that would not infringe on RCA's patents. But this proved impossible and there seems to have ensued a mutual jockeying for position, as a result of which, in June 1921, Westinghouse was admitted to the RCA group with the privilege of manufacturing forty percent of all radio goods merchandised by RCA, while General Electric kept the right to manufacture sixty percent. As a sidelight on the patent situation, Westinghouse attorneys later testified that their company used "more than two hundred patents [held by other members of the RCA group] in the manufacture of receiving sets and broadcasting apparatus." After the admission of Westinghouse, the Radio Corporation of America represented the pooling of more than 2000 patents. But those patents were not pooled for democracy.

It was the juiciest plum ever handed any business clique by a fond government. It was so beautifully inadvertent and gratuitous! The official anxiety which led to the formation of RCA was over transoceanic wireless communication, and at first that was the corporation's chief source of revenue. In 1921 its total gross income was barely \$4,000,000, of which transoceanic communication and marine service represented sixty-four percent. But the domestic development, stumbled on by Westinghouse in

Pittsburgh, immediately changed the picture. In 1922 RCA's gross income jumped to nearly \$15,000,000, of which transoceanic and marine accounted for only twenty-four percent. In 1923 the gross jumped again—to \$26,000,000—while transoceanic and marine [altho amounting in actual dollars to nearly as much as RCA's total gross income of 1921] shrank to fifteen percent, and to eight percent in 1924. In that latter year gross income more than doubled, going to \$54,000,000, of which ninety-two percent [or \$50,000,000] came from the sale of radio apparatus and almost wholly resulted from the domestic broadcasting craze. The original main line of effort had become the small side-line and in three years RCA had realized nearly \$75,000,000 from a source of income undreamed of in the original organization.

All of which lends humor to the plea of an RCA official [made to the Harvard Graduate School of Business Administration] that the corporation's importance in transoceanic communication, and its investment of nearly \$20,000,000 in that field, were strong reasons why its domestic monopoly should not be criticised or disturbed. Its investment to save radio for democracy had been returned many fold—and by that same democracy.

IV

AS A RESULT of the stimulus of a presidential campaign the radio industry realized Dr. Babson's prediction of volume, the retail sales amounting to between \$300,000,000 and \$350,000,000 for 1924. There had been the usual summer slump and men began to say that the radio selling season lasted only from Labor Day to St. Patrick's Day each year. But the fall of 1924 opened brightly and the business mounted at such a rate that RCA reported a volume of \$22,000,000 for the months of November and December alone. The impetus continued into 1925. In January there came the great radio debut of John McCormack and Lucrezia Bori, in which the American Telephone and Telegraph Company demonstrated the possibilities of network broadcasting. RCA's sales for the first three months of the new year brought in over \$15,000,000.

Overproduction—Enthusiasm ran high in the trade. Said a report of the time: "Leaders of the industry see a great business ahead and scoff at pessimists who speak of overproduction." But, quite appropriately, April Fool's Day changed the chant into a wail. One of those same leaders, boasting in December of a 435

percent gain in factory output, was so overproduced by April that he was forced to use a great department store as a dumping ground for 5000 sets in a "half-price" sale, which broke the market so badly that in May another leader threw overboard 20,000 sets, valued, at December retail prices, at more than \$4,000,000. But in May they brought less than half that figure.

The slumps of 1922, 1923 and 1924 had taught no lesson. The puffed-up RCA was caught with the rest, staggering under an inventory rumored to exceed over \$30,000,000 on a retail basis and with its jobbers and dealers [15,000 in number] so glutted with merchandise that it did not dare cut prices or jettison its own load. As a result, RCA reported in July, 1925, its first deficit in earnings—"a reflection of the drastic unloading of radio apparatus by competing companies." All told, it was later estimated that about 1,000,000 receiving-sets were sold to the public during 1924. But another 500,000, representing the industry's overproduction, had to be liquidated at bargain prices.

Wanted—a czar—In the fall of 1925 business revived once more. But the pressure of unliquidated inventories still persisted and in turn this led manufacturers to seek new retail outlets. During September it was estimated that 6000 new dealers were persuaded to enter the field and all scruples in selling were cast to the winds. This again stimulated fresh manufacturing activity, and three manufacturers plunged foolhardily into production schedules calling for 1,500,000 sets. Again the market was glutted and April Fool's Day of 1926 saw the beginning of a new series of bargain sales, this time accompanied by receiverships and bankruptcies among manufacturers. The radio trade began calling for a czar. As in the old fable, the frogs petitioned earnestly for a king—but a nice, obliging king.

Chaos in the air—The business was feeling not only the effects of its own folly; it was also reflecting the chaos in the air. Operating under a law of 1912 the Secretary of Commerce had sought to control broadcasting by allotting wavelengths to the various stations as they appeared. In the first three years of the industry 1105 broadcast stations made their debut, but more than half retired very promptly. Such retirements did not ease the situation, however, for the remaining stations, having used up all the

possible wavelengths, began a race to obtain more power in the effort to drown out rival broadcasts. To add to the merry war a United States court decided in 1926 that the Secretary of Commerce had no power to regulate broadcasting; that in fact no legal control was possible under the existing law, and in July all regulation ended—with five hundred and twenty stations on the air. With the result that by the following March [of 1927] new stations had crowded in to a total of seven hundred and thirty-four and the power used had grown from 378,000 watts to nearly 647,000 watts. Every program was accompanied by heterodyning squeals and whistles from interfering stations. It was absolute chaos.

Conditions were such that the trade meekly accepted from Congress in 1927 a new radio law, designed to regulate broadcasting and since described as "the most severe, the most drastic, and the most confining which was ever imposed upon any American business." But improvement was slow. Not until 1928 did the Senate grant final confirmation to all the members of the new Radio Commission. In the meantime the damage had been done. The multiplicity of broadcasters forced receiving-set manufacturers to sacrifice every consideration of tonal quality and accurate reproduction to the one great necessity of sharp tuning so that the user might shut out interference.

Quality reaches new low—The year 1926 is still remembered as marking the low point of quality in radio reception. The public, in disgust [and aware, too, that the convenience of power-operated sets was just around the corner]; sat back and postponed its purchases. For the first time since the industry began there was an actual falling off in the annual number of sets sold. In 1925 total sales were placed at 2,000,000 tube sets. In 1926 sales dropped to 1,750,000 and in 1927 to 1,350,000, with an actual recession in total sales volume, even counting the sales of tubes, accessories, and parts. The number of radio manufacturers declined in twelve months from 2550 to 1200, and the number of dealers from 40,000 to about 28,000. The financial columns of the *New York Times*, noting that 5,000,000 shares of radio stock had been peddled to the investing public, estimated that those same shares had declined almost \$100,000,000 in value within a year. Radio was one vast headache.

Yet, oddly enough, the income of the Radio Corporation of America grew steadily. True, its sales for 1925 had receded, but 1926 showed a gain of \$10,000,000 and a new high total for the year of \$56,000,000. In 1927, while the rest of the trade slumped, Radio Corporation showed another \$56,000,000 and a gain of about one percent in sales. But its net profit that year showed a clear gain of six percent from a rate of twelve percent in 1926 to eighteen percent in 1927. The corporation had tapped a new source of income. The saving of radio for democracy had turned from a patriotic duty to a positive pleasure—a pleasure that brought in that year more than \$3,000,000 of clear extra profit. *The new profit sprang from the patent situation.*

V

THE first radio tube was patented by an Englishman, James Ambrose Fleming, in 1905. It contained simply a cathode and anode and was known, therefore, as a two-element tube. But a year or so later an American, Lee De Forest, patented a tube containing a third element—the grid—which represented a very great improvement on the Fleming tube. For a time De Forest manufactured and sold his tube but then the American Marconi Company [which had acquired the Fleming patent] brought suit for infringement and the United States courts sustained the claim. De Forest was stopped.

De Forest—In the meantime, however, he had sold rights of manufacture and sale under his patent to the Western Electric Company, which in turn reassigned those rights to its parent—the American Telephone and Telegraph Company. Thus when domestic broadcasting suddenly opened up a vast new market for tubes the Radio Corporation of America [which had taken over the American Marconi Company] was, by reason of its patent exchange with American Tel. and Tel., in the curious position of being free to manufacture and sell three-element tubes while the actual inventor of that tube, De Forest, was not free to do so. Not until the Fleming patent expired in 1922 was De Forest able to reengage in tube production. By that time Radio Corporation had achieved such control that, as pointed out by the Federal Trade Commission, it was able to sell during the first nine months of 1923 more than 5,500,000 tubes, while "the only other concern having the right to make and sell, sold only 94,100." (Concluded in next issue)

The Radio Octopus

DANE YORKE

[Concluding Installment]

Langmuir—Nor does that end the story. The De Forest patent expired in 1925. The very same year the General Electric Company secured the so-called Langmuir patent and the luckless De Forest was once more in litigation. Both the Fleming and De Forest tubes were gas-filled. Langmuir simply took out the gas and produced a high vacuum. Except for the vacuum the Langmuir tube was identical with the De Forest tube, but the question whether or not the mere exhausting of the air in the tube constituted true invention occupied the United States courts for four years. In May last the Supreme Court finally settled the matter by declaring the Langmuir patent invalid. But meanwhile all competitive tube manufacturers had to choose between paying tribute to the Radio Corporation [as the sales-agent, so to speak, of General Electric] upon an unadjudicated patent, or of gambling that the Langmuir patent would be upset. Until 1929 those manufacturers were not even allowed to pay tribute.

All of which makes very pertinent the comment of a federal judge in the last trial of the Langmuir case:

Much litigation with respect to the radio art has drifted to this circuit. Oddly enough, in every case the plaintiff has claimed for his invention the whole credit of its growth. I am satisfied from the number of the cases we have heard that the whole credit for the amazing advance of the radio art cannot be given to any one invention; or even to a few of them. . . . At one time there were 7000 applications pending in the radio section of the Patent Office. The art has been impelled forward by hundreds of inventors and thousands of skilled workers.

In the manufacture of receiving-sets the patent situation was even more complicated. By one authority it was declared that the radio set manufacturer was threatened by seven different patents, all of them alleged to be fundamental to the average set, while many others were involved in the use of minor parts necessary to complete set assembly. Litigation became more and more frequent, the whole trade called for some measure of patent stabilization, but for several years the Radio Corporation seems to have looked upon all competitors as mere interlopers in a field where by divine [or semi-divine,

at least] appointment it had been given "leadership . . . patriotically."

The phonograph—There is some suspicion that its attitude may have sprung from fear of the phonograph industry. Radio and the phonograph competed in the home entertainment market, and much of the popular interest in radio had been at the direct sacrifice of phonograph purchases. Yet there was no inherent conflict between the two lines, as there had been between the carriage and the automobile. Where the automobile directly supplanted the carriage, the radio set simply supplemented the phonograph. One gave the immediate and transitory hearing, the other gave the enjoyment of the permanent record and repeated hearings. So obvious was the connection that from the very first days of the radio industry there was felt a strong public demand for the combination of radio and phonograph into one instrument. Tho stubbornly resisting this view at first, by 1924 declining volume had forced the phonograph manufacturers to seek ways of tying up their product with the popular interest in radio.

The leader in the phonograph industry was then the Victor Talking Machine Company. Grudgingly turning to explore the radio manufacturing field, that company found itself [like Westinghouse, earlier] unable to develop a radio set that would not lay it open to infringement suits. The Victor laboratories could pick flaws in every radio set tlien on the market. But its engineers could not produce anything better without trespassing on ground marked out as forbidden by Radio Corporation patents. With all its financial resources, running to more than \$35,000,000, the spectacle of the five billions of dollars behind Radio Corporation [in the assets of General Electric, Westinghouse, and American Telephone and Telegraph] made Victor chary about entering into a patent fight with such a colossus.

The Victor dog—In the meantime the fear of a Victor radio set was the pet nightmare of the radio trade. Wearied of new names and meaningless stencils, the public was demanding a set marked by such a trademark of quality as the Victor dog. It stood as the best known trademark in the country, being supported [in

1924] by the largest advertising appropriation of any national user of magazine and newspaper advertising. In the Victor dog the public had vast confidence. Its introduction into the radio field would have been nothing short of revolutionary, from a merchandising standpoint. But seemingly, that introduction was one thing that the Radio Corporation was determined not to allow.

The quiet, almost underground, struggle that took place between the Radio Corporation and Victor in 1924 is one of the most interesting stories in recent American business history. Unfortunately, it cannot be entered into here. The best that Victor could do was to secure in 1925 the privilege of incorporating Radio Corporation receiving-sets as part of Victor phonographs. It was not a happy nor a satisfactory solution for Victor. When in 1926 that company was taken over by a group of bankers, it seemed almost as if that taking-over was a signal that Radio Corporation had been awaiting. For within three months after Victor passed from its original ownership to the bankers, the Radio Corporation [as if freed from a previous bugaboo] suddenly changed its policy and began to terminate its patent suits against various radio-set manufacturers by licensing those manufacturers under Radio Corporation patents on payment of an annual royalty of seven and one-half percent. It licensed only one class of its patents [the so-called tuned radio frequency]; it still rigidly maintained control of the superheterodyne and tube patents. But by the end of the year [1927] some twenty-five manufacturers had taken out licenses, tho not all with alacrity. One manufacturer, holding back, found himself suddenly faced with a series of suits brought not against himself but against his wholesale distributors. He capitulated. It was from those licensees [some willy, some allegedly nilly] that Radio Corporation drew in royalties the more than \$3,000,000 extra profit shown in its 1927 financial statement.

It was hailed as a big-hearted move on the part of Radio Corporation; a patriotic sharing of its patents to ensure stabilization of the industry. But the licensees seemed to have gained little

from their royalty payments save freedom from infringement suits on the part of Radio Corporation. One of those licensees later testified that he was paying additional royalties to "three other patent owners, and had been sued by five additional companies who claimed infringement of seven patents none of them finally adjudicated." As to his Radio Corporation payments he further said:

We did not pay this royalty [to Radio Corporation] because we considered these patents worth such a royalty; we did not believe we needed these patents, and none of them had been adjudicated, but the radio combine had so terrorized the industry and had so intimidated the dealers and jobbers that they were afraid to handle what they called unlicensed sets. Our bankers said they would not finance us unless we took out a license. They said they would not finance a patent fight against such a monopoly, and there was nothing left for us to do but to sign the license agreement.

To make the situation even more interesting it would seem that all during the Radio Corporation's career the United States government has had in its possession and ownership certain fundamental radio patents which, in the opinion of experts, have priority over the patents under which the Radio Corporation has operated. Such was the testimony before the Senate Interstate Commerce Committee, in 1929, of the patent expert of the United States Army, whose remarks were amplified in the *New York Times* as follows:

The Von Bronck patent, which was seized by the United States from Germany just before the Armistice, has lost two decisions in New York district courts to the Radio Corporation's Alexander patent. But these cases, said Colonel McMullen, were tried "in a sort of left-handed way." They were "rather a put-up job by the General Electric Company to have the Alexander patent validated over the Von Bronck" where neither the government nor any one else represented the Von Bronck patent. However, the highest court in Canada had ruled against the General Electric in favor of the government-owned patent.

But the United States government had taken the position that it "did not have the right to maintain its patent monopolies."

So much for the radio patent situation and "the sympathetic cooperation of the government."

VI

PATENT ROYALTIES made up twenty-eight percent of the Radio Corporation's net operating income for 1927 and its net earnings doubled those of the previous year. The glittering figures were promptly seized upon by the merry wags of the stock market and Radio Corpora-

tion at once became the new bell-wether of the Coolidge prosperity. By March 21, 1928, its common stock had taken the market leadership from General Motors, and was quoted at 155. By March 31 it had touched 195 and by June it had reached 224—on a book value of perhaps \$20 a share. No dividend had ever been paid or promised.

Under this benevolence of the stock market the whole radio industry boomed. The receiving-set had reached a final stage of all-electric operation, with perfected socket-power receivers, electrodynamic loudspeakers, and electric power-tubes. Big Business had made its debut in radio advertising with the famous Victory Hour of the Dodge Brothers Automobile Company, in which four noted stage stars, speaking from the four corners of the land, had been joined in one great network broadcast. A presidential campaign impended and political convention oratory gave a new impetus to sales.

And still no dividend—Radio Corporation's report of its half-year's business revealed net profits almost nine times those of the similar period of 1927 and by October its stock had risen above 226—still with no promise of a dividend. On the tail of its kite the small fry mounted. The so-called investment public fairly begged to put money into the industry via the stock market and accommodatingly a new crop of stock issues appeared, to be snapped up at absurd prices. Radio merchandise was actually produced not so much for public sale as for its excuse to sell stock. In one case the president of a radio manufacturing company made \$698,000 in the stock market on his company's stock, altho the company was operating at an actual loss. Again, annual sales of \$13,000,000 of radio merchandise furnished the basis for a stock market campaign that netted the company chairman more than \$14,000,000. The company has since dragged its way thru the bankruptcy courts.

When Radio Corporation's final statement appeared for 1928, it revealed that some \$2,000,000 of its net profit had come "mostly from loans in the call-money market." Its patent royalties had almost doubled, amounting to more than \$6,000,000. Its sales had gained more than fifty percent; its total income [including that from royalties and call-money loans] had increased \$36,000,000. When, in January of 1929, Radio Corporation finally and definitely swallowed the Victor Talking Machine Company, the *New York Times* commented that on the

basis of Stock Exchange quotations the "market value of the stocks of the two companies aggregated \$626,540,000"—a figure about five times the combined assets of the companies. Radio Corporation common then stood at 395, but before trading finally ceased [by reason of a five-for-one stock split] it touched 479. Earnings for the previous year had been less than \$16 a share; there still had been no dividend nor any promise of one. The Stock Exchange could not have picked a better exemplar of Coolidge-Hoover prosperity, nor one more truly created "with the sympathetic cooperation of our government."

Monopoly?—Of course such success could not go unnoticed. The \$6,000,000 collected in royalties in 1928 drew adverse Congressional mention, and Radio Corporation cannily allowed the item to disappear from its future statements. But enough had been disclosed to permit the inference that its big-heartedness in licensing its competitors was bringing in a royalty revenue sufficient to wipe out its entire patent investment. But it still had its troubles. In the original license agreements one clause—the famous Clause Nine—required the licensed competitor to equip his receiving-sets with Radio Corporation tubes. It was estimated that this affected from eighty to ninety percent of all the receiving-sets manufactured, and thus shut out competitive tube-makers from that great market. In September, 1928, a United States circuit court declared the clause to be in violation of the Clayton Act and shortly thereafter Radio Corporation extended its licensing policy to its tube patents. But only to a few competitors.

The corporation seems to have begun to realize that the cry of monopoly was growing serious. It suddenly grew big-hearted again, and in the middle of 1929 made the announcement that hereafter receiving-set manufacturers need pay royalties only on the value of the radio chassis. This was certainly generosity of a sort, for previously the hapless competitor had been paying royalty on the full value of his sets—including the wood cabinets [amounting to about half the value] on which Radio Corporation patents had no hold whatever. And yet there was still cry of monopoly!

The octopus revealed—There began a series of moves that would seem to indicate a buttressing against possible adverse governmental action. The original *raison d'être* of Radio Corporation—overseas and marine communication—had been split off in 1927 to form the

Radiomarine Corporation. In January, 1929, the domestic message business was split off into RCA Communications, while in the same month RCA Victor was formed to take over all receiving-set manufacture from Westinghouse, General Electric, and Western Electric. A little later the tube business was split off into the RCA Radiotron Company. The octopus had begun to grow.

Meanwhile, it had been stretching into other markets. It controlled the National Broadcasting Company, which in turn dominated the country's principal network of broadcast stations. In 1928 the RCA Photophone Company was organized to tap the talking-picture field, and later Radio Corporation entered vaudeville thru the Radio-Keith-Orpheum merger. Then some bright soul had the vision of a radio set in every automobile. Studebaker capital took over a Radio Corporation competitor and General Motors was reported to be on the verge of entering the game. Like the oldtime threat of the Victor dog, the advent of General Motors was something to be feared. An octopus itself, it was perhaps the one great business organization that could effectively match the Radio Corporation group in any fight for commercial supremacy. There ensued a mutual jockeying for position which resulted in the formation of General Motors Radio Corporation, controlled by General Motors with a fifty-one percent stock interest but effectively shared by Radio Corporation thru a forty-nine percent interest.

Thus by the close of 1929 the radio octopus stood fully revealed. The original Radio Corporation now served as the sac-like body from which great arms reached out to tap every source of income which had resulted from what the learned federal judge had called "the amazing advance of the radio art." That advance had almost wholly come about since Woodrow Wilson's envoys had begged Owen D. Young and his associates of General Electric to forego a \$5,000,000 order, and save radio for democracy. As one result of that patriotic sacrifice Radio Corporation had for the one year of 1929 a total income from all sources of more than \$182,000,000. Virtue sometimes *is* rewarded.

But so far had been the development from that original thought of saving radio for democracy that in 1929 Owen D. Young was to be found actively endeavoring to persuade Congress to repeal or modify the White Act so that RCA Communications could be sold to the International Telephone and Telegraph Com-

pany . . . at a profit estimated at sixty percent, and running into the millions.

VII

IN 1928, the dear public, eager to hear candidate Hoover promise perpetual prosperity, gave the radio industry a record year. Nearly 2,500,000 receiving-sets were sold, also more than 50,000,000 tubes, and the trade licked its chops over a retail income estimated at \$650,000,000.

The year 1929 opened like the answer to a high-pressure salesman's prayer. A new tube came in, the screen-grid, having four elements, and the Radio Corporation announced production schedules one hundred and fifty percent greater than the peak production of the year before. The receiving-sets already sold could not use the new tube and this was hailed as a great constructive step whereby the public must scrap or trade-in its old sets and purchase new models. Set manufacturers doubled their plant capacity and advertising copywriters grew delirious. The *New York Times* announced a gain of one hundred and ten percent in radio advertising; the public was besought to buy "the radio of the future," "the radio with the human voice," the radio that "sounds like life itself." Alas, they have all departed, along with that set whose manufacturer proclaimed it as "carrying its owners down the heavenly highroads of song." Poetry had entered into radio advertising and plain dam-foolishness into the heads of the majority of radio's merchandisers.

"There is not a dark cloud on the radio horizon," ran a business prediction, while the Department of Commerce joined in the chorus with a roseate survey showing 9,000,000 receiving-sets in use in this country, 20,000,000 in use in the world, and a potential world market of 200,000,000 at which manufacturers could shoot.

Came October 1929—And then came the dark days of October and the stock market collapse. When 1929 ended the radio industry was found to have sold about 4,000,000 sets, a sixty percent increase over the previous year. But more than 5,000,000 sets had been manufactured and in the drastic liquidation of the surplus nearly 7000 dealers failed or retired. In one large city thirty percent of the radio wholesalers folded up. Among manufacturers ten percent entered bankruptcy; others retired, while many more limped along sustained by frantic bankers who saw no way of letting go without losing the whole of their previous loans.

One banking group unhappily paid over \$9,000,000 to take up a new stock issue which it had underwritten at \$36 a share, tho the price had then declined to \$20 and was to sink to \$5. The Radio Corporation gave new proof of its "leadership, scientifically, commercially, and patriotically," by begging permission of the Stock Exchange to omit any statement of results for the first quarter of 1930. It was 1922, 1925 and 1926 all over again—simply worse.

It may be objected that the crash of 1929 was an act of God. But the explanation is somewhat unfair to the Deity. Greedy overreaching had been a continuous factor in the radio industry. Even in 1929 the seeds of disaster were plainly evident and warnings of overproduction, of indiscriminate distribution, of foolishly heavy sales-promotion expenditures, were heard in early summer and continued during the fall, only to be disregarded. There was a curious lack of profit. In 1928 a Radio Corporation executive addressing the Harvard School of Business Administration complained that in spite of a total retail revenue of almost two billions of dollars the profits "retained in the industry to date have unfortunately been inadequate." As to Radio Corporation's own results, it was later disclosed that the blame was laid on General Electric and Westinghouse, who by reason of their manufacture of Radio Corporation merchandise drew toll to the tune of "twenty percent of the retail cost" and "made it difficult for the Radio Corporation to compete with independent manufacturers," even when those independents were under the necessity of paying patent tributes which [when finally passed on to the public] amounted in some instances to thirty percent of the retail cost.

Something was certainly wrong, as was indicated by a survey made in 1929, at the very peak of the boom, by the Union Trust Company of Cleveland, which declared that "radio executives look for more profit in the industry in the future than in the past." *It is significant that after having drawn from the radio business since 1921 a total income of almost three-quarters of a billion dollars the Radio Corporation of America has never paid a single dollar in dividends upon its common stock. That surely establishes a record in American business.*

VIII

THUS after a decade of unparalleled growth, in which nearly 13,000,000 American homes have been equipped with

radio receiving-sets, the radio industry stands today with dissatisfied dealers, dissatisfied jobbers, and dissatisfied manufacturers. A revenue during that decade of almost \$4,000,000,000 has not brought stability. One authority places the annual turnover in dealers at thirty percent, while another declares that ninety-five out of every one hundred dealers entering the business either fail or retire. Among manufacturers the mortality has been tremendous and continuous. The number of "orphan sets" [i. e., sets produced by a manufacturer since failed or retired] in American homes is staggering and their resale value so trivial that one prominent trade journal frankly advises the dealer to not even remove them from the home to which a new set has been sold in replacement. The trade is so sick of the "latest thing" [in 1930 it was the midget set] that a trade paper editorial angrily declares:

The truth is that whoever can sell nothing but the latest thing deserves to be shot. And whoever makes anything later than the latest thing now within view deserves to be hanged!

Including liquor—The truth is that radio has simply epitomized the history of American business in this last decade of progress. The industry illustrates the typical short-sightedness, the greedy overreaching, the worship of volume thru high-pressure selling and mass production, which has been so characteristic. "The radio business," says a trade magazine, "has been running around in a vicious circle of oversupply and under demand. . . . The alleged reason for such large production schedules is that low costs depend upon mass production. But this seems to be false reasoning when a million or more leftovers must be sold at a loss." It is false reasoning, too, when in muscling into the market a manufacturer spends from twenty-five to thirty percent of his income in advertising and others stage a series of dealer-entertainments which cost [including liquor] as much as \$100,000 a series. One such operator achieved sales of \$15,000,000 in a year with a net profit reported of \$1067—less than one one-hundredth of one percent. A dealer did \$150,000 in one year—and went broke, eaten up by instalment financing.

The industry—like American business generally—has reached such a peak of efficiency that it is now possible for "a brand of radio to be founded, to establish a national sale, and to go bankrupt

never to run again—all within a single season." With a market that has never absorbed 5,000,000 receiving-sets in any one year the industry stands today with a production capacity of three times that—or 15,000,000 sets a year. One-third capacity is therefore normal operation—as compared to the fifty percent which constitutes normal for the automobile and the sixty percent for steel. The radio tube industry is so overproduced that prices have been slashed sixty-five and seventy percent—and with such meager results that there is a persistent cry that "tubes are made too good." The call is for quality to be sacrificed—the present tubes last too long to suit the hungry sellers!

Trademark sanctity?—The final picture is of one great plant blandly turning out identical radio chassis to be sold under four different trademarks—each chassis cynically [perhaps] advertised as representing the individual thought and radio manufacturing skill of four different and wellknown American corporations. Millions of dollars have been spent in bringing the public to a belief in the sanctity of trademark values, but even that tremendous goodwill is now being sacrificed and prostituted to the needs of mass production. Oddly enough, the two shining examples of success in the radio manufacturing field are given by two manufacturers who have all along clung to ideals of fine quality, carefully regulated production, meticulously selected distribution, and jealously guarded goodwill. Quaintly old-fashioned, yet somehow curiously profitable! It may be of further significance that tho both have achieved national standing, neither one has combined stock-selling with radio-selling and their executives have been consequently free from the temptation of forcing up merchandise sales and distribution in order to influence [or justify] stock market quotations.

New greed coming—But it is doubtful if such small details will have much meaning for the radio industry as a whole. Just now its leaders are dreaming of television and admiring the lovely picture painted, in the last report of the Radio Corporation, of twenty million American homes to be turned into little theaters. Hungrily the trade yearns for that dream to come true. Profit is just around the corner—as always! In one decade the industry has run thru a great market, just as earlier American industries ran thru

and exhausted various of our natural resources. It looks forward now to the similar greedy exploitation of another.

In restraint of trade—Meanwhile the Radio Corporation of America, "founded [to quote one of its own advertisements] *at the request of the United States Government, [and] expected to blaze the way in the radio field—scientifically, commercially, and patriotically,*" has so justified the faith and "sympathetic cooperation" of a fond government as to be now under attack by that government in a belated attempt to take away the rich plum of its private patent pool—said to control at present more than 4000 patents. Specifically, the government's representatives charge that the Radio Corporation and the other members of the pool "have been and are engaged in a combination and conspiracy in restraint of trade and commerce among the several states and with foreign nations."

Its greedy "tube-grab" clause [the famous Clause Nine of its patent licenses] has brought upon it damage suits, filed by competitors claiming injury, which total over \$48,000,000. The federal courts recently decided that this same clause was a plain attempt at illegal monopoly, and the decision caused the Federal Radio Commission to hold special hearings in June to consider the renewal or revocation of the 1407 broadcasting licenses held by the corporation and its subsidiaries. Much that was comic ensued. Frantically the corporation waved the spectre of unemployment among its workers; it urged that it must be left free to develop television for democracy; and once more it cited its importance in overseas radio communication as its justification for existence. Out of Radio Corporation's 1930 income of \$137,000,000 its overseas and marine communication accounted for less than \$5,000,000!

But perhaps the high light of the June hearing was this: To the threat of the possible revocation of broadcasting licenses the Radio Corporation's very eminent, very learned, and very zealous counsel made solemn objection. Their client, they argued, tho perhaps found guilty of attempted monopoly, could still not be said to be *criminally* guilty, since, forsooth, its guilt had been discovered only thru a mere civil case and had not [to use the legal jargon] been determined in a criminal action. It sounds like Alice in Wonderland! Or Amos'n'Andy!

Detroit Convention of Broadcasters

TRACY F. TYLER

Secretary and Research Director of the National Committee on Education by Radio

IT IS NEEDLESS to mention the many-sided importance of radio in modern life. Its dissemination of entertainment, of knowledge, and of public opinion and topics of the public welfare, has become an essential element in the intellectual development of our country.—Close followers of radio noticed that in addressing those words to the broadcasting fraternity President Hoover made no mention of the value to the public of the nauseating sales talks which are so generously sprinkled thru otherwise acceptable programs.

The President spoke other words, of equal importance to the delegates attending the ninth annual convention of the National Association of Broadcasters held in Detroit, October 26-28 inclusive. Most significant was that portion of his address, broadcast from the White House, in which he reviewed decisions reached among broadcasters while he was Secretary of Commerce. He recalled:

The determination that radio channels were public property and should be controlled by the government; the determination that we should not have governmental broadcasting supported by a tax upon the listener, but that we should give license to use of these channels under private enterprise where there would be no restraint upon programs, has secured for us far greater variety of programs and excellence of service without cost to the listener. This decision has avoided the pitfalls of political and social conflicts in the use of speech over the radio which would have been involved in governmental broadcasting. It has preserved free speech to the country.

Following President Hoover, Secretary James W. Baldwin of the Federal Radio Commission, also speaking from Washington, read the address of Major General Charles McK. Saltzman, chairman, ill with a bronchial cold. Among the high points in General Saltzman's remarks were that "wavelengths in the United States are totally inadequate . . . reception will be improved when the new rules governing allowable frequency deviation go into effect next year . . . [The Commission] has no control on material given over the radio . . . The European system gives the audience what the audience ought to hear . . . The American what the listener wants . . . The United States is the foremost radio country in the world . . .

The United States is the birthplace of broadcasting . . . The Federal Radio Commission wants to keep broadcasting the best in the world."



SENATOR WALLACE H. WHITE, JR., of Maine, whose straightforward presentation of facts regarding radio in the United States, before the recent convention of the National Association of Broadcasters, reveals his readiness to ally himself with radio legislation conceived in the interests of the people.

Senator Wallace H. White, Jr., of Maine, gave the broadcasters plenty of material for reflection in a paper he read at the first session. Lately chairman of the House Committee on Marine and Fisheries, and largely responsible for framing the radio act of 1927, Senator White knows his radio book. He said he thought Congress would not repeal the Davis Amendment [the principal section of which provides radio facilities for each state, according to population, within each of the five zones]. He called attention to the fact that the radio act of 1912 made license-obtaining a matter of right, whereas the 1927 act made the issuing of individual licenses a matter to be decided on the basis of public interest. As a further restriction, a renewal application is subjected to the same close scrutiny as an original license. Senator

White was positive in his assertion that Congress in framing the radio act, did not intend to give any property right in the ether in the granting of a license. He declared that if the courts ruled that property rights did exist, Congress would limit licensees more drastically.

Senator White disclosed that at the time the present radio act was being considered by Congress, a committee of the American Bar Association urged incorporation of the principle of a superior right to a broadcast frequency springing from a prior use by a licensee. He said the committee's recommendation not only was received unfavorably, but was rejected. In this connection it is to be noted that the report of the present communication's committee of the Bar Association, under the chairmanship of Louis G. Caldwell, met with considerable opposition during the recent association meeting at Atlantic City. Is it possible that selfish personal interests are retarding the good work which might be accomplished by the communication's committee of the American Bar Association?

Still on the subject of priority, Senator White recalled the agitation which prevailed at the time the present law was in the making for preference or priority in the allotment of facilities to certain groups or classes. Commenting on the reservation of channels, he said: "It is urged in behalf of one *group* [italics not in original] that a definite percentage of the broadcasting band should by law be made available to it for its purpose." Altho a critic of the present abuse of radio, he unconsciously adopted the terminology frequently used by commercial advocates.

Government arrayed against itself—The tendency of the forces, which wish to subordinate education to commercialized radio, to use the word *group* is an indication of their failure to realize the universal character of public education and the fact that it is the largest single activity of the government. The actual situation is that the Federal Radio Commission, a small branch of the federal government, is quite ignoring the basic needs and rights of another branch of our government as represented in the states and their educational activities.

Having declared, in substance, that Congress should not meddle with the broadcast band, he, however, said:

Candor compels me to add that the action of the Senate in the last session and a knowledge of the general sentiment of the then membership of the House, convince me that should the present Congress be persuaded that discrimination has been practised against any group of our citizenship, or that there has been a disregard of the public interest in the granting, or the withholding of a license in a particular case, it would not hesitate to act. Its action would be intended not as a repudiation of the principle here stated, but as a necessary exception to it.

Among other suggestions made by Senator White were: that priority as to subjectmatter might be established; that all communication regulatory bodies including radio be merged and a communications commission formed; that the law requiring construction permits should be repealed or changed to permit of appeal. He said no doubt existed regarding the right of the Radio Commission to revoke a license, and no federal obligation to compensate in the event of revocation.

Senator White predicted few changes in the radio law by the coming Congress, but stated that radio could not exist without regulation. He thought, however, that the radio law should be reframed to promote clarity and provide for less restriction.

H. A. Carpenter, chairman of the broadcasters' commercial committee, voiced the dissatisfaction of station owners with general order number seventy-eight, and suggested a change in requirements affecting the announcement of electrical transcriptions. He considered one announcement for each feature, with optional wording, would be enough. He foresaw the requirement abolished altogether as the quality of the recording would usually be sufficient for listeners to determine its worth.

Dr. Frank W. Elliott of the Central Broadcasting Company, WHO-WOC, chairman of the committee on ethics, regretted that the meeting did not include, more largely, owners rather than station managers because he believed ethical principles should originate with them. He said that when the first meeting of the broadcasters was held, the main purpose was to protect radio from those who wished to destroy it, not to make money. Now, with radio pretty well established, its leaders should realize they hold a sacred public duty and trust not unlike the professions of law and medicine. He wasn't sure but that, in a good many instances, radio advertising had reverted to the old days of "let the buyer beware."

Later, Dr. Elliott vigorously denounced the peremptory requirements imposed by chain systems upon local member station owners or managers preventing freedom of program selection. Stations using chain

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programs are practically compelled to give their unsold time to any advertiser to whom the chain sells its time. He spoke of the objectionable type of advertising represented by the Lucky Strike hour, and of the questionable stories told by certain stage stars on national network programs. For his part, Dr. Elliott said he wished he might discontinue certain programs which he was now almost compelled to take. He declared that altho his statements might cost him his chain affiliation, he felt that public interest demanded that all station owners unite against this plan of the chains which parallels the objectionable "block-booking" of the theaters.

Discrimination—The feeling existing among the representatives of local stations that they are discriminated against within the NAB was emphasized by the report of the local committee which conveyed a suggestion that state meetings of local stations be held several times a year where problems might be discussed and a representative selected to attend the annual national meeting. Particularly did the local group attack and ask repeal of section three of general order number 105 which stipulates twelve hours a day as the minimum broadcast period satisfying the requirements of a full-time assignment.

It is this same general order which has been attacked by educational stations. It

puts a premium on the number of hours used, rather than on the value of the programs and hence is unfair. If thru its inability to broadcast the required number of hours, an educational divides time with a commercial station, it loses its control over many of the hours it has been using which are vitally important educationally.

Educational Static was the subject of a paper read at the Tuesday afternoon session by Levering Tyson, director of the National Advisory Council on Radio in Education. It was well received by most of the better informed station representatives, tho some of the broadcasters seemed to have the feeling that all radio education was of little value, and the people didn't want it. The progressive station owners realize that the only salvation for radio is the devoting of larger amounts of time and facilities to raising the cultural level of the people. Many delegates thought that the recently-inaugurated educational programs of the National Advisory Council should be broadcast on some other night than Saturday.

Undercurrents—What was said officially at the convention was far less significant than what was said unofficially and "off the record." Undercurrents not infrequently determine the course of a stream. The undercurrent of discussion which centered around the quality of advertising literally strewn thru current air programs gave promise of forcing the future broadcasting stream down other channels. As readily recognizable was a certain apprehensiveness lest Congress assign broadcast channels for use under educational auspices, others for labor. This misgiving was provoked to some extent by the fearless manner in which Senator White approached his subject. It was plain there would be no fooling this gentleman. Again, this feeling was prodded further by Henry A. Bellows, former member of the Radio Commission, now vicepresident of the CBS, manager of WCCO, and chairman of the legislative committee of the NAB. He was busily engaged during the convention trying to convince members of the association that they were confronted by real danger in the various fields of legislation. He urged the need of appropriating large sums of money for maintaining a public-relations lobby in Washington, especially in view of the recently announced program of the American Society of Artists and Composers to secure additional copyright revenue from broadcasters.

Contrasts—John Bull and Uncle Sam

ENGLISH adult education radiocasts—Which are better, English or American radio programs? Such competent observers as Senator Clarence C. Dill of Washington, and Armstrong Perry, director of the service bureau of the National Committee on Education by Radio, are convinced that the British are so far ahead of us that there is no comparison. As one of its services to radio education, the National Committee on Education by Radio dispatched Mr. Perry, a trained observer, to Europe where he spent the greater part of the summer in making a careful study of broadcasting there. As another service it has prepared the following description of an English program of correlated adult education by radio.

On September 28, 1931, the British Broadcasting Corporation began one hundred forty-four, thirty-minute talks on the general subject *The Changing World* which will be broadcast every evening except Saturday until March 27, 1932. The talks have been divided into six major series: *The Modern Dilemma*, *Industry and Trade*, *Literature and Art*, *Science*, *The Modern State*, and *Education and Leisure*.

The Modern Dilemma series will be broadcast on Sundays between five and five-thirty. Four talks each will be given by Professor John Macmurray, T. S. Eliot, and Christopher Dawson who are well qualified to give a constructive and, at the same time, idealistic discussion of the problems of the hour, and to reconcile them to some standard of belief which is religious in the broad sense of the word. Two talks each will be given by laymen including a woman, a representative of the younger generation, a working man, a working woman, and a representative of the church.

Industry and Trade, the second series, will be broadcast on Mondays between seven-thirty and eight. The speakers: Professor Arnold Plant, six talks on *How Wealth Has Increased*; D. H. Robertson, six talks on *Why Does Poverty Continue?*; Professor Henry Clay, six talks on *How Has Private Enterprise Adapted Itself?* Between them, these three will divide the six concluding talks on *How Has the State Met the Change?*

Literature and Art is the subject of the series broadcast on Tuesdays between the hours of eight-thirty and nine. The speak-

ers include the Honorable Harold Nicolson who will give twelve discussions on *The New Spirit in Literature*; Sir Barry Jackson, two talks on *The Drama*; Kingsley Martin, four talks on *The Press*; J. E. Barton, six talks on *Modern*

From Rhode Island

WHILE it scarcely is possible to forecast the part that radio and television may play in educational programs of the future, we view the increasing use of radio for advertising and the steady development of a commercial interest in radio as suggestive of private monopolization operating to the exclusion possibly and the elimination certainly of use for educational and other public purposes. Under our constitutional and legal system continued use begets rights which tend to become vested; the same course of events, which in the instances of other public utilities has resulted many times in the sacrifice of public right, appears in the current development of radio broadcasting. The people too frequently have been confronted in the past with the problem of buying back from great corporations rights established principally by public neglect to maintain the prior public right. The same mistake should not be made with reference to radio. We do not wish to be understood as advocating a censorship of radio programs; for a careful discrimination in selecting programs, which up to the present time has kept radio programs generally free from objectionable features, we commend those who have been active in the field. We urge, however, as a precautionary measure preservation of a reasonable share of radio channels for educational and public use, in such manner as not to curtail unnecessarily private or commercial use of the same channels when these are not in use for public purposes, but in order that if and when the channels are wanted for educational use there may be no outstanding private interest recognized in law superior to public right.—Resolution adopted October 31, 1931, by the Rhode Island Institute of Instruction, the representative organization of teachers in that state.

Art. It is pointed out that this series has been planned for those who, already having some knowledge of English literature, are interested in present century developments and in the writings of the so-called modern authors. It is not suitable for listeners in search of a first introduction to literary appreciation.

Monsieur E. M. Stéphan gives French language talks every Tuesday evening between the hours of six-fifty and seven-twenty for those especially interested in modern languages.

The *Science* series is broadcast on Wednesdays between seven-thirty and eight. The speakers include Professor H. Levy, six talks on *What is Science?*; Professor Julian Huxley, and Dr. John Baker, six talks on *What is Man?* Contributions to six talks on *Science and Civilization* will be made by Hilaire Belloc, Hugh I'Anson Fausset, J. B. S. Haldane, Sir Oliver Lodge, and Bertrand Russell. Sir William Beveridge will give some of the six concluding talks on *Science in the Making: Changes in Family Life*. In this connection a series of questions on the following aspects of family life has been prepared as a basis for discussion: *The Founding of the Family*, *Educating the Family*, *The Family at Work*, *Earning and Spending Money*, *Relationships within the Family*, and others. Those taking part are expected to cooperate in securing, filling in, and returning the prepared questionnaire forms.

The Modern State series will be broadcast on Thursdays between seven-thirty and eight. The speakers: Leonard Woolf and Lord Eustace Percy, each presenting six talks; Mrs. Sidney Webb, three talks on *Diseases of Organized Society*; Professor W. G. S. Adams, three talks on *Has Parliamentary Government Failed?*; Sir Arthur Salter, six talks on *The Problem of World Government*.

Herr Otto Siepmann gives German language talks every Thursday evening between six-fifty and seven-twenty for those especially interested in foreign languages.

The final series on *Education and Leisure* will be broadcast on Fridays between seven-thirty and eight. Twelve talks on *Learning to Live* will be given by Professor John Macmurray, Professor J. Dover Wilson, and Sir Percy Nunn. Professor C. Delisle Burns will complete the series with twelve talks on *Modern Life and Modern Leisure*.

The scope and aim of the broadcasts have been set forth succinctly in the announcement pamphlet of the British Broadcasting Corporation. It is worth quotation here:

An attempt is being made this winter to achieve within the series covered by this program, not only a greater continuity as between

courses on given subjects, but also a unity of theme and treatment which has never yet been realized. The title *The Changing World* gives some inkling of what is intended. For some time past, a sense of crisis has been abroad, which has led many to wonder what can be the outcome of our present troubles. This perplexity goes to the very roots of life, and affects us, not only in the economic and social sphere, but is all-pervasive, setting its seal on art and upon literature, and upon all expressions of the human spirit. It is quite plain that everyone is concerned about the future, and is searching anxiously for new knowledge and a proper understanding of their present state, and for the means of the solution of their difficulties . . . The preoccupation of the speakers in all the separate series will be the same. All will be attempting, according as their subject makes it possible, to answer three questions, and thereby to help to a fuller understanding of the present and the future. These are the questions which the speakers will be putting to themselves.

1. What have been the forces of change which within my subject have had effect within the present century?

2. What has been the influence upon social thought and circumstance, upon our ways of life, the way we think and look at things, of these same forces of transformation?

3. What is the significance to the future of these changes, and what responsibility rests with us in the light of this new knowledge to remodel our ways of life, the machinery of government, and the relations of mankind thruout the world?

Thus, the program has a central theme and a central purpose. But this does not mean that the unity of the program is such that a single series will be unintelligible apart from the remainder of the talks. Each group will be self-contained within the field it covers. Further, this program embodies an attempt to make these broadcast talks of genuine interest to everybody. It is not only that by dealing with present problems it is hoped to render a timely service, but that the theme makes it possible to deal with every subject in terms of the experience of ordinary listeners. There is nothing here either remote or academic—the talks are concerned with life as it is today, and as it touches everyone.

A—Something approaching—a mere suggestion of—the kind of thing being done in England, has been inaugurated by the National Advisory Council on

Radio in Education “thru the courtesy of the National Broadcasting Company.” In the United States we are rather used to receiving goods and services thru com-

A Good Program At A Bad Hour

THE National Advisory Council on Radio in Education, financed by the Rockefeller-Carnegie interests, has arranged a thoroly admirable series of thirty lectures in economics and psychology. It is characteristic of the commercial radio situation that these educational talks prepared at great expense are broadcast on Saturday evening which experience has suggested not to be a particularly good time for educational material, and yet on the basis of their experience with these talks the “commercial crowd” will draw conclusions which may affect their whole policy and attitude toward education on the air.

mercial agencies, but not education. It seems now that adult education, via radio at least, will be made available only thru the toleration of commercial entrepreneurs.

On Saturday, October seventeenth, the Council began a weekly program of radio addresses on present-day economics and psychology. Thirty lectures are scheduled in each series between the hours of 8:30 and 9 PM EST every Saturday evening over an NBC-WEAF network. Such significant names in America’s cultural life as Nicholas Murray Butler, James R. Angell, and Jane Addams head an impressive list of program speakers. According to its own estimates the NBC has

donated one of its most expensive radio hours to this series of cultural broadcasts. Not without reason, however. By so doing the NBC has annexed perhaps the greatest selling point of its career. What a simple matter it will be now to sign the prospective purchaser of time to advertise his high-priced merchandise when he may be offered potential buyers who listen to President Butler of Columbia, President Angell of Yale, and Jane Addams of Hull House, Chicago. Indeed it is time well donated.

An interesting point is raised by a comparison of the radio hours considered the most valuable in America and England. Whereas the official documents of the NBC record the Saturday evening hours as the most valuable, the BBC [as indicated above] considers these same hours worthless for cultural broadcasts. The BBC, however, does consider the Saturday evening hours best for broadcasting entertaining programs.

In reality the NBC and the BBC agree in their appraisal of radio time-on-the-air. The difference lies in their fundamental hypotheses. Fundamentally American radio is entertaining; British radio, instructional. Therefore, in an appraisal of either American or British radio time, the Saturday evening hours will be held the most valuable for entertainment. Thus, while the NBC, on paper, is donating its most valuable hours for the cultural broadcasts of the Council, in British estimation the hours are worthless.

When the old order changeth, as it will, and men and women such as those named above are brought to the microphone without first securing the assent or “courtesy” of commerce, then will radio in the United States become something greater than the megaphone of the dollar sign. Until such time, congratulations are in order for the National Advisory Council on Radio in Education on the occasion of its advance toward better radio programs.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
R. C. Higgy, director, radio station WEOO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let’s keep it clean and free.

The Impending Radio War

JAMES RORTY

THE LATE DOCTOR MICHELSON WAS once asked why he wasted so much time measuring the speed of light.

"Because it's such good fun," replied the genial physicist.

Perhaps the scientific workers who developed and perfected the radio tube were equally guileless as to motive. But in terms of social consequences, these playboys of the laboratories brought into the world hopes, apprehensions, marvels, and grotesqueries greater than they could have anticipated. Recently one of the most eminent of them—Dr. Lee De Forest—was moved to comment upon the present status of radio:

"Why should anyone want to buy a radio or new tubes for an old set," declaimed the irate inventor, "when nine-tenths of what one can hear is the continual drivel of second-rate jazz, sickening crooning by degenerate sax players, interrupted by blatant sales talk, meaningless but maddening station announcements, impudent commands to buy or try, actually imposed over a background of what might alone have been good music? Get out into the sticks, away from your fine symphony orchestra pickups, and listen for twenty-four hours to what eighty percent of American listeners have to endure! Then you'll learn what is wrong with the radio industry. It isn't hard times. It is broadcasters' greed—which is worse. The radio public simply isn't listening."

Doctor De Forest, of course, is a prejudiced witness. He has been fighting the Radio Corporation of America for years, and recently won two important court victories, as a result of which the powerful National Broadcasting Company seemed momentarily in danger of being chased off the air.

Radio holds the key—At bottom the issue is part of the larger conflict between exploitation for private profit and the increasingly articulate movement for public ownership and operation of essential public services. In this conflict the citadel of radio is the key position, because the control of radio means increasingly the control of public opinion.

Big business knows this. So do the educators who are sponsoring the Fess Bill, introduced in Congress last spring. This bill assigns fifteen percent of the available radio channels for the exclusive use of educational broadcasters; and the commercial broadcasters are fighting it wholeheartedly. In all probability the battle will be waged in full force this fall, and its result is quite unpredictable. The purpose of this article is to present the issues and to indicate briefly some of their wider social implications.

Educational radio stations—The records of the Federal Radio Commission show that in May 1927, when the present radio law went into effect, there was a total of ninety-four educational institutions licensed to broadcast. On March 9, 1931, the number had been reduced to forty-nine. According to the National Committee on Education by Radio, twenty-three educational broadcasting stations were forced to close their doors between January 1st and August 1st, 1930. At present, out of a total of 400 units available to the United States, educational stations occupy only 23.16 units, or one-sixteenth of the available frequencies. In short, educators and educational institutions who desire to make independent use of the radio as an educational instrumentality are facing strangulation. They must either fight or acquiesce in the present trend, which, if continued, will give the commercial broadcasters complete control of the air—the educators being invited to feed the Great Radio Audience such education as the commercial stations consider worth broadcasting, at hours which do not conflict with the vested interests of tooth-pastes and automobile tires or with the careers of such established radio personalities as Amos 'n' Andy, Phil Cook, and Peggy Winthrop.

The National Committee on Education by Radio—The educators—their militant wing at least—have chosen to fight. They have, in fact, been fighting for years a losing guerrilla warfare against the encroachments of commercial broadcasters. But about a year ago, following a conference presided over by United States Commissioner of Educa-

tion, William John Cooper, they organized and threw down the gage of battle embodied in their official endorsement of the Fess Bill, which is here quoted:

Not less than fifteen percent reckoned with due weight to all factors determining effective service, of the radio broadcasting facilities which are or may become subject to the control of and allocation by the Federal Radio Commission, shall be reserved for educational broadcasting exclusively and allocated when and if applications are made therefor to educational agencies of the federal or state governments and to educational institutions chartered by the United States or by the respective states or territories.

At this conference the National Committee on Education by Radio was created to carry on the work. Represented on this committee are the National Education Association, the National Council of State Superintendents, the National Association of State Universities, the Association of College and University Broadcasting Stations, the National University Extension Association, the National Catholic Educational Association, the American Council on Education, the Jesuit Educational Association, and the Association of Land Grant Colleges and Universities. Joy Elmer Morgan, editor of the *Journal of the National Education Association*, is chairman of this committee. Its work is financed by the Payne Fund for a term of five years.

At the first Assembly of the National Advisory Council on Radio in Education, held last May in New York, Mr. Morgan said:

As a result of radio broadcasting there will probably develop during the twentieth century either chaos or a world order of civilization. Whether it shall be one or the other will depend largely upon whether broadcasting be used as a tool of education or as an instrument of selfish greed. So far our American radio interests have thrown their major influence on the side of greed. In striking contrast to the leading countries of Europe, they have preferred a hasty mushroom development to a slower and sounder development.

There has not been in the entire history of the United States an example of mismanagement and lack of vision so colossal and far-reaching in its consequences as our turning of the radio channels almost exclusively into commercial hands. The mismanagement of the public domain out of which our western states were carved was bad enough, but we did have the vision to reserve certain sections for schools. Our failure to take possession of our mineral

and oil resources for the common good has contributed to extensive waste of our natural resources and to excessive wealth on the one hand and to poverty on the other. The giving away of much of our water power—a resource almost as necessary during the years ahead as air—was even worse than our land policy or our squandering of mineral and oil resources. But all of these fade into insignificance when compared with the giving away of radio frequencies of untold value with no thought of compensation or no reservation, as in the case of the public domain, for the uses of education.

The opposition—Let us turn now to the battalions of the opposition by which these educational militants are confronted. On June 1, 1931, there were in the United States 609 licensed stations divided in a ratio of one to sixteen between the educational and the commercial broadcasters. The strongest of the latter group are affiliated in two great chains with the National Broadcasting Company and the Columbia Broadcasting System. NBC owns three broadcasting stations: WEAf and WJZ in New York and WRC in Washington, D. C.; it operates four other stations: WTAM in Cleveland, WENR in Chicago, KOA in Denver, and KGO in Oakland, California; in addition it serves sixty-nine independently owned stations. NBC is a one hundred percent owned subsidiary of the Radio Corporation of America, which manufactures radio equipment and pools the patents of General Electric, Westinghouse, and American Telephone & Telegraph. Obviously the educational militants are facing a closely affiliated group representing the dominant power and communications interests of America. Deny's National Advertising Records show that in 1930 a sum of over eighteen million dollars, excluding contract discounts and advertising agency commissions, was spent by clients of NBC for the use of its facilities; in addition these clients spent four million dollars thru the National Broadcasting Company and approximately two million dollars thru outside channels for talent on their NBC programs. Additional revenue comes to NBC thru the sale of artists and orchestras for broadcasting, personal appearances, theatrical engagements, moving pictures, talking movies, and thru the sale of sustaining programs.

II

A commercial viewpoint—Here, then, we have real business, big business. Do we also have education and culture? The commercial broadcasters insist that

we do, and receive considerable support in this contention from the conservative wing of the educational profession, which the educational militants must also either convert or fight. On NBC's Advisory Council appear such distinguished names as the late Dr. Edwin A. Alderman, Walter Damrosch, William Green, Dr. Charles S. MacFarland, Mrs. John D. Sherman, the late Dwight W. Morrow, Morgan J. O'Brien, Francis D. Farrell, and Elihu Root. There are committees representing NBC's service to education, agriculture, labor, music, religion, and women's activities. No committee representing its service to business would appear to be needed. Two hundred and sixty-three clients used NBC facilities in 1930, an increase of sixty-four over the previous year. Included in the opposition, at least insofar as the current fight on the Fess Bill is concerned, we must list also the majority of the Federal Radio Commission, which actively represents the point of view of the distinguished promoter, business man, and engineer who now occupies the White House. In an address delivered at the Second Annual Institute for Education by Radio, on June 8, 1931, Commissioner Harold A. Lafount undertook to controvert the charge that the educational broadcasters are being forced off the air.

The forty-nine educational institutions now licensed to broadcast have been assigned 3669.2 hours per week, of which they actually use 1229.28 hours—one-third of the time which has been made available to them, only 283.85 hours per week being devoted to education.

Available facilities for radio broadcasting being so limited, the public interest requires that each assignment be utilized to its utmost capacity, and the Commission has no choice in the matter. But even if the radio act did not so require, ordinary fairness and plain justice dictate that educators make full use of the facilities they already have assigned to them before demanding more.

Only half the story—The Commissioner goes on to point out that since the Commission became the licensing authority, educational broadcasts [largely by the commercial stations] have increased from almost nothing to almost a tenth of the total time used by all broadcasting stations now on the air. He further declares that the reduction in the number of educational stations since 1927 has occurred by virtue of the voluntary assignment or surrender by educational stations of their licenses, because they were unable financially to maintain them or because they did not have sufficient program material to continue operation.

On the surface this official statement is rather convincing. It does not, however, sufficiently portray the actualities of the situation. What has really happened, according to the militants, is that the educational stations have steadily been obliged to accept less desirable frequencies, the more desirable being assigned to commercial groups. They have also been obliged first to divide time with commercial stations, later to reduce their share, and finally, harried by their commercial rivals, have been obliged to defend their right to broadcast at all in expensive hearings before the Commission in Washington.

Unquestionably the educational stations have been inadequately financed. It is at least arguable that they should be better financed, and that a preliminary to the reorganization of education by radio might well be the legal recognition of the importance of independent, non-commercial broadcasting embodied in the Fess Bill. As to the "voluntariness" of the educational stations' surrender, the sponsorship of the Fess Bill by nine educational associations is a sufficient answer.

The Advisory Council on Radio in Education—There are, however, educators who have accepted the existing organization of broadcasting to the extent at least of working with it and thru it. They, too, are organized. The National Advisory Council on Radio in Education is financed jointly by John D. Rockefeller, Jr., and the Carnegie Corporation. Its president is Dr. Robert A. Millikan and its vicepresident is Dr. Livingston Farrand. The educational militants charge that this organization is merely a smoke screen for the commercial broadcasters, altho the National Council has taken no position regarding the Fess Bill, and in fact officially abstains from legislative activity. Its objectives, as stated in its constitution, emphasize fact-finding and fact-dissemination; it undertakes to "mobilize the best educational thought of the country to devise, develop, and sponsor suitable programs, to be brought into fruitful contact with the most appropriate facilities in order that eventually the Council may be recognized as the mouthpiece of American education in respect to educational broadcasting." Officially it suspends judgment on the question of private versus public ownership and operation of broadcasting facilities, remarking that "as yet no one is prepared or competent to say whether this [the

announced educational program of the Council will eventually force the Council to discuss the mechanisms necessary for educational broadcasting, and whether their ownership should be in commercial hands, in the hands of educational institutions, or in the hands of non-profit, cooperative federations, or perhaps in all."

Definitions—The attitude of the commercial broadcasters has been repeatedly expressed, both in print and at educational conferences. It may be roughly paraphrased as follows:

"What do you mean, 'education'? Do you mean the incompetent, prolix mouthing of educational dodoes, completely lacking in showmanship, to which nobody listens; to which comparatively few people *can* listen, because the educational stations have neither sufficient power nor an adequate technical staff? Is education conceivable without an interested audience? Well, we have built up great audiences, and we have learned how to hold them. Furthermore we are interested in education too—*real* education, the kind the people want. We'll *give* educators all the time on the air they can use, provided they will agree not to bore too great a proportion of our audiences too much."

To get a clear view of how the concept of "public interest, convenience, and necessity" might logically be applied to radio, one must start with definitions. For convenience, let us accept as both sufficiently broad and sufficiently accurate the definition of radio education offered by Professor W. W. Charters, director of the Bureau of Educational Research of Ohio State University. Professor Charters says that "an educational program is one whose purpose is to raise standards of taste, to increase range of valuable information, or to stimulate audiences to undertake worthwhile activities." Such a program obviously serves the "public interest and necessity." But what about the converse of the picture, the programs which do not raise standards of taste, which do not increase the range of valuable information, which do not stimulate audiences to undertake worthwhile activities? Such programs—and it may fairly be alleged that they include a heavy percentage of the advertising programs now being broadcast—are, by definition, not educational. Neither, apparently, do they serve the "public interest and necessity"

if this concept embodies any positive and creative policy whatever.

In other words, if the militant educators were logical, they might assert a claim, not to fifteen percent of the air, but to all of it. They would hardly be justified in asserting this claim in behalf of professional educators as a group. But by what process of reasoning can it be denied that this public property—the ether—should be used for social purposes, that is to say, educational purposes according to Professor Charters' definition?

Abroad—In Great Britain the radio is so used by the British Broadcasting Corporation, a government-controlled monopoly which permits no advertising on the air and supports itself by an annual license fee paid by the owners of receiving sets, half of which goes directly to the government. In Germany, in Austria, and in fact quite generally on the Continent, the national governments have tended to use their property in the ether for educational as distinguished from commercial purposes. In Russia education is of course frankly tendential, and every instrument of communication, radio included, is made to serve the purposes of the state, which is identical with the present leadership of the Communist Party.

In America, however, we have a different tradition, as was pointed out by Ray Lyman Wilbur, Secretary of the Interior, in an address before the first annual assembly of the National Advisory Council on Radio in Education. Said Doctor Wilbur:

With our conception of government, the private initiative of those interested scientifically and commercially in the exploitation of radio has had practically free range. If there had been an unlimited opportunity for everyone to get on the air without interference with others, it is probable that only the abuses that arose would have been the subject of governmental action.

One could scarcely ask for a franker statement of the *laissez-faire* position, which is of course characteristic both of Doctor Wilbur and of the present administration in general. At the same conference the position of the commercial broadcasters was energetically presented by Henry Adams Bellows, vicepresident of the Columbia Broadcasting System and former member of the Federal Radio Commission. It is that public interest and necessity with respect both to classroom education and to adult education are best served by educators who accept and use the free time offered by commercial stations; that an arbitrary allo-

cation of fifteen percent of the air to educational broadcasting stations would reduce, rather than fortify, the net educational effectiveness of radio.

Bellowing—Mr. Bellows also permits himself to play with definitions. "Public interest," he says, "is the foundation on which the entire Radio Act of 1927 is built up, insofar as it relates to broadcasting. It is likewise the sole foundation for the commercial success of any broadcasting station or chain. All that a station has to sell is its ability to reach a listening audience, a greater or smaller number of people who are, with a considerable degree of regularity, interested in its programs."

Note the subtle but fundamental shift in the meaning of the word "interest." So interpreted, the worst imbecilities of current sponsored programs are justified on the ground that they are popular—that they command an "interested" audience. Could one ask for a more convincing illustration of what Henry Adams, forty years ago, called "The Degradation of the Democratic Dogma"? Could one ask for a more radical reversing of the educational process, both in philosophy and practise?

Of course the true "interest" of our people—rehabilitating the meaning of the word as it was used in the radio act—can be interpreted not by a surrender to current standards of taste, but by an assertion of leadership which is the very essence of the educator's function. When this idea of "let the people rule" is uncritically applied in education, what happens is that first education perishes and eventually civilization perishes.

There would seem to be other unconscious sophistries in Mr. Bellows' argument. His apparently sincere belief that the Great Radio Audience, by applauding what it likes and denouncing what it dislikes, is itself capable of successfully asserting the "public interest" as opposed to the private interest of radio advertisers and commercial broadcasters, is not warranted by the evidence to date. It is true that the commercial broadcasters have not dared and do not dare to sell all their time—that comparatively few broadcasting stations have sold more than forty percent of their total time on the air. But what time? The evening hours from six to eleven are far more valuable, both for adult education and for advertisers, than the daytime hours. And in the evening the advertisers swamp everything. Nor is Mr. Bellows' analogy with newspapers

and magazines [he points out that they carry four, ten, and twenty times as much advertising as reading matter] in the least valid. It is vastly easier for the eye to exclude the advertising sections of publications until it chooses to turn to them than for the ear to exclude the exhortation proffered by the radio announcer in behalf of the advertiser.

In justice to the commercial broadcasters it may be admitted that they try to reduce the sales talk on the air to a minimum; but they don't succeed, and probably won't so long as the advertiser, using the bait of a profitable contract, holds the whip hand, and so long as the Federal Radio Commission is debarred by law from exercising the function of censorship. Says Mr. Bellows:

It is preposterous to put the blame for blatant advertising on the broadcasters, whose dream of paradise is a world in which advertisers are content with mere credit announcements at the beginning and end of each program. No advertiser is so foolish as knowingly to offend any considerable part of his audience.

The preposterousness of this last sentence is sufficiently obvious. Radio advertisers consistently offend large sections of their audiences—the most civilized sections—people who are properly and sensibly cynical about radio advertising from much weary listening to it; so cynical are they that their usual comment is not to write a protesting letter to the broadcasting station but to tune out the station and in many cases to secede from the Great Radio Audience. Would the commercial broadcaster risk a radio plebiscite as to whether or not the Great Radio Audience desires the restriction which Mr. Bellows himself apparently desires?

IV

Schools of the air—What have the educational broadcasters done thus far to justify their claim to fifteen percent of the air?

In classroom radio education the most conspicuous success to date has been achieved by the Ohio School of the Air, which broadcasts over station WEOA of Ohio State University and WLW, the 50-kilowatt station of the Crosley Radio Corporation. After eighteen months of operation, its programs were being heard by upward of half a million persons in twenty-seven states. A recently undertaken census of the opinions of teachers in some of the city schools utilizing the

broadcasts showed that a substantial majority favored their continuation. Broadcasts go on the air every school day between the hours of two and three o'clock. The state department of education keeps a careful check on the progress of the air school, collating the reports of the teachers as to the effectiveness of the programs.

The Ohio School of the Air has succeeded, in the judgment of many educators, and sufficiently so in the minds of the people of the state, so that the legislature was induced to pass a \$40,000 appropriation to cover the administrative costs over a two-year period. At present writing, however, the School is facing a cut in its appropriation which threatens seriously to handicap its work.

Other state universities have done and are doing creditable work. They would like to do more; they not only resent the policies of the present Federal Radio Commission—they question the present theory and practise of federal control. In applications to the Commission the old cry of "states' rights" is being raised. For example, Wisconsin's brief, asking for permission to consolidate two state-owned stations, pointed out that "the power to govern, control, and regulate public school systems and educational facilities is one of the powers not delegated to the United States by the Constitution, nor prohibited by it to the states, and is reserved to the states respectively or to the people. Since the state has this power, it follows that it also has the right to make use of such facilities as it chooses to more efficiently carry out its plans and programs. The state has chosen to use radio."

Wisconsin chose, and the Federal Radio Commission disposed—adversely—of its application. It is impossible to discuss here the merits of the Commission's decision in this or other individual cases. But regardless of their disposition, the states' rights issue will probably figure prominently in Congressional debates.

How much has been done by the educators who have accepted and used the commercial broadcasters' offers of free time—as, incidentally, the Ohio School of the Air was obliged to do in part?

An impossible arrangement—It would appear from the Commission's figures that more has been done, quantitatively at least, than by the independently owned and operated educational stations. The American School of the

Air and the California School of the Air are outstanding examples in this field. In general, both appear to have been intelligently conducted. But the questions of ownership, control, and censorship will not down. Even if, instead of accepting free time, educational stations were financially able to buy time on the air from commercial stations, it may be doubted that such an arrangement would be permanently satisfactory. Says Mr. H. V. Kaltenborn, editor of the *Newspaper of the Air*:

Paying for time on commercial stations would not give the educational programs complete right of way. Stations would insist that the programs must interest most of their listeners, lest competing stations win them away. Nor will stations offend important advertisers by denying them the right to broadcast on particular days.

Technical development—Another section of the radio battle involves the experts. It has to do with the shifting technical base upon which the whole science and art of broadcasting is built.

Doctor Millikan, in the first address of a radio series sponsored by the National Advisory Council on Radio in Education, has declared that the steady accumulation of new discovery and application in the field of electronics will result in making a monopoly of the air both technically and economically impossible. This assertion is probably based, first, on the fact that synchronization, altho still in its experimental stages, promises shortly to relieve materially the present congestion of the air; second, that micro-wave transmission, recently demonstrated across the English Channel by engineers of the International Telephone and Telegraph Company, promises to increase enormously the number of broadcasting stations which can be operated without mutual interference.

When it breaks in Congress, the radio war will be a holy war. The educators are bitter, determined, and not without allies, the newspaper business being what it is today. The commercial broadcasters are bitter, virtuous, and inspired by a flaming conviction: "The Show Business for Business Men." They will also come provided with a capacious war chest, so that they may win—this time. If they do they will merely have to fight again, on this or some other front.

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An Open Letter to Members of Congress

LUCKIES ARE always kind to your throats! Use Pepsodent twice a day! Non will argue that such advertising is not effective. But effective in what way?

It would surprise nobody to learn that more than half the whole number of Senators and Representatives had become nauseated by the mere mention of Amos 'n' Andy. That's how effective is the advertising—so forceful that the simple mention of Amos 'n' Andy [who, disassociated from Pepsodent, are excellent artists] calls to mind the sickening advertising with which they are affiliated, and disapproving thumbs turn down.

Under our American scheme of radio we have approved the method of support by advertising, given radio over to private enterprise, and settled into a groove of radio *laissez-faire*. It's an excellent system. So was slavery, but it didn't work. Correction of the evils of radio won't require a Lincoln, for the reason that sentiment against present abuses did not await a guiding genius, but crystallized in action from the Atlantic to the Pacific, from Canada to Mexico. What is meant by such phrases as *evils of radio* and *present abuses*?

Is it not evident to all of you that the good American word *buncombe* fits rather neatly into any explanation of the evils of radio? An American citizen is a pretty broad-minded and tolerant fellow and when he sickens of advertising [one of his own respected institutions] it's fair to say that it has been abused. Indeed, he is such a congenial fellow that he tolerates the false claims made by the advertising of particular products just so he doesn't have to hear a deal of claptrap. But when the radio gave him both falsehood and buncombe, he proved he was no more than human and rebelled.

A business man—He's a business man. To him *waste* is the greatest evil. When he turns his radio receiver dial and brings in the same program over



SENATOR CLARENCE C. DILL of Washington, whose close application to the problems of radio legislation bespeaks a commendable interest in his work as a representative of the people.

twenty or thirty stations at the same hour, he is quite naturally, quite inherently, disgusted with the kind of business men who offer him his radio fare.

A family man—He's a family man. As much as the tradition of business and commerce clings to him, so is he recognized for his love of family. He'll work his fingernails off to provide his children with a home, food, clothing, and an education. Thus sincere, he resents the kind of business that pays stage celebrities to come into his home via radio, stealthily,

and tell questionable stories before his children.

Such are advertising abuses of radio. It is fair to assume that the business men who pay for this advertising on the air will realize and correct the error of their ways. They will if they're smart, and generally they're smart. Advertising abuses are perhaps the least of the evils, however.

A sportsman—More than a business man and a family man, the citizen of the United States is a sportsman. He upholds the spirit of fairplay fostered in his games of football and baseball. He's a defender of the underdog. A sense of justice springing from his moral being warns him against the fellow who hogs the show. When the highest court in the United States declares the patent pool of the Radio Corporation of America violates the antimonopoly laws of his country, he forms a low opinion of a selfish organization which would exclude all others from an open field of endeavor.

He's fair in his judgment, too. The Radio Corporation's engineers and scientists have been vigorous leaders in advancing the art of radio. Mechanical development of radio owes a large debt to RCA. But if the giant, overproud of his own preeminence, would take the situation into his own hands and exact payments in pounds of flesh, his sword soon submits to the pen which writes his public indictment in the annals of the Supreme Court.

Monopoly is not a novel institution to an American. He's grown accustomed to mergers and consolidations. He has listened to economists who held that the welfare of future American industry lay in the direction of greater centralization in the field of production. Never, however, has he subscribed to any business

BE IT ENACTED by the Senate and House of Representatives of the United States of America in Congress assembled, That the second paragraph of section 9 of the Radio Act of 1927, as amended by an Act entitled "An Act continuing for one year the powers and authority of the Federal Radio Commission, under the Radio Act of 1927, and for other purposes," approved March 28, 1928, is amended by adding at the end of said paragraph, as amended, the following:

"Not less than 15 per centum, reckoned with due weight to all factors determining effective service of the radio-broadcasting facilities which are or may become subject to the control of and to allocation by the Federal Radio Commission, shall be reserved for educational broadcasting exclusively and allocating when and if applications are made therefor, to educational agencies of the Federal or State Governments and to educational institutions chartered by the United States or by the respective States or Territories."—From a bill to amend the Radio Act of 1927, by Senator Fess in the Senate, January 8, 1931.

philosophy which advised the manufacturer to absorb competition no matter what the expense. As RCA showed its monopolistic face in the matter of production [tubes], only to be thwarted, it now turns the same face toward distribution. Thru its subsidiary, the National Broadcasting Company, RCA once again may be heard licking its hungry chops at the expense of this easygoing, broad-minded, and tolerant American citizen.

Guiding the destiny of the NBC is its president, Merlin Hall Aylesworth, who, as managing director of the National Electric Light Association, once addressed its public relations section as follows:

All the money being spent is worthwhile. And may I leave this thought with you executives. Don't quit now. At the next convention have more young ladies here so as to do the job right, and let off more men from the departments so they may come here. Don't be afraid of expense. The public pays the expense.¹

Is it to be presumed that this man holds the public in any higher esteem as president of the National Broadcasting Company?

Challenge—What about this, Mr. Congressman? This explanation of *evils of radio* and *present abuses* needs no further elaboration. You, Mr. Representative, and you, Mr. Senator, how long is this citizen whom you represent going to be forced to sit before his radio board on which the only food is a heaping dish of sweet entertainment, constantly replenished? Either the picture as painted is grossly inaccurate or something is wrong with the contention of the Federal Radio Commission that the American system of radio gives the listener what he wants. It sounds fine: the great and good Radio Commission, with the interests of the people at heart, contending, in their largess, that the American radio system gives the listener what he wants. Why, then, did not this considerate Commission really do something for the listener by refusing to license RCA to broadcast, after the Supreme Court had held that the Radio Corporation violated the anti-trust laws—a violation which, incidentally, boosted receiving-set prices for the listener? The Commission, in that instance, blandly ignored everything Congress had tried to do to protect the citizen.

A Senator speaks—Gentlemen of Congress, this is not written in prejudiced ink. Consider the opinion of one of your own number, Senator Clarence

C. Dill of Washington, who has made it his business to keep himself informed on radio matters. Concerning the RCA case, just mentioned, he said:

Instead of following the law, the Commission *arranged* [italics not in original] with the

WE RECOMMEND that the executive committee [of the Association of Land-Grant Colleges and Universities] [of the National Association of State Universities] appoint a representative committee to appear before the Federal Radio Commission asking for the allotment of such adequate broadcasting channels as will enable these institutions to reach their constituencies.

We recommend that [the Association of Land-Grant Colleges and Universities] [the National Association of State Universities] declare itself in favor of the principle of reserving by legislation or regulation, adequate radio channels for our land-grant institutions and state-owned universities, for educational purposes.

Submitted at Chicago by their own radio committees, these resolutions were approved unanimously, on November 16, 1931, by the Association of Land-Grant Colleges and Universities, and on November 19, by the National Association of State Universities, two of the most powerful organizations in the field of higher education.

Radio Corporation and renewed all its licenses. The chance to bring the matter before the courts was lost. We need a new radio commission composed of big men truly representing the public.²

How long do you suppose the American people are going to pay taxes to support men in federal office whose action leads a Senator to suggest they are bargaining with big business?

Did the Commission, by some fantastic stretch of imagination, suppose it had helped give the listener what he wanted by thus permitting the NBC to continue its enlightening twaddle about Pepsodent, Lucky Strikes, and any number of other false advertisers? The case here, however, is not built to malign the National Broadcasting or any broadcasting company. The plea is for an entirely new deal with a fresh deck whose separate cards can't be read from the wrong side. The plea is for a truly American radio system. Instead of using our radio for the dissemination of culture among our

people, we beat the tomtom f jazz every night over a score or more stations at the same time. Instead of conserving the facilities of radio to be used as a lifting, edifying force, practically all were assigned to commercial promoters, and have since become the lollar-sign's mightiest megaphone.

Sugar and water—Soon enough, however, the handwriting on the wall grew large enough for even the promoters to see. One's physical self may be sustained for several days on sugar and water. Sooner or later the body rebel and, without bread, ceases to function. Thus for a period, measured in years now, radio offered sugar and water, and each year the wall's handwriting grew larger—bread—BREAD—BREAD. Recently it became discernible to the commercial operator, and the NBC presented Walter Damrosch and the Music Appreciation Hour; the CBS offered the American School of the Air.

Most recently has been the inauguration of a good, solid program of bread content by the National Advisory Council on Radio in Education. Every Saturday night, under its auspices, there is broadcast a half hour of economics and psychology by outstanding men in each field. The broadcasts are made possible "thru the courtesy of the National Broadcasting Company." That fact, and the fact that experience has proved Saturday evening the worst possible time for cultural programs, combine to strip the undertaking of much of its significance.

And bread—Nobody is advocating a bread-only fare for the radio audience. Conversely, nobody advocates a sugar and water diet. The ideal menu contains both. *But*, and it seems that this fact is important, bread should be the backbone of the meal. The American radio audience still gets more sugar and water than bread—the ratio being about sixty percent saccharine, thirty percent brackish water, and ten percent bread crumbs!

Sugar and water for breakfast, luncheon, dinner, and supper over more than five hundred of the approximately six hundred stations in the United States. Bread was to be secured regularly from the broadcasting stations administered by educational institutions. It is interesting to note that in cases of litigation between commercial and educational broadcasting stations before the Radio Commission, the commercial station not infrequently built its argument on the ground that it operated full time, while the educational station was on the air

¹ Levin, Jack, *Power Ethics*. New York, Alfred A. Knopf, 1931, p. 167.

² From an address before the convention of the Public Ownership League, Los Angeles, California. September 30, 1931.

only a few hours a day. Does the virtue of a crack train reside in the number of hours it has run between points, or the number of occasions it has been on time? Would you select a course under a professor merely because he had been on the faculty for twenty years, or would you insist on a man who was an excellent teacher no matter how long his tenure of office? In other words, do you demand quantity or quality? Tho the educational station was on the air but an hour to the commercial station's twelve hours a day, its fulfillment of the requirement of public interest, convenience, and necessity stands on the quality, not the quantity, of its programs. It is certainly within the scope of imagination—if not experience—that the one hour of the educational station stands qualitatively higher than the whole dozen of the commercial station.

The trend is toward higher power and fewer stations. The American air is cluttered with radio stations which, until recently, had been placed with little or no regard for equality of service to the listener. The most effective work of a generally ineffective Commission is its present attempt to weed out undesirable stations and give the facilities thus obtained to an under-served section. Even this commendable policy is forgotten at will, and additional facilities are dumped into a section already adequately served. The mechanical excellence of modern reception and transmission apparatus obviates the need of dumping stations into crowded centers of population. But what does the receiver pick up?

Beating the big drum—Program variety long has been the big drum beaten by commercial stations. One has but to turn his dial around the broadcast band to silence the drum as any number of stations bring in the same program at the same hour. If the drum still beats, ask the drummer if his definition of variety is variations of jazz and sales talks. Different kinds of the same thing cer-

tainly are not varieties in the true sense of the word.

Another drum the commercial interests like to beat proclaims their own smug contention that they are always willing to put educators and their programs on the air without charge. Like the Commission's interest in the public, such statements sound fine, and look particularly well in print. Their viciousness was recognized way back at the turn of the nineteenth century when William Blake wrote

A truth that's told with bad intent
Beats all the lies you can invent.

The commercial operator doesn't say *what* time-on-the-air he will offer. He who comes with an instructional, cultural program is given mid-morning or afternoon hours, unless he pays for the evening hours. An exception seemed to have been made in the above-mentioned program offered by the National Advisory Council on Radio in Education. The NBC put the program on Saturday night, rated both at home and abroad as the best time for *entertainment* programs. So long as the school and the home must approach the commercial operator on suppliant knee, so long will they be greeted cordially, but knifed in the back. What's the solution?

A solution—When your forefathers opened up the Northwest Territory they set aside certain sections of land for education, grants of 145,000,000 acres, worth more than \$1,000,000,000. Legislation subsequent to that time has been replete with federal aid to education, with aid for the cultural development of the nation. Radio has brought possibly the greatest of all educational tools—a medium thru which master-teachers of the country may reach countless students everywhere at one time. Shall this tool be permitted to become forever the megaphone of the dollar sign, or will you follow the precedent of your Continental forebears and reserve a percentage of radio's facilities for your own and your

children's education? Long experience has proven the futility of education's seeking aid from radio stations owned by commercial interests. *The United States must have independent educational radio stations.* This is not the battlecry of any radical group of free-thinkers. This is not a revolutionary idea. It's simply an obvious fact.

Educators [tho a definite percentage of radio channels are placed in their hands] will continue to broadcast over commercial stations, whenever farseeing program directors offer them satisfactory hours—free from censorship. But these educational frequencies, administered for purposes of education and culture, will serve as a mighty force against propaganda, false advertising, commercial censorship, and program deterioration. They will compel a regard for the truth and public interest on the part of commercial stations that no amount of regulation on the part of a government commission could accomplish.

The Fess Bill—On January 8, 1931, Senator Simeon D. Fess of Ohio introduced a bill [S. 5589, 71st Congress, 3d session] seeking reservation of fifteen percent of the radio facilities of the United States for educational broadcasting. [It is printed herewith in the panel at the bottom of page one.] It will be reintroduced by Senator Fess as soon as the calendar permits after the convening of the Seventy-second Congress. In view of the facts stated hereinbefore the Fess Bill seems the modern expression of federal interest in education following a precedent established at the time of opening the Northwest Territory. In this later instance an even more priceless heritage is at stake, not land but air. Five years hence, when, as a result of this wise legislation, the American people realize the benefits of cultural and instructional programs on the air, how are you going to answer the questioner who asks: How did you vote on the Fess Bill?

E DUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

- Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
- R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
- J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
- Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
- Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
- H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Shall Public Servants Serve the Public?

In view of repeated public statements of Harold A. Lafount, member of the Federal Radio Commission, and the aspersions he casts on the teaching profession in his efforts to subordinate public education by radio to the commercial interests, the following statement from *Education by Radio*, volume 1, number 29, page 118, is repeated here:

IT IS not surprising to find the representatives of commercial monopolies pleading that education shall be subordinate to the commercial stations, but it is a bit surprising to find members of the Federal Radio Commission going out of their way to plead on behalf of these same commercial stations in spite of the fact that the organized educational and civic groups after wide experience have taken a decisive stand for independence and freedom for education on the air. If the members of the Federal Radio Commission would spend as much energy trying to find out the real needs of education as they have spent trying to subordinate education to the radio monopoly, recently discredited by the Supreme Court, they would be performing a large public service. Such an attitude on the part of a public employee properly raises the question as to whether he represents the interest of the public by whom his salary is paid or some narrower, more limited point of view. When a member of a public body charged with judicial responsibility takes such an attitude on behalf of commercial stations can the educational station appearing before him expect a fair and impartial consideration of its case?

How Does Your State Stand?

WHAT STATES have educational broadcasting stations? How much time is assigned to station WCAC? These questions and many others can be answered by referring to the figures concerning educational radio stations to which this issue of the bulletin is largely devoted.

For purposes of classification, an educational station is one administered by an institution whose primary purpose, as revealed in its program content, is instruction, whether it be operated by the federal, state, or municipal government, or by private enterprise chartered thereunder.

On June 17, 1930, the Radio Commission issued general order number ninety-two, which, after many whereases came to a final

Whereas, it has been found that, according to the broadcasting service rendered to the people of each zone and of the states within each zone by stations of various classes, both of transmission and of reception, each class of station is of the following value in units, to wit:

Classes of Stations

[A] For Full-Time Stations

Value in units

- [1] Stations of a power of 5 kilowatts¹ or more, 1 station only operating on the channel at night..... 5
- [2] Stations of a power of 5 kilowatts or more, 2 stations operating simultaneously on a common frequency and separated by 2000 miles or more..... 4
- [3] Stations of a power of 5 kilowatts or more, 2 or more stations operating on a common frequency and stations separated by less than 2000 miles..... 2
- [4] Stations of a power of 1 kilowatt, 2 or more stations operating simultaneously on a common frequency..... 1
- [5] Stations with 500-watts power with more than 2 stations operating simultaneously on a common frequency..... .6
- [6] Stations with 250-watts power with more than 2 stations operating simultaneously on a common frequency..... .4
- [7] Stations with 100-watts power or less with 2 or more stations per zone operating simultaneously on a common frequency..... .2

[B] Day Stations

Value in units

- [1] Stations of a power of 5 kilowatts operating during daylight hours only simultaneously with stations of Class A [1] above..... 1.5
- [2] Stations of a power of 2.5 kilowatts operating during daylight hours only..... .75

- [3] Stations of a power of 1 kilowatt operating during daylight hours only.... .5
- [4] 500, 250, or 100 watt stations operating during daylight hours only, one-half values given for corresponding full-time stations above.

Education Handicapped

November 20, 1931. . . . Today station WJAR, from which we get the Damrosch lessons, encroached on Mr. Damrosch's time to advertise Buick cars. We lost Mr. Damrosch's introduction. Respectfully yours, [A Rhode Island school principal.]

[C] Full-Time Stations Having Excess Day Power

All stations shall have their values in units based on one-half the units for full-time stations of same power as the stations have at night plus the value in units for a day station of the same power as the station has in daytime, as follows:

Value in units

- 1 kilowatt night, 2½ kilowatts day, equal..... 1.25
- 500 watts night, 1 kilowatt day, equal... .8
- 250 watts night, 500 watts day, equal... .5
- 100 watts night, 250 watts day, equal... .3

[D] Limited-Time Stations

For stations of more than 5 kilowatts the value of units will be the same for all powers. The units will be based on 5 units. The units for each station will therefore be 2.5 for day operation plus 2.5 times hours used between 6 p.m. and 12 p.m. local time, divided by 12.

Stations over 5 kilowatts operating—

- 1 night hour..... 2.7
- 2 night hours..... 2.9
- 3 night hours..... 3.1

For stations of 5 kilowatts the basis shall be 1.5 units for day operation, the same as a 5-kilowatt day station given above, plus 2.5 units times hours used between 6 p.m. and 12 p.m., local time, divided by 12.

Stations of 5 kilowatts operating—

- 1 night hour..... 1.7
- 2 night hours..... 1.9
- 3 night hours..... 2.1

For stations operating with power of 1 kilowatt, 500 and 250 watts, the value in units shall be the same as for a day station plus the value in units of day station times number of night hours used between 6 p.m. and 12 p.m., local time, divided by 12.

1000-watt stations operating—

- 1 night hour..... .54
- 2 night hours..... .58
- 3 night hours..... .62

500-watt stations operating—

- 1 night hour..... .32
- 2 night hours..... .35
- 3 night hours..... .38

250-watt stations operating—

- 1 night hour..... .22
- 2 night hours..... .23
- 3 night hours..... .25

For stations dividing time on the same frequency the value assigned will be in proportion to the time assigned.

It is, therefore, ordered that the values of radiobroadcasting stations of the various classes, powers, and time of operation be, and they are hereby, fixed in units as above set forth; and

It is further ordered that each of the five zones created by section 2 of the radio act of 1927 shall each have broadcasting stations the total value in units of which shall be equal and shall be fairly and equitably distributed among and allocated to the states within each of said zones in proportion to the population each of said states bears to the population of the zone, and that the quota of broadcasting facilities to which each state is entitled shall be determined and fixed as herein provided and in accordance with values in units for various classes of stations above set out.

The last column in the table which follows gives the quota units for these educational stations based on the above rules of the Federal Radio Commission.

Note the amazing discrepancy between the total number of quota units assigned to educational and the number assigned to commercial stations. Only 26.10 units of the 430.46 now in use in the United States—approximately six percent—have been assigned to educational stations. Conversely, ninety-four percent have been given to operators whose primary interest in the people is the number of dollars it is possible to secure from them thru the purchase of goods advertised over their station. Can there be any question concerning who holds a monopoly of quota units?

What is a quota unit? It is a measure of comparison of broadcasting stations in terms of class, power, and hours of operation. By assigning a numerical measure to each of these factors, an attempt is made to comply with the provisions of the Davis amendment to the radio act of 1927.

Thus by comparing their total quota units, states may be compared with states, zones with zones, and the progress made by the commission in accordance with the amendment may be determined.

¹ The watt is a unit used to measure power. A kilowatt is 1,000 watts.

Educational Radio Stations in the First Zone

State and City	Station	Owner	Kilo-cycles	Licensed Time	Power ⁵	Quota Units
Connecticut						
Storrs.....	WCAC	Connecticut Agricultural College ¹	600	Two sevenths....	250 W	0.2
New York						
Buffalo.....	WSVS	Seneca Vocational High School ²	1370	Unlimited.....	50 W	0.2
Canton.....	WCAD	St. Lawrence University ³	1220	Day.....	500 W	0.3
Ithaca.....	WEAI	Cornell University ¹	1270	Day.....	1 KW	0.5
New York.....	WNYC	City of New York Department of Plant and Structures ⁴ .	570	Half time.....	500 W	0.3
Troy.....	WHAZ	Rensselaer Polytechnic Institute ³	1300	One seventh....	500 W	0.08
[The following states in this zone have no educational stations: Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Vermont.]					Total.....	1.58

Educational Radio Stations in the Second Zone

Michigan						
E. Lansing.....	WKAR	Michigan State College ¹	1040	Day.....	1 KW	0.5
Ohio						
Columbus.....	WEAO	Ohio State University ¹	570	Half time.....	750 W	0.5
Pennsylvania						
Grove City.....	WSAJ	Grove City College ³	1310	Unlimited.....	100 W	0.2
Harrisburg.....	WBAK	Pennsylvania State Police ⁴	1430	Half day Quarter night....	500 W 1 KWLS	0.32
Lewisburg.....	WJBU	Bucknell University ³	1210	Half time.....	100 W	0.1
State College...	WPSC	Pennsylvania State College ¹	1230	Day.....	500 W	0.3
Virginia						
Emory.....	WEHC	Emory and Henry College ³	1350	Day.....	500 W	0.3
[The following states in this zone have no educational stations: West Virginia, Kentucky.]					Total.....	2.22

Educational Radio Stations in the Third Zone

Alabama						
Birmingham...	WAPI	University of Alabama, Alabama College, Alabama Polytechnic Institute. ¹	1140	Simultaneous day; Half time night.	5 KW	3.75
Arkansas						
Fayetteville....	KUOA	University of Arkansas ¹	1390	Half time.....	1 KW	0.5
Florida						
Gainesville....	WRUF	University of Florida ¹	830	Limited till Denver sunset.	5 KW	1.9
Georgia						
Atlanta.....	WGST	Georgia School of Technology.....	890	Unlimited.....	250 W 500 WLS	0.5
Oglethorpe....	WJTL	Oglethorpe University ³	1370	Unlimited.....	100 W	0.2
Louisiana						
New Orleans...	WWL	Loyola University ³	850	Half time.....	5 KW	2.5
Oklahoma						
Chickasha.....	KOCW	Oklahoma College for Women.....	1400	Unlimited.....	250 W 500 WLS	0.5
Norman.....	WNAD	University of Oklahoma.....	1010	Half time.....	500 W	0.3
Texas						
College Station.	WTAW	Agri. and Mech. College of Texas ¹	1120	Half time.....	500 W	0.3
[The following states in this zone have no educational stations: Mississippi, North Carolina, South Carolina, Tennessee.]					Total.....	10.45

¹Land-grant colleges, maintained by public funds. ²Maintained by the municipality. ³Supported by private funds. ⁴Maintained by the state. Those institutions not marked are state colleges or institutions supported by public funds. ⁵The letters W and KW stand for watts and kilowatts respectively; the letters LS signify local sunset. For example, station KWSC at Pullman, Washington, operates with two kilowatts power until local sunset, after which time it operates with one kilowatt power.

Educational Radio Stations in the Fourth Zone

State and City	Station	Owner	Kilo-cycles	Licensed Time	Power	Quota Units
Illinois						
Urbana.....	WILL	University of Illinois ¹	890	One fourth.....	250 W 500 WLS	0.12
Indiana						
W. Lafayette...	WBAA	Purdue University ¹	1400	One seventh.....	500 W 1 KWLS	0.12
Iowa						
Ames.....	WOI	Iowa State College of Agriculture and Mechanic Arts. ¹	640	Day.....	5 KW	1.5
Decorah.....	KWLC	Luther College ³	1270	Half-shared.....	100 W	0.05
Iowa City.....	WSUI	State University of Iowa.....	880	Three sevenths...	500 W	0.25
Kansas						
Lawrence.....	KFKU	University of Kansas.....	1220	Half time.....	500 W	0.3
Manhattan....	KSAC	Kansas State College of Agriculture ¹ ..	580	Half time.....	500 W 1 KWLS	0.4
Minnesota						
Minneapolis...	WLB- WGMS	University of Minnesota ¹	1250	Quarter time.....	1 KW	0.25
Northfield.....	WFMX	Carleton College ³	1250	Quarter time.....	1 KW	0.25
Northfield.....	WCAL	St. Olaf College ³	1250	Quarter time.....	1 KW	0.25
Missouri						
Columbia.....	KFRU	Stephens College ³	630	Half day Quarter night....	500 W	0.23
Jefferson City..	WOS	Missouri State Marketing Bureau ⁴	630	Half day Quarter night....	500 W	0.22
St. Louis.....	WEW	St. Louis University ³	760	Day.....	1 KW	0.5
Nebraska						
Lincoln.....	WCAJ	Nebraska Wesleyan University ³	590	One seventh.....	500 W	0.09
North Dakota						
Grand Forks...	KFJM	University of North Dakota.....	1370	Unlimited.....	100 W	0.2
South Dakota						
Brookings.....	KFDY	South Dakota State College ¹	550	Specified hours equal to one twentieth.	500 W 1 KWLS	0.05
Rapid City....	WCAT	South Dakota State School of Mines..	1200	Unlimited.....	100 W	0.2
Vermilion.....	KUSD	University of South Dakota.....	890	Quarter time.....	500 W	0.15
Wisconsin						
Green Bay.....	WHBY	St. Norbert College ³	1200	Unlimited.....	100 W	0.2
Madison.....	WHA	University of Wisconsin ¹	940	Day.....	750 W	0.5
Milwaukee....	WHAD	Marquette University ³	1120	One seventh.....	250 W	0.06
Stevens Point..	WLBL	State of Wisconsin, Department of Agriculture and Markets. ⁴	900	Day.....	2 KW	0.75
Total.....						6.64

Educational Radio Stations in the Fifth Zone

New Mexico						
State College...	KOB	New Mexico College of Agriculture and Mechanic Arts. ¹	1180	Simultaneous day; third night.	20 KW	3.33
Oregon						
Corvallis.....	KOAC	Oregon State Agricultural College ¹ ...	550	Unlimited.....	1 KW	1.0
Portland.....	KBPS	Benson Polytechnic School ²	1420	Quarter time.....	100 W	0.05
Washington						
Lacy.....	KGY	St. Martins College ³	1200	Unlimited.....	10 W	0.2
Pullman.....	KWSC	State College of Washington ¹	1220	Half time.....	1 KW 2 KWLS	0.63
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> [The following states in this zone have no educational stations: Arizona, California, Colorado, Idaho, Montana, Nevada, Utah, Wyoming.] </div>						
Total.....						5.21

Total for United States: Educational Stations 49, Quota Units 26.10

¹Land-grant colleges, maintained by public funds. ²Maintained by the municipality. ³Supported by private funds. ⁴Maintained by the state. Those institutions not marked are state colleges or institutions supported by public funds. ⁵The letters W and KW stand for watts and kilowatts respectively; the letters LS signify local sunset. For example, station KWSC at Pullman, Washington, operates with two kilowatts power until local sunset, after which time it operates with one kilowatt power.

The Power Trust

and the

Public Schools

National Broadcasting
Company

183.99

Columbia Broadcasting
System

108.02

All Educational
Stations Combined

26.10

All Other
Broadcasters

112.35

Does this assignment of radio facilities represent the importance the Federal Radio Commission attaches to education?

Units of radio facilities assigned to education as compared to chain broadcasting as of November 28, 1931. Under chain assignments are included all stations owned, operated by, or affiliated with each chain.

The question of monopoly in radio communication must be squarely met.—Herbert Hoover.

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The Battle of Radio Armaments

BROADCASTING AND INTERNATIONAL FRICTION

HEBER BLANKENHORN

EUROPE'S most important broadcast-
ing corporation, being British and
governmental to boot, cannot do
business without heraldry. Its coat of
arms has a little lion and a large legend:
Nation shall speak Peace unto Nation.
Cavillers may discover in the word peace
an interpolated afterthought, but the rest
of the sentiment is sound. Nation-to-
nation is in the backbone of radio, for
better or worse, for broadcasters and
listeners.

All the world is here, thinks the set-
owner at home with his dial. . . .
World-reach and internationalism seem
so implicit that many rise up automati-
cally to call it all-blessed. One invention,
at least, on the side of world peace.

The truth is that radio is
broadcasting more war than peace. As
among nations, broadcasting has devel-
oped a nationalist attitude out of all pro-
portion to its international reach. This
view will be denounced as heresy by
broadcasting authorities in every coun-
try. They meet it with pained denials.
The pain is slightly dulled by misgivings,
for they are not ignorant of the many
frontiers where radio tension is acute.
During the past few years high-power
transmitters have sprung up along Euro-
pean frontiers, facing one another as bor-
der fortresses used to do. Along the
boundaries of Silesia four rival stations
now stand within forty miles of one
another. It is hardly likely that these
locations are the evidence of a pacifistic
policy. When Germany set up the Muh-
lacker station on the Alsace border and
France countered with the powerful
Strasbourg transmitter, a sigh of relief
went up in international radio circles
because the French refrained from broad-
casting the *Marseillaise* during their sta-
tion's inaugural ceremonies last Armis-
tice Day. Several storms have blown up
in the British parliament over propa-
ganda, broadcast in English, from a
Moscow station. Frequently the opening
of some country's newest station is the
signal for the transmitters of other coun-
tries to go wildly off their allotted bands
and interfere. The Pope's first broadcast

was jammed into unintelligibility in a
dozen nations. In the western hemisphere
there is anything but peaceful freedom
of exchange of programs with either

in radio affairs as startling as if gun cali-
bers were doubled in the naval world.
"The trouble with international broad-
casting is that governments have just
discovered it," remarks a European
broadcaster.

AS A RESULT of radio broad-
casting there will prob-
ably develop during the twen-
tieth century either chaos or a
world order of civilization.
Whether it shall be the one or
the other will depend largely
upon whether broadcasting be
used as a tool of education or
as an instrument of selfish
greed. So far our American
radio interests have thrown
their major influence on the
side of greed. . . . There
has not been in the entire his-
tory of the United States an
example of mismanagement
and lack of vision so colossal
and farreaching in its conse-
quences as our turning of the
radio channels almost exclu-
sively into commercial hands.
—Joy Elmer Morgan in "Edu-
cation's Rights on the Air,"
Education by Radio, Vol. I,
No. 19, June 18, 1931, p73.

Is it possible that a race for loud
speakers can be as serious as a race for
armaments? Governments in our day are
becoming more and more particular
about words. Propaganda is a recognized
sin, deadlier than the old seven. Govern-
ments . . . are aghast over a single
phrase in a foreign broadcast. Bismarck
in 1870 did no more to the Ems Tele-
gram than our newspaper correspondents
do daily with their *cablese*, but it proved
an adequate *casus belli*.

An inquiry into international broad-
casting made in the chief American and
European headquarters, elicits three
points in the defense of the broadcasters.
First, they say international transmission
is hampered by technical difficulties.
Next they point to "the large number of
international rebroadcasts we do make,"
and the list contains quite impressive
programs. Finally, they say their listen-
ers do not care for foreign programs,
"which are of inferior quality." This is
the line of explanation in each country.

Europe or South America. Brazil, last
summer, was the scene of a revolution
in which radio was a main weapon.
When the rebels won [the day after
President Hoover decided against them]
rebroadcasts of the interesting event were
about as welcome to stations in the
United States as if Nicaragua had offered
a program on American occupation. It
is an open secret among our broadcast-
ing authorities that "the President does
not want Europe to do much talking to
us." . . .

A race for loudspeakers—Quite
suddenly has come a significant develop-
ment. Nations, speaking precious little
peace unto nations, have not been idle.
In Europe during the past year they have
begun a race in radio equipment that is
carrying the world level of transmitting
power to unheard of heights, three times
the American limit—an increase of range

Broadcasters are matter-of-fact. They
begin with what they have rather than
what they wish, and unless their position
can be understood criticism gets nowhere
with them. The technical problem comes
first. . . . Broadcast engineers are
primarily concerned with the business of
communication, not peace propaganda.
Their task is to build up or amplify the
human voice so that, overcoming dis-
turbances [static], it will carry to dis-
tances where it can be caught and ampli-
fied again so as to be heard. For an
ordinary low-power station they amplify
this voice fifty billion times. . . . They
do not like to talk about the Heavside
Layer, that imagined roof of the world,
fifty to a hundred and fifty miles up,
off which short waves bounce to be picked
up in distant lands. This roof is supposed
to be the cause of that misbehavior
termed *fading*. Because of it engineers
say they cannot schedule with certainty
the reception of overseas transmissions.
The simplest problem of international

This article is abridged from the December
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of the publishers.

broadcasting is time; a concert sent from New York at one o'clock Thursday on a spring night is heard in San Francisco on Wednesday night, in Poland on Thursday afternoon, in New Zealand on Friday, and in the Argentine in the autumn—all within one second.

Exclusive agreements—The average listener has no idea of the elaborate system of land lines, high-power transmitters, costly receiving stations that bring him a foreign rebroadcast. The hookup may require half a dozen government or private telephone links abroad, many of which have had to be reconstructed for broadcasting purposes. All this is costly. If the broadcasting company has pioneered in the complicated negotiations for such hookups, it naturally tries to establish a preferential position. If it has supplied capital abroad for the necessary equipment, it naturally asks exclusive rights. Exclusive agreements . . . have shown a singular tendency to turn into stone walls between nations. The spectacle of the Foreign Minister of Germany compelled to go outside his own country in order to find the technical facilities for an invited broadcast illustrates a difficulty created for internationalism by these exclusive agreements.

Overemphasizing home programs

—The argument of technical difficulties is coupled with the broadcasters' belief in the superior quality of the home program. Asking at a New York broadcasting headquarters "why so little Europe?" you are told "Americans are so accustomed to good programs that they will not stand for the inferior quality of European broadcasts." Europeans cling to antiquated transmitters and "won't cooperate technically: they stick to long waves; we want short waves." The radio engineers give the impression that the longs are a sort of backwoods area while the shorts are the realm of the future.

If you travel on to London and ask broadcasters there why they have so few American or Continental rebroadcasts, you are told that the standard of British broadcasting is so far ahead that "we doubt our people do much listening now to foreign stations." As for American commercial programs "we've had some"; and "why should we erect shortwave directional antennæ to reach America, merely to have our programs pirated by stations there?"

Carrying the inquiry to Paris, broadcasters assure you that French offerings are now of such fineness and variety that

"we get a volume of mail from foreign listeners, especially British." In Berlin German broadcasters insist that "to interest our listeners in foreign things we

THE AMERICAN POLICY of advertising on the air is a war breeder. The efforts of our power-radio trust to force this American advertising onto foreign peoples, whose radio is free from advertising, intensify jealousies. Commercial greed—a moving cause in many wars—cannot be trusted with this new giant in the hands of mad ambition. If citizens who genuinely desire a peaceful world have vision, they will join in the efforts to free the air and keep it free from advertising.—J. E. M.

have to send out our own traveling microphone to create worthwhile programs beyond our borders."

. . . After three thousand miles of travel you come to the conclusion that they cannot all be right. You discover heretics in every station who listen frequently abroad and who smile slightly at the official reasons.

When broadcasters speak of *quality* they refer not so much to faint reception due to long-distance transmission but rather to the low program standards of the benighted alien. The broadcasting authorities, confused by the conflicting opinions of engineers, musicians, and orators, have scarcely arrived at a standard of any kind for home programs, let alone a standard for checking up on the *quality* of productions originating thousands of miles away. Yet the quality excuse everywhere deprives listeners of their chance at foreign programs.

Organized monotony?—Protest at radio program monotony is constant. America has some six hundred stations, puts more money and effort into broadcasting than the rest of the world, has the best there is and a great deal of the worst, and is the originator of most of the new forms of the art. And yet—and yet—"is the result simply an organized monotony?" Listeners complain of the same stunt or dance, the same tomtom or croon, on every wavelength. The variety of competitive production tends to a curious sameness especially when the entertainment is taken over by a *sponsor*

who must have a sure-fire hit to risk his money. He gives the public "what it wants" but the demand for programs from Europe and the rest of the world does not cease.

Europe's two hundred stations, taken together, offer greater variety. With a good set you can make fascinating journeys by radio, tho you find the air surprisingly crowded and ripped with government stations' code messages to fleets and colonies. You can pick up the music box signal of Budapest, the nightingale note used by Italian stations, the shrill bell of Fecamp, or the deep boom of Strasbourg, the *Give akt* of Baltic stations, the *Hier sind* of German, the *Dublin Radio Ath Cliath e seo* and the *A-ah-hota sec-a-ta* of Madrid. You have opera, religious services, radio playlets, and a good deal of debate. Stations offer to make you a linguist, and you can overhear English, French, and German being taught in unintelligible tongues. Or you can switch to the cabarets of twenty lands, sounding much alike.

And yet—in this European playground and international university notable lacks soon appear. Talks on current politics are few and thin; many stations ban them outright. The pungent comment of a William Hard is not for Europe. No illuminating controversial forums exist such as are broadcast by our organizations like the Foreign Policy Association. News communiques tend to be bare, arid, and suggestive of official points of view or semi-official news agencies.

The suspicion dawns that the national monotony complained of in America bothers Europe as well. Rebroadcasts of other countries' programs are rarer even than with us. No one knows the proportion of listeners with sets capable of fishing for their own foreign programs where they please in Europe, but it is probably small. Europe's broadcasters take pride in catering to the small receiver and in "not promoting the sale of costly sets"—a circumstance which increases the control of the broadcaster. The mass of listeners do not hear any programs except those of their nearest home stations. Like the American public, they are restricted for their international radio to home station rebroadcasts.

European radio fears—The truth is that European broadcasters are afraid. At the start government laid hands on the radio to control it, as in the past they took charge of telegraphs and telephones, and frequently of railways, all "elements of the national defense." Some countries

still forbid broadcasting altogether. Most of the fears are domestic rather than international. Not a few authorities fear what happened in Madrid last December, when revolutionists seized the capital's wireless at least long enough to proclaim the republic—to such as were awake at 5AM.

Fear was widespread last spring when the Spanish revolution succeeded. Not only were Mediterranean dictatorships opposed to broadcasting from Madrid, but in South America a panic of radio fears arose. That first exuberant broadcast of President Zamora to the United States was relayed also to the Argentine at the instance of a Buenos Aires newspaper. In Madrid you could hear, relayed back, the cheers of the appreciative throngs in Buenos Aires. The Argentine government immediately suppressed the offending newspaper, and there were no more broadcasts there. Later on Brazilian newspapers did something that would have terrified such proponents of controlled broadcasting as the United States and English authorities. They interviewed President Zamora, with all Spain and Brazil listening in, asking uncensored questions and receiving extemporaneous answers. This occurred about the time that the new Spanish government was making constant use of the radio to hold the republic together. During a day when many cities of Spain were overcast with smoke from burning convents, you could see, in one provincial capital, people packed a hundred deep outside every shop and dwelling that contained a loudspeaker. In the end they went peacefully home, burning nothing, calmed by the winged words from Madrid. Of the thing's power, governments know enough to fear deeply.

Revolution by radio—Recently in Brazil the revolution made its way by radio, thus breaking down a newspaper boycott. President Washington Luis, in his efforts to censor radio, sent the police to all radio shops to get the names of purchasers of sets; the police then went to the homes and took away the tubes! When the revolution succeeded [to the discomfiture of another Washington government beside Luis's] the vengeful listeners smashed and burned the shops of radio dealers who had betrayed them. In Venezuela the dictator-president Gomez, in order to combat rebel transmissions from over the border, forbade the ownership of sets to any but his supporters. General Uriburu, who seized the Argentine government last autumn, found himself nearly overthrown by the

radioed speeches of the late Irigoyen cabinet members, sent from neighboring Uruguay. Uruguay closed the broadcasting only after diplomatic exchanges that

IT WILL THUS BE SEEN that radio censorship in the United States is both an amusing and a melancholy affair, as one may choose to look at it. Stupidity, timidity, hypocrisy, superstition, greed, bribery, evasion, rancor, follies of many kinds, the usual economic despotism, the usual antic idiocies and inconsistencies abound here . . . The present government control is weak, evasive, and ambiguous, even if we leave out of discussion the possible corruption of which it has given off some fairly strong odors.—Vita Lauter and Joseph H. Friend in "Radio and the Censors," *Forum*, Vol. LXXXVI, No. 6, December, 1931, p364-5.

included threats of war. In Europe exactly the same situation promised to develop, when the Spanish revolutionists pressed their new government to use broadcasting to tell the world, and Italy in particular, what Spain thought of dictatorships. Such use would have brought about exactly the situation that rose between Italy and France two years ago. Then a determined Italian exile [who now lies buried in an Italian prison] managed to rig up in a house back of Nice a small transmitter, with which he nightly talked to northern Italy. Until Paris, harried by Rome, tracked down and dismantled the station, those chats caused most of the trouble in the diplomatic exchanges of the two governments.

Fortresses of radio—These are examples of the radio in the hands of revolution; its power is not less when it speaks as a government transmitter. The new high-power stations ranged along frontiers in Europe are seen by many as pure monuments to fear: lofty antennae marshalled face to face as if to dispute a border, in different languages. Wherever the late peace-shifted boundaries and minority problems are difficult, there is found a concentration of opposing stations. The whole Polish frontier, much of the German, the Czechoslovakian, Hungarian, and others are scenes of what are frequently reported as radio wars.

The clutter of bilingual stations in the German-Polish-Czech corner often broadcasts words which are packed home again in diplomatic pouches. France is to enlarge the station near Nice; is that caused by, or causing, Italian plans for a station near Genoa? Rumania, protesting against a Soviet station close to Bessarabia, threatens a counter transmitter whose duty will be frankly to jam the Russian. Berlin for some time made weekly protest against wave interference, as well as propaganda, from Russia. The speech-making in English, from Moscow, which provoked belligerent protest in the British parliament, was taken less seriously after it appeared that only the costliest, most aristocratic British receivers could pick up Moscow.

Though Russia is most frequently charged with being the source of uneasiness, the striking fact is that all Europe has suddenly shifted to high-power broadcasting armament. While the United States still contends that 50 kilowatts is the legal limit for stations, little Hungary is to have one of 120 kilowatts, Prague 120, Vienna likewise. Poland's new station, supposed to be 120, has just started up at 156. Berlin and Paris are going up; and so are the Russians. Europe watches dourly. The Russians, as part of the Five-Year Plan, are thinking of spending \$45,000,000 for a station of 500 kilowatts and short-wave transmitters to reach anywhere.

No wonder the League of Nations is to have a station [whenever the fight is ended as to whether British or American with French capital shall predominate in the building], which station shall be left to the Swiss "in the case of a general war."

Broadcasting must have its fling—Another difficulty appears, which in the long run may be hard to handle. It is simply the inherent nature of radio asserting itself! Broadcasting will out. Eight years' experience dictates higher power, especially to serve small, remote sets. Low power, centrally located, left each country with some very dense border populations with no national radio. These areas now, in catching up, naturally build to modern specifications, *i. e.*, high power. This incites to equally high power just over the border, lest home programs there should be lacking in strength. The new stations "are not so much acts of war. They are acts of national pride. They should in future furnish more international cultural programs than ever before." Governments concerned are not unconscious of the pos-

sibilities of an ether offensive. Government stations have been known to jump five kilocycles off their assigned wave length in time to jam the inauguration of another country's latest radio *pride*.

Russia's right to high power is unquestioned by European engineers. It is a vast country; it conducts radio education on a scale demanded by vast illiteracy. Russia, moreover, was not invited to the conference in Washington, where world wave lengths were allocated. Nobody can blame her for crashing in where she can. Technically and culturally her broadcasting plans are unassailable. But it would belie Kremlin intelligence to suppose the plans unrelated to Russia's interest in world revolution. Already British listeners, curious to hear Moscow, have asked why it is that the life-saving ring of radio marine signal stations around England [on which ships rely to steer] happens to operate on a wave length neatly distorting Moscow out of intelligibility. Will nations circle themselves with stations trained to go red with rage against any waves from Russia? Or would it be a more statesmanlike method to extend the law requiring set owners to take out a license to listen, and force them to add a license to think, revocable at police pleasure?

Meanwhile Europe's keeper of the radio peace, the Geneva Broadcasting Office [Union Internationale de Radiodiffusion], with admirable discretion tackles wave lengths, the interferences of the new high powers, the coming necessity for fewer stations. It finds technical rather than political menace in the new situation. For the spill-over area [where a station's signals no longer are heard but do carry interference] is vastly greater with the new giants. Recently its engineers worked hard and amicably over a baffling interference between new German and English stations. But the temper of a host of British listeners meanwhile was not calm; it was "Get the bloody fatherland off our airs."

The international amateur— Finally there's another element being heard from: the amateur. Hitherto he has constituted in every country much the most international element in broadcasting. But he, too, helped turn what might have been the most peaceful of occasions—the opening of the Vatican station by the Pope—into a bellicose affair. Deliberate interference was so widespread that the papal message was ordered repeated for a dozen countries, while Moscow was indicted as the marauder by a righteous world. But it seems the interferences were various. Paris listeners, for example, found the Vatican wave jammed first by some distant northeastern station, second by a French station, and third by a French amateur [repeating the Morse *b* with good power]—all of which cleared out as soon as the papal words ceased. Authorities whose idea is rigid control, rather than the fostering of free broadcasting and tolerant reception, have their work cut out for them when individual intolerance is added to nationalist interference.

Because they have the same language, the English-speaking peoples might have been expected to be the friendliest pioneers in international exchanges. Notable things have been done in rebroadcasting official or ceremonial programs. In addition, the National Broadcasting Company has to its credit annual speeches by its president on the imminence of international service, while the other great American chain, Columbia, has maintained for over a year an original and varied series of programs from London, now extended to the continent as well. The friendly relations of both with the British Broadcasting Corporation have not visibly broadened the latter's programs. With no desire to dismiss lightly either results or efforts, the truth is that foreign programs constitute hardly one percent of American or British offerings.

What is pure broadcasting?— What is ceremonial, what commercial, what *pure*? The radio world has evolved no clear lines on this at all. The President of the United States saw fit to broadcast his labor opinions as part of the celebration of the activities of an American food concern during that concern's *hour*. These activities included manufacturing abroad. The offer of that pronouncement as an attraction deserving a place in European programs—well, the reactions of foreign governmental broadcasters, not to mention foreign food makers, can be left to the imagination. Such haphazard offers [when given the thin stream of overseas exchange] are certain to contribute less to international good relations and more to false habits of mind among the broadcasters. "Britain pretends to regard all American broadcasting as commercial; somebody will be making money out of any program exchanged with it; 'holier than thou' is the attitude. America, on the other hand, pretends to see all European programs as government propaganda, or else cheap; 'freer and better than thou' is the retort."

. . . Plainly, tolerance is the only way out. To give broadcasting its head is both sense and inevitable.

Radio in the hands of the dictator and the bureaucrat may become a means of oppression and a source of inflammatory propaganda. *Free* radio means an easy and constant interchange of thought between one country and another. Free trade in radio broadcasting may well prove a source of international understanding and goodwill. But the trend is not in that direction. Threats and fears, hostile radio barriers, and controversies promise little for human kind. *Science*, which made for peace, devised the horrors, the gas, and liquid fires of the last war. The throttling of radio may bring about a result quite as hideous.

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Educational Functions of Radio

WILLIAM JOHN COOPER

United States Commissioner of Education

AT THE OUTSET I desire to discuss some misunderstandings which I feel sure are now retarding the use of radio in the classroom. The first of these is the fear of classroom teachers that radio may displace them. Teaching is more than merely passing out subject-matter. The radio will supplement but never displace the classroom teacher.

The second misunderstanding seems to consist in a vague notion that somehow or other radio will provide a royal road to learning. It also must be dispelled, for it likewise is based upon a failure to comprehend the essential nature of the educational process.

I shall suggest some principles as a basis of our discussion here. The first is that education is something to be achieved, not something that can be given to one.

Second, since we know all children are different and may differ one from another markedly, radio programs prepared for an average child will not do equally well for slow or bright children.

My third suggestion is that since some people are eyeminded and some earminded, radio programs should be more successful with the latter group than with the former. Accordingly the radio may become a major tool in the education of adult illiterates.

We should next agree, if possible, on checking the effectiveness of our instrument, the radio, upon an accepted program before investing much money in time and equipment. First, we must

have a group of cooperating schools under a unified administrative control. The effectiveness of the work could be checked, and, so far as subject-matter or facts are concerned, we should get fairly

FROM THE BEGINNING the Federal Radio Commission has given the college stations the poorest, the power-trust-radio monopoly the best radio channels. As tho this were not enough, the Commission has forced these colleges to spend funds, which should have been available for program development, on lawyers' fees and trips to Washington to protect even these poor channels. Immediate enactment of the Fess Bill [S. 4, see panel below] would stop this.

reliable and accurate results. It would be ideal if a state department could undertake a project of this magnitude. The Ohio School of the Air is the nearest approach we have had to this situation.

Next to a group of schools under a single administrative control, we need a central organization to prepare programs suitable for school use and bring them to the microphone.

The third item I suggest for your consideration is a determination of the school fields in which we should conduct these experiments. In order to do this quickly, I suggest some organizing

principles. One would be subject-matter fields, and another, levels of instruction.

There is one general field, auditorium programs, open to much experimentation. A state is in an excellent position to work up auditorium programs for such occasions as Flag Day and Labor Day.

Radio programs for the elementary school would serve two purposes: to supplement the usual curriculum, and to furnish poor and mediocre teachers with examples of good teaching.

Another type of experimental program in this field would consist in having children who have learned to read children's selections well, read those selections to inspire other children.

In the junior high school there are still greater possibilities for radio. This school is a new institution. It has a chance to develop free from traditions, for it is free from any European ties.

I think there are great possibilities in the United States in the use of the drama in radio education.

The Office of Education is much interested in some experiments with the use of radio in assisting adult illiterates to learn. The Office of Education and some schools of education can evaluate the radio as an educational tool.

The Office of Education is to gather and systematize information. It has no propaganda activities of any sort or at any level, but we do hope to answer questions.

If you write in, we should like to tell you where there are organized schools of the air, and direct you to persons who can give you more detailed information.

Excerpts from an address delivered before the Second Annual Institute for Education by Radio, Ohio State University, Columbus, Ohio, June 9, 1931.

S. 4 BE IT ENACTED by the Senate and House of Representatives of the United States of America in Congress assembled, That the second paragraph of section 9 of the Radio Act of 1927, as amended by an Act entitled "An Act continuing for one year the powers and authority of the Federal Radio Commission, under the Radio Act of 1927, and for other purposes," approved March 28, 1928, is amended by adding at the end of said paragraph, as amended, the following:

"Not less than 15 per centum, reckoned with due weight to all factors determining effective service, of the radio-broadcasting facilities which are or may become subject to the control of and to allocation by the Federal Radio Commission, shall be reserved for educational broadcasting exclusively and allocated when and if applications are made therefor, to educational agencies of the Federal or State Governments and to educational institutions chartered by the United States or by the respective States or Territories."—From a bill to amend the Radio Act of 1927, by Senator Fess in the Senate, December 9, 1931.

SIX IMPORTANT DON'T'S

DON'T take it for granted you can make a good radio talk without preparation. Every address by radio should, if possible, be preceded by a rehearsal.

Don't orate in the style usual to platform or pulpit. A discourse delivered in a conversational tone, and in such an intimate manner as one would use if he actually entered each of the million homes that may be tuned in, is much more effective than the one offered in the style of platform or pulpit address.

Don't speak from a manuscript that is clipped together. Bring your script with the pages loose. When you finish with a page let it drop to the floor. This eliminates the shuffling and rustling of the paper.

Don't clear your throat or cough near the microphone. Both sounds are borne to the radio audience as the growl or roar of some hitherto unheard mammoth of the jungle.

Don't hiss your sibilants. The s sound executed with the slightest whistle is disagreeable on the radio. Keep the tongue as far as possible from the roof of the mouth and the sibilant may be uttered softly.

Don't guess at the number of minutes your speech will require. The speaker in each broadcast has a time allotment which, with the necessary announcements and perhaps some incidental music, should exactly fill the assigned period. The address should therefore be accurately timed by paragraphs and parts of paragraphs in seconds.

The microphone which picks up the voice of the speaker in a radio broadcast studio is a very sensitive instrument. The slightest sound, even one that is almost inaudible to the speaker himself, is picked up by the microphone and amplified in transmission so that sounds intended for our listeners may be clearly reproduced in the homes of those who make up the radio audience.—John Carlisle, production manager of the Columbia Broadcasting System, in the Washington *Evening Star*, December 4, 1931.

The United States Census Bureau Enumerates Radios

Area	Number of families		Population per family		Families having radio sets, 1930	
	1930	1920	1930	1920	Number	Percent of total
1	2	3	4	5	6	7
UNITED STATES..	29,980,146	24,351,676	4.1	4.3	12,078,345	40.3
Alabama.....	592,530	508,769	4.5	4.6	56,491	9.5
Arizona.....	106,630	80,208	4.1	4.2	19,295	18.1
Arkansas.....	439,408	390,960	4.2	4.5	40,248	9.2
California.....	1,618,533	900,232	3.5	3.8	839,846	51.9
Colorado.....	268,531	230,843	3.9	4.1	101,376	37.8
Connecticut.....	389,596	311,610	4.1	4.4	213,821	54.9
Delaware.....	59,295	52,070	4.0	4.3	27,183	45.8
District of Columbia.....	126,014	96,194	3.9	4.5	67,880	53.9
Florida.....	377,823	234,133	3.9	4.1	58,446	15.5
Georgia.....	654,009	628,525	4.4	4.6	64,908	9.9
Idaho.....	108,515	100,500	4.1	4.3	32,869	30.3
Illinois.....	1,934,445	1,534,077	3.9	4.2	1,075,134	55.6
Indiana.....	844,463	737,707	3.8	4.0	351,540	41.6
Iowa.....	636,905	586,070	3.9	4.1	309,327	48.6
Kansas.....	488,055	435,600	3.9	4.1	189,527	38.8
Kentucky.....	610,288	546,306	4.3	4.4	111,452	18.3
Louisiana.....	486,424	389,913	4.3	4.6	54,364	11.2
Maine.....	198,372	186,106	4.0	4.1	77,803	39.2
Maryland.....	386,087	324,742	4.2	4.5	165,465	42.9
Massachusetts.....	1,024,527	874,798	4.1	4.4	590,105	57.6
Michigan.....	1,183,157	862,745	4.1	4.3	599,196	50.6
Minnesota.....	608,398	526,026	4.2	4.5	287,880	47.3
Mississippi.....	472,354	403,198	4.3	4.4	25,475	5.4
Missouri.....	941,821	829,043	3.9	4.1	352,252	37.4
Montana.....	137,010	139,912	3.9	3.9	43,809	32.0
Nebraska.....	343,781	303,436	4.0	4.3	164,324	47.8
Nevada.....	25,730	21,862	3.5	3.5	7,869	30.6
New Hampshire.....	119,660	108,334	3.9	4.1	53,111	44.4
New Jersey.....	987,616	721,841	4.1	4.4	625,639	63.3
New Mexico.....	98,820	83,706	4.3	4.3	11,404	11.5
New York.....	3,162,118	2,441,125	4.0	4.3	1,829,123	57.8
North Carolina.....	645,245	513,377	4.9	5.0	72,329	11.2
North Dakota.....	145,382	134,881	4.7	4.8	59,352	40.8
Ohio.....	1,700,877	1,414,068	3.9	4.1	810,767	47.7
Oklahoma.....	565,348	444,524	4.2	4.6	121,973	21.6
Oregon.....	267,690	202,890	3.6	3.9	116,299	43.4
Pennsylvania.....	2,239,179	1,922,114	4.3	4.5	1,076,770	48.1
Rhode Island.....	165,811	137,160	4.1	4.4	94,594	57.0
South Carolina.....	366,265	349,126	4.7	4.8	28,007	7.6
South Dakota.....	161,332	142,793	4.3	4.5	71,361	44.2
Tennessee.....	601,578	519,108	4.3	4.5	86,229	14.3
Texas.....	1,383,280	1,017,413	4.2	4.6	257,686	18.6
Utah.....	116,254	98,346	4.4	4.6	47,729	41.1
Vermont.....	89,439	85,804	4.0	4.1	39,913	44.6
Virginia.....	530,092	483,363	4.6	4.8	96,569	18.2
Washington.....	426,019	342,228	3.7	4.0	180,229	42.3
West Virginia.....	374,646	310,098	4.6	4.7	87,469	23.3
Wisconsin.....	713,576	595,316	4.1	4.4	364,425	51.1
Wyoming.....	57,218	48,476	3.9	4.0	19,482	34.0

Read table thus: In 1930 Alabama had 592,530 families while in 1920 the number was 508,769; there was an average of 4.5 persons per family in 1930 as compared with 4.6 in 1920; in 1930, 56,491 or 9.5 per cent of the families had radio sets. Similarly, read the data for each of the other states and for the entire United States.

THE CONDITIONS OF OUR RADIO at the present time constitute a national scandal and disgrace. If they are allowed to continue for another ten years we shall have the most depraved and vulgarized people in the world, and the fault will not rest with the people, who are helpless, and have to take what is handed out to them by exploiters and commercialists of the basest type. I expressed my own opinion of the radio by giving away my set a couple of years ago, and subsequently declining the offer of another set which a friend tried to give me. If those who pay their money for radio advertising knew how many sets are silent in this country, they would reduce the amount of their subsidy of buncombe and rubbish.—Upton Sinclair.

Education by Radio

E. A. CORBETT

University of Alberta, Edmonton, Alberta

DURING THE PAST FIVE YEARS interesting experiments have been carried on, both in Europe and in America, to ascertain the degree to which the radio may be used as a medium of elementary and adult education. The British Broadcasting Corporation now broadcasts regularly to over half-a-million school children, and it is estimated that 1000 groups of adults listen every week to talks by great scientific authorities and educators on subjects of vital concern to the people. The great interest taken by the British public in lecture courses of this kind was shown recently when, after a lecture on the functions of the mind, 27,000 letters were received by the BBC asking for literature on the subject.

In the United States, in addition to the splendid achievements of the Ohio School of the Air, many of the state universities own and operate broadcasting stations and are giving regular programs of music, drama, and extension lectures. In fact, in one or two colleges in the United States, arrangements have been made whereby a young man or woman, unable to attend a university, may study at home and receive by radio the lectures of a university-degree course.

In Canada little has been attempted yet in the schools in the way of education by radio. Several universities, however, are finding the radio an effective means of assisting in extramural work. Here at the University of Alberta we have operated our own station for four years. Our program of music, drama, and extension lectures has been built up largely to meet the needs of people in remote districts who desire to share in the cultural opportunities enjoyed in more thickly populated areas. Our experience has convinced us that the *radio has an everincreasing part to play in extending a university's practical value to the people who make its existence possible.*

We have no black-face comedians, no crooning tenors, no whispering baritones, and we have no toothpaste to advertise, nothing that is kind to the throat. One realizes, of course, that the world must

be amused, but we have found that there is also a genuine hunger of the mind among our people for good entertainment, and that along with their amusement they are eager to hear scholars, teachers, and men of distinction in various fields of scientific research.

But while a start has been made in Canada to use the radio in the best interests of the people, I think we are all agreed that we as Canadians should no longer be dependent for the greater part of our entertainment upon the large American stations. The time has come for a national radio policy of our own. Whether it should be a state-controlled system as in England, a commercially controlled system as in America, or a new plan developed from the best elements of the plans used in other countries and cast into a distinctly Canadian system, is for the people of Canada to decide. We will have the advantage of profiting by the experience of others.

Radio is a means of breaking down narrow sectional prejudices and of creating a better understanding of the problems which confront us as a nation as well as those which are peculiar to the provinces individually—that is of building up from the Atlantic to the Pacific a sound national consciousness and a genuine pride of country which will preserve for future generations the traditions of which every Canadian has reason to be proud.

Perhaps the greatest of all values of radio is the possibility of its use in building up group discussion on great international issues by broadcasting brief, well-informed talks on current world events and thus creating an international outlook and understanding.

Barriers of language form one of the greatest obstacles to goodwill among the nations of the world, but this barrier is not as serious today as it has been because radio has extended among the nations a new international language, powerful to create sympathy tho without words and sentences, namely, the international language of music. It is said that the broadcasting of German music in Europe has played a large part in bringing her late enemies to an understanding of her great contribution to the world's cul-

ture. But perhaps the greatest obstacle to international confidence and understanding is the barrier of ignorance—we know so little of the habits of thought or the manner of life of other nations. Formerly, the average man's contact with the people of other nations was limited to scrappy newspaper items, dealing for the most part with commercial concerns or with formal political relations; now a million British families may hear, by their own firesides, the music of Germany, and come nearer than ever to the heart of a great people.

The universality of radio makes it a factor of supreme importance to the nations of the world; it transcends all frontiers and makes light of all man-made barriers of tariffs and fortifications. It goes everywhere in a moment of time, so that today in Europe listeners may get part of their daily entertainment from any country they choose, and to meet the new demand for this kind of international exchange there is a growing practise of relaying international programs of music to several countries simultaneously, the announcements being made in three languages.

The effects of international broadcasting are seen in several ways. First, it creates among the listening public a familiarity with the sound of foreign tongues, and so stimulates a desire to learn them. Above all, it causes the listener to feel that a foreign country is helping to provide him with good entertainment, and nothing more quickly warms the heart of the ordinary man towards an alien people than this.

Finally, it cannot be too strongly emphasized that if the radio has been found to be an educational necessity in the thickly-populated countries of Europe and in the United States, it is far more essential in a country like Canada, where so many people are far removed from those cultural advantages that enrich life and add zest and interest to the daily round. So we may expect that Canada will in the near future develop a radio policy which will provide for all its people reasonable amusement, abundant good music, and a sufficiency of well-chosen educational material to satisfy the minds of an intelligent nation.

An Insult to Congress

Nor are the broadcasters without their friends on Capitol Hill; radio as a campaigning medium is only too valuable to political candidates. They know it, for they are regular seekers after favors from the radio people.

[From an article by Sol Taishoff in *Broadcasting* for December 1, 1931]

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J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

The World's Oldest Educational Radio Station Carries On

HAROLD A. ENGEL

Director of Publicity, Station WHA, University of Wisconsin

THE WISCONSIN TEACHERS' ASSOCIATION and the University of Wisconsin Radio Station, WHA, have joined hands in effecting a comprehensive program for radio education thru the Wisconsin School of the Air. The hearty support of leaders in educational circles and city school systems adds strength to the contention that the use of the radio to supplement classroom work will soon be a general practise.

The Wisconsin School of the Air is now presenting ten broadcasts each week for the schools of the state. Each school day at 9:35 AM and 2:10 PM a different subject is taken up. The classes included in this group are: government and parliamentary law, guidance, children's stories, Wisconsin history, music, art, nature study, health and safety, and literature. These are planned and presented by university people and Madison school teachers. Schedules are being sent each week to a host of schools all over southern Wisconsin, many of which are using these programs regularly to supplement their classroom work.

The Wisconsin School of the Air programs, sponsored by state, county and city educational agencies, and broadcast over a state-owned station, embody nothing with any flavor of advertising or propaganda. This strictly non-commercial backing is one of the things which has caused the presentations to be so generally accepted and endorsed by educators. Mr. E. G. Doudna, secretary of the State Board of Normal School Regents of Wisconsin, expressed it by saying:

"We refuse to permit the use of advertising in the pages of our textbooks; similarly we do not countenance the use of commercially sponsored radio programs in our schoolrooms."

The report of the committee on propaganda in schools, presented at the convention of the Wisconsin state teachers



HAROLD B. McCARTY, program director of Station WHA, the University of Wisconsin, Madison, Wisconsin. To Mr. McCarty goes most of the credit for the great success enjoyed by "America's first educational radio station." WHA has succeeded in spite of reverses at the hands of the Federal Radio Commission.

held in November 1931, embodied the following:

"Two rather recent school interruptions which are often propaganda-laden are the motion pictures and radio programs used by schools.

"The admission into the schoolroom during school hours of radio and film programs carrying 'goodwill' publicity, establishes precedents which naturally lead other firms to try to gain admission for

their own advertising. Granting one firm such a privilege while denying it to others confers an unfair trade advantage. There is little practical difference between printing the words, 'Brown and Company are good merchants' on the school blackboard, and permitting the words, 'Brown and Company are making you children a present of this fine program' to be spoken repeatedly in the classroom or to be flashed upon a motion picture screen.

"Education is a state function. The states have a decided need for the radio in connection with their educational systems. Educational broadcasting should have an assured standing and adequate facilities. Schools should not be dependent upon the commercial broadcasts for their educational programs but should be able to look to the state's educational institutions for this service.

"The committee heartily approves the educational radio programs of the Wisconsin School of the Air, sponsored by the University of Wisconsin, the Madison public schools, and other schools of the state and broadcast over WHA, America's oldest educational radio station. It believes that the Federal Radio Commission should grant the request of WHA for the use of greater power so that it may serve the schools of the entire state.

"The committee recommends that the Wisconsin Teachers' Association take definite steps to join its forces with those of the University of Wisconsin in its request for increased power for radio station WHA so that the schools of the entire state may be served by the educational facilities provided by the state thru the University of Wisconsin."

The inadequacy of the power allotted to WHA is shown by this recommenda-

RECOGNIZING THE IMPORTANCE of radio as a medium of education in the schools, we endorse the attitude expressed by the Department of Superintendence of the NEA in urging the conservation of adequate channels and facilities in the important new means of communication by radio for the purpose of education, culture, and government. We further endorse the National Committee on Education by Radio in its efforts to conserve adequate privileges in radio broadcasting for education.—Resolution adopted by the Wyoming State Teachers' Association at its annual meeting, October 7-8-9, 1931.

tion. To reach all corners of the state effectively a substantial power increase will be required. With the present facilities and equipment the station may cover quite satisfactorily in the daytime an area within a radius of fifty miles of Madison. The station is limited to daytime broadcasts. The application to merge WHA and WLBL, the state station of the Department of Agriculture and Markets, was refused on June 26, 1931, by the Commission. The proposal was to combine the stations and establish a 5000-watt transmitter which was to be located in the central part of the state. Such a station would give a better coverage with less duplication.

WHA prides itself in being the world's first educational radio station. During the war period it was requested to remain on the air and continue with its experimental work when other stations were being forced to discontinue their broadcasting. Looking back over the history of the station gives an impetus to the work of planning for the future. Under the able leadership of Harold B. McCarty, program director, WHA is now launched upon the most comprehensive educational project ever attempted in the state.

The Madison public schools, under the direction of Superintendent R. W. Bardwell and Leo P. Schleck, radio director, are cooperating in presenting these broadcasts. Provisions are made in the city schools to use these programs regularly to supplement the work of the teachers. Many buildings are equipped with loud speakers in every room.

Wisconsin school authorities have seen the benefits to be derived from the use of these programs. Their attitude is expressed by John Callahan, state superintendent of public instruction, who says:

"The Wisconsin School of the Air has my hearty endorsement. It provides stimulating educational programs for home and school.

"Wisconsin is noted for its pioneering in the public interest, and now, thru the

leadership of the university, the state is attempting to enlist the radio as a means of disseminating information of general concern. The orderly presentation of well-planned programs will, I hope, find

WHY HAS THE Federal Radio Commission never sought impartial advice of the Office of Education of the United States in weighing the merits of educational versus commercial radio? ¶Radio stations affiliated with educational institutions frequently are called to appear before the Commission to defend their rights against greedy commercial air-grabbers. Important questions arise regarding the educative, cultural, and instructional value of programs broadcast by the educational station, questions best answered by schoolmen whose background of experience lends authority to their judgment. ¶The Office of Education is located in Washington in the same building that houses the Interior Department. It is about five minutes walk from the National Press Building where the Radio Commission has offices on the seventh floor. ¶Is it fair to accept the evidence of expert commercial testimony without seeking expert advice from educational sources?

reception in the schools. I earnestly recommend the Wisconsin School of the Air programs to our teachers."

All the efforts required are not on the side of those engaged in preparing and presenting educational radio programs. Mr. E. G. Doudna tells the teach-

ers they, too, must keep abreast of the developments. He states:

"Educators must recognize that radio education is here to stay. The question is whether it shall be under the control of commercial stations or educational institutions. We must develop a technic for using radio, not as a substitute, but as a complement to classroom work.

"The Wisconsin School of the Air offers a beginning in this field. With the cooperation of the schools, the university station, and the people who are putting on the programs, we can learn a great deal about how to improve the character of the programs and their effectiveness in the schools."

In addition to the ten weekly programs of the Wisconsin School of the Air, many other educational features are offered regularly by WHA. Professor C. H. Mills' music appreciation course is broadcast every Tuesday and Thursday morning at eleven, direct from Music Hall on the campus. Spanish lessons for beginners are given on Monday and Thursday at three-thirty. Each Thursday afternoon at four, talks to parents and teachers may be heard. These are arranged and sponsored by the parent-teacher groups of the third district and the Madison public schools. Some of these are broadcast from the studio in the state capitol, as are numerous school of the air programs. The Homemakers' Hour every morning at ten brings to housewives a multitude of helpful suggestions as well as entertainment. Farm talks, emanating from the College of Agriculture, are heard daily at twelve-thirty. The Badger Radio Safety Club and the Campus Players' dramatizations also have a large following.

With the present facilities it is felt that WHA is rendering a maximum in service to the citizens of certain areas of the state. Those residents of the more remote sections are hopeful that eventually educational channels may be forthcoming, and with them the necessary power to enable them to benefit by a service to which they are rightfully entitled.

IS THE DIALOG METHOD superior to others for giving facts to college students over the radio?

Albert M. Fulton of the University of Wisconsin has recently completed a controlled experiment and concludes that there is no significant difference between formal, informal, and dialog presentation of facts to college students. Scientific studies of this sort show the fallacy of following the generally accepted practise of the commercial broadcasters. In the attempt of the latter group to find a common denominator they have taken the "level of thirteen-year-olds."

Educational broadcasters aim to reach various homogeneous groups of a state's population. Based on Mr. Fulton's conclusions it would be both uneconomical and useless to go to the trouble of writing a presentation in dialog style in teaching a group possessing the intelligence and achievement of college students.

SHALL THE STATES BE HEARD?

HOW CAN A STATE fulfill its educational obligations to the people when dependent on the whims of a federally-supported radio commission seemingly interested only in the development of commercial broadcasting? Altho untrained pedagogically, these five men had the power to tell the authorities of Wisconsin that they did not need radio in education and at the same time denied their application to establish an all-state station.

The requisites of a broadcasting license are based upon public interest, convenience, and necessity. No extension of the imagination can explain the reasoning which supports an allocation of nearly half the available radio facilities, either directly or indirectly, to a commercial group which has been discredited by the Supreme Court of the United States for violating the law of the land. Wouldn't the ordinary dictates of national pride cause any individual to hesitate at turning over to a commercial monopoly man's greatest medium of communication? Isn't it the part of a common interest in the welfare of mankind to proceed deliberately when, conceivably, the destiny of the cultural development of a nation is in one's hands? Would it not be a highly commendable procedure to answer at least some of the commercial requests for radio facilities with:

"No, you will have to wait awhile. The states are at work on a program of education by radio, and certainly they have a claim as worthy as yours. Let's see what they are going to do before you get all the channels. Furthermore, there are plenty of commercial programs on the air now to hold the interest, suit the convenience, and fill the necessity of the most rabid radio fan. The fullest development of radio won't take place in a day or a month. Come back in two or three years. You know these educators are pretty cautious but they're right when they claim that it requires long and careful planning to arrange truly educational programs. You commercial managers can arrange entertainment programs a day at a time

with little thought of continuity. With them a whole term's work must be planned and tested out in advance. Neither do we expect them to use twelve hours a day to hold their license. We do give them the hours most suitable to reach the various groups they are planning programs for. The other hours are given over to the far less important use of advertising. That's fair enough, isn't it?"

Don't be alarmed! The unexpected has not happened. A page from fancy would be more credible than such words from Commissioner Lafount, for instance.

It may be stated authoritatively that the Commission's attitude toward the objectives of the National Committee on Education by Radio is something like this:

"Sure we're for education by radio, but that crowd which wants fifteen percent of the radio facilities are a lot of theorists. They have no plan. Why don't they ask us for something specific? Why don't they come to us with a definite request, an organization, and funds to support this plan? We'd like to know how they think we're going to give them fifteen percent of facilities which already are occupied."

The Commission has advanced no effective plan of its own for education. Why should it be necessary for a governmental agency, supposedly holding the interests of the people first, to go outside its own resources for a successful plan to provide for and safeguard educational broadcasting? It is to be lamented that after nearly five years the United States still wants such a plan.

Finally, if the Commission considers it impossible to find fifteen percent of the facilities for education, in what complete quandary will it be plunged by an international edict ordering it to release a percentage of facilities to Mexico and at the same time give additional channels to Canada! To talk of methods, however, is to lose sight of more important considerations. One question only needs answering: whenever requested by them, will the states be given radio facilities for educational purposes? If Congress declares they shall, then let the Commission carry out the mandate of the people and

find room for the states. It can be done and the Commission knows it. It becomes a simple matter of ignoring private dollars for common sense.

PASTOR PROTESTS HYMN BROADCAST

THE REV. DR. ALBERT JOSEPH McCARTNEY, pastor of the Covenant-First Presbyterian Church, Washington, on Sunday, December twentieth, addressed his congregation with these words:

"I wish to take this occasion to voice a public protest on behalf of all Christian people in Washington and elsewhere against the growing tendency to commercialize our Christmas hymns and Christian beliefs by using them as a vehicle of advertisement over the radio at the Christmas season. I make specific reference to a certain group of commercial firms in Washington which last night appealed for public patronage of their particular products, using as a background some of our most sacred Christmas hymns and our sacred faith that was born in Bethlehem.

"If this abominable traffic over the cradle of Our Savior is not checked vigorously at the start we shall be confronted with a public nuisance. It is perfectly outrageous that people should be permitted to immolate our sacred songs of Christmas faith and hope upon the altar of commercial greed and go unrebuked.

"I, therefore, publicly denounce all commercial enterprises or individuals that pursue this sacrilegious method of advertising and file my complaint against them with the Radio Commission.

"I forward copies of this protest to the public press for what it may be worth, in the hope it will find a most earnest, immediate, and vocal response in the hearts of millions of Christian believers."

Program material is left to the judgment of the individual stations and the Commission has no jurisdiction, the minister was informed later.

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- James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
- Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
- H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

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Power Trust Promoter Becomes Radio President

Is This NBC's Concept of Education by Radio?

Merlin H. Aylesworth, president of the National Broadcasting Company, while representing the National Electric Light Association—the publicity lobbying organization of the Power Trust—had this advice for his managers:

“I would advise any manager who lives in a community where there is a college to get the professor of economics interested in your problem. Have him lecture on your subject to his classes. Once in a while it will pay you to take such men and give them a retainer of one or two hundred dollars a year for the privilege of letting you study and consult with them. For how in heaven's name can we do anything in the schools of this country with the young people growing up, if we have not first sold the idea of education to the college professor?”

Radio Administration—at Home and Abroad

ARMSTRONG PERRY

Director of the Service Bureau of the National Committee on Education by Radio

INFORMATION gathered by interviewing radio officials of every national government and broadcasting company in Europe indicates that the operation of broadcasting stations on a basis of public service, instead of for advertising purposes, keeps the stations and programs in the hands of radio experts, as they are in America. It seems evident that the same executives, engineers, and talent are functioning as would function under any conditions. They are the groups which, because of their interest in radio, have risen to positions of leadership. The main differences between results in Europe and those in America are:

[1] Most broadcasting organizations in Europe have assured incomes instead of lawsuits and losses, and many of them are making good profits.

[2] The listeners in Europe have plenty of good programs of the kind they desire and are comparatively free from the advertising nuisance which, in America, has become so obnoxious that commercial broadcasters and government officials are releasing publicity stories stating that they are trying to abate it.

[3] The listeners in Europe pay, thru their governments and in convenient small installments, much less than the American listeners pay indirectly for the programs which they receive.

[4] There is plenty of competition to keep the programs up to high standards but it is based on proper national pride instead of on the desire of commercial broadcasters to secure advertising patronage and exploit the public.

The administration of American broadcasting handicaps broadcasters, listeners, business concerns, the press, and governments, according to their own testimony. This statement is made on the basis of interviews with radio officials, broadcast listeners, business executives, editors, publishers, and public officials representing the United States and each of its states, Canada, Mexico, and every

one of the several European countries.

American broadcasters handicapped by short-term licenses—The American broadcaster is handicapped at the start by a short-term license. He must

THE DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS of the National Education Association urges that education by radio be given immediate attention by teachers, school officers, and citizens to the end that a fair share of radio broadcasting channels may be reserved exclusively for educational purposes; that the quality of educational broadcasting be improved; that broadcasting facilities be extended to schools and to programs for the education of adults; and that the introduction into the schoolroom of any radio program, however fine its quality, which is announced or titled so as to gain "goodwill" or publicity for its sponsor, or which advertises a sponsor's wares, be forbidden by statute. Radio is an extension of the home. Let us keep it clean and free.—Resolution adopted by the Department of Elementary School Principals of the National Education Association at its meeting in Los Angeles, California, July 1, 1931.

invest his money with no guarantee that he can carry on his business for more than a few months. He is attacked frequently by others who want his privileges, and he is compelled to spend much money in defending what he believes to be his rights. In Europe broadcasters united and secured concessions from

their governments under contracts which will continue in some cases for twenty to thirty years. They developed radio on a sure foundation. Wavelengths are assigned by a voluntary, representative organization. Hearings and lawsuits, such as absorb a considerable part of the energy and funds of American broadcasting organizations, were not reported in Europe altho no country on that continent has as many wavelengths as the United States.

European broadcasters have assured profits—The American commercial broadcaster depends on the sale of advertising for his income, and is handicapped by the fact that listeners seldom if ever demand advertising. In order to satisfy advertisers he must attempt to force upon listeners advertising which they do not want. The listener often shuts out the advertising or lets it pass unheeded. Reports are unanimous on this point. Radio advertising keeps many listeners talking against the advertising instead of praising the things advertised. It may prove to be an unreliable source of revenue.

Protests of European listeners against radio advertising are so vigorous that it is prohibited in twelve countries and limited in seventeen others. Only from five to twenty minutes per day of advertising are permitted in most of these seventeen countries, and it is seldom permitted to interrupt programs.

Most European broadcasters receive regular, assured incomes from their governments. Comparatively few American broadcasters have reported satisfactory profits, but in fifteen European countries broadcasting officials report profits ranging from "satisfactory" to fifteen percent. Only one country reported a deficit. That was only \$25,000, and it was paid by the government.

The European broadcaster usually has only the listeners to please. Advertising revenue, if any, is too small to affect

ONE HUNDRED MILLION DOLLARS PER YEAR—A brief résumé of the principal research contributions of the University of Illinois to agriculture and industry has been published as a University of Illinois bulletin under the title *One Hundred Million Dollars Per Year*. This bulletin is Volume XXVIII, Number 45, June 7, 1931, and may be secured by writing J. F. Wright, publicity director, University of Illinois, Urbana, Illinois.

broadcasting policies. The more the broadcaster pleases the listeners the larger his audience and income. The less advertising, the better the listeners are pleased.

Broadcasters in one small country abandoned advertising when it was paying them seventy percent profits. Radio advertising was prohibited by law. No license fee was required of set owners. Broadcasting was left with no source of income except voluntary contributions, yet in two years one broadcasting organization has accumulated a surplus of \$600,000, another a very large sum, and the others are at least paying expenses. Listeners are glad to be rid of the advertising nuisance, and continue to contribute liberally. Contributions come even from listeners on the frontiers who can hear foreign stations more easily than those of their own country.

European listeners pay less for radio service than Americans—The American listener seldom can hear any program for more than ten or fifteen minutes at a time without being interrupted by some salesman, whose statements may not agree with the facts. Many who listen become painfully conscious of the fact that commercial broadcasters look upon them merely as chattels to be sold to the highest bidders. Tests made by asking American listeners to express their preferences indicate that many would rather pay for their programs directly, and thereby get what they want without advertising. European listeners do so. Many of them are asked, at least once a year, what they want, and programs are made to meet their demands. There is very little demand for the meaningless stuff that some American commercial broadcasters claim the public wants. Jazz is described in Europe as "negro music capitalized by Jews." There is a strong demand for good music and for educational programs.

American listeners are told that they pay nothing for their radio programs. The fact is that the listeners pay, indirectly, the \$444,179.94 budget of the Federal Radio Commission, plus the total budget of all the broadcasting stations, a sum reported as over \$75,000,000. This is more than the listeners pay in all the other countries combined. It is extravagant in view of the fact that much of the time on commercial stations is devoted to commercial propaganda which many listeners consider as not in the public interest, convenience, or necessity. In the words of a wellknown radio editor: "The radio listener, altho he does not do it

in a tangible way, actually 'pays the bill' for broadcasting. You paid part of that bill when you purchased a radio set, a tube, or any of the other gadgets that went into radio. You continue to pay when you smoke the cigarettes, use the soap, and patronize the merchants whose virtues you have heard extolled thru your

WISCONSIN is noted for its pioneering in the public interest, and now, thru the leadership of the University of Wisconsin, the state is attempting to enlist the radio as a means for disseminating information of general concern. The orderly presentation of wellplanned programs will, I hope, find reception in the schools. I earnestly recommend the Wisconsin School of the Air programs to our teachers.—John Callahan, state superintendent of public instruction of Wisconsin, in the University of Wisconsin Press Bulletin, volume 25, number 24, December 16, 1931.

loud speaker between periods of music or dialog."

Stations more crowded in America—Many American listeners are handicapped by the number of stations crowded into small areas. Several American cities have ten or more stations within a radius of a few miles, the majority of which broadcast programs of the same general nature. This causes interference which in many cases prevents satisfactory reception. In Europe there are seldom more than two stations in any small area.

Unfair discrimination and favoritism—In America one distributor of merchandise is permitted to operate one or two broadcasting stations to advertise his goods and others are denied the privilege of operating stations. One man is given repeated renewals of his broadcasting license altho he uses his station to sell his own goods on the one hand, and to attack legitimate business enterprise on the other. His privileges were continued even after he defied the government which granted them, and in spite of the fact that listeners complained that he used profane and obscene language in doing so. Organizations of capitalists are given the most valuable radio privileges

while labor is compelled to fight continually for its right to be heard. The declaration by a company that it wants to invest money in a radio broadcasting station and make profits by selling radio audiences to advertisers is considered by the radio authorities as giving the company a right superior to that of a university which seeks to use radio as a means of extending its service to citizens who cannot sit in its classrooms. The testimony of an employee of a commercial broadcasting company to the effect that the public wants the service of its station has more influence with the federal radio authorities than the fact that the people of a state support a broadcasting station at their state university by paying taxes. The commercial broadcasters are permitted to discriminate in favor of one concern that wants advertising time and against its competitor.

In Europe, radio channels are used primarily for service to the listeners. They are not turned over to favored business concerns. Where advertising is permitted the air is open to all legitimate business on equal terms. The advertiser usually pays only for the time used for his advertising. He is not obliged to pay for an expensive program in order to secure a few minutes of advertising time. The man with a small business can advertise. The air is not monopolized by large advertisers.

Difference in treatment of press—American newspapers and magazines have lost a large part of their revenue thru the action of the federal government in granting broadcasting companies the use of the public radio channels for advertising purposes. Also, certain newspapers are granted valuable radio privileges by the federal government while others are handicapped by greater restrictions or are denied the use of the air altogether. In Europe the press is better satisfied. In one country a committee representing the press is financed by the national government so that it may serve the public thru the national radio stations.

Broadcasting adds to tax burden—The American government grants the use of radio channels to broadcasters free of charge. It receives no income directly from these channels and spends about \$444,000 annually to maintain the Federal Radio Commission which issues the licenses to the broadcasters. What the government pays out of its treasury must of course be collected directly or indirectly from the citizens. Most European governments collect a small tax on

radio receivers, retain at least enough of it to cover the expense of their services, and use the rest in providing, directly or thru concessionaires, programs which the listeners want.

The state governments in the United States are deriving no revenue directly from the radio channels. Their right to control any channels is denied by commercial broadcasters and by the Federal Radio Commission. The Commission grants permission for broadcasting stations in one state to cover other states with programs, altho these programs may be objectionable to citizens and officials, but it denies the right of state governments to operate broadcasting stations even in performing functions for which the states alone are responsible, such as public education. The right to use radio in exercising the police powers of a state, without interference from the federal government, was won only thru the determined stand of one of the states, and the Federal Radio Commission still claims the right to exercise some authority over such use. In Europe the right of a sovereign state to use radio without permission or regulation from any other power is unquestioned. A satisfactory system is established and maintained by voluntary cooperation, and with less trouble and expense than in the United States.

Education classified as "commerce"—In the United States broadcasting has been classified as interstate commerce, thru the efforts of the radio industry. One state has been prevented, by action in a federal court, from taxing radio receivers, on the ground that they are instrumentalities for interstate commerce. On the same grounds efforts might be made to exempt from taxation radio broadcasting stations, railway property, telegraph and telephone lines, and automobiles. Prices paid for broadcasting stations indicate that the commercial value of radio channels is as high as \$6,000,000. The taxpayers appear to be losing much that the broadcasters gain for their free

privileges. In Europe broadcasting is an educational and civic function, carried on for the benefit of all citizens, and not for the benefit of a particular group of business concerns. It is not classified as commerce.

Education controled by advertisers—In the United States, commercial broadcasters and radio officials are trying to place all broadcasting channels in the hands of concerns engaged in the advertising and amusement business. Such concerns, when operating broadcasting stations, have full control and censorship of all programs broadcast. They, and radio officials, agree that a commercial broadcasting station must have the right to sell as much of its time as can be sold profitably. This leaves education dependent mainly on unsalable time and under the control and censorship of concerns which sell their time to advertisers, whose statements concerning their products do not always agree with known facts. In Europe this makes the United States a laughing stock, particularly when even the President of the United States, speaking to the citizens over public radio channels, becomes an adjunct to an advertising campaign.

Some national departments of education in Europe are represented in the commissions appointed by the governments to control radio programs. Where they are not represented the opportunity is left open for them to function when they choose to do so.

Political propoganda—American listeners are told that governmental control of broadcasting causes programs to be filled with political propoganda. In Europe, where some governments operate the broadcasting stations and others place broadcasting monopolies in the hands of controled corporations, complaints against political propoganda are not so numerous as complaints against commercial and political propoganda in America.

Program quality—American listen-

ers are told that under governmental control radio programs become dull and uninteresting. European listeners and officials who were interviewed, representing all the countries of Europe, were practically unanimous in stating that they believed European programs in general to be superior to those in the United States. Their testimony was supported by that of several Americans who hear programs both at home and abroad.

American listeners are told that in Europe there is excessive use of phonograph records in radio programs. No evidence was discovered indicating that phonograph records were used more in Europe than in America, altho the use of records has not been attacked there as vigorously as it was in the United States before the dominant concern in the radio industry absorbed the leading phonograph business.

Americans want European radio channels — In several countries attempts of commercial interests to gain control of the air and introduce American advertising programs were reported. Some of the approaches made were reported as highly improper. In most countries they failed. In one country they succeeded and a broadcasting station, reported as the most powerful in the world, is under construction. Government officials stated, referring to the contract with the concessionaire, that the government retained control of the programs. Officials of the company stated, on the contrary, that the company was free to do as it pleased, even if it chose to take a wavelength which is in use by a station in another country. It was stated that the company was associated with an "international trust." This trust was said to include an American corporation which, thru action of the Supreme Court of the United States, has been finally adjudged guilty of violation of the anti-monopoly laws of our country, and which the United States Department of Justice has sought to dissolve by legal action.

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James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
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Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

The Magnitude of Education by Radio

PEOPLE who believe that education by radio can accomplish its work in an occasional hour over a commercial chain, utterly fail to comprehend the magnitude of our educational needs. Within a relatively short time the radio broadcasting stations of our several states will be the largest and most vital institutions in those states--in their effect on the lives of the people, in their financial budgets and in their personnel and planning. They will be on the air fulltime both day and night broadcasting to homes, to schools, and to meetings of citizens and groups of all kinds, giving a new unity, a richer perspective, and a surer sense of direction to human life. They will do all this at a relatively small cost considering the vast numbers reached. All kinds of receiving and broadcasting equipment will be greatly reduced in price as monopoly forces are brought under control by the people. For a state to surrender its right to radio is equivalent for it to surrender its right to the education of its people, as that education will be operated in the civilization of tomorrow.—From *The Journal of the National Education Association*, volume twenty-one, number one, page sixteen.

Canadian Educators Speak¹

THE PRESENT SITUATION in Canada with regard to possible developments in the field of radio broadcasting is one that concerns all who are in any way interested in the problems of elementary and adult education.²

Whether the question of national control of broadcasting is considered at the present session of Parliament, it is felt that the situation, so far as education is concerned, should be set forth so as to be readily available to the Cabinet.

In Great Britain and Germany sufficient progress has been made in both elementary and adult education to lead to the conviction that the experimentation period has passed and the leaders in this work know something of the possibilities of radio as an aid to elementary teachers, and are fully convinced of its vast possibilities in the field of adult education.

Nearly a million children in the schools of Great Britain listen for a short period daily to great scientists, artists, and teachers of various subjects. In adult education the principle of group listening during evening hours has been developed to such an extent that there are now in England over 200 study groups listening to courses of lectures on history, literature, astronomy, music, drama, biology, and other subjects.

Can any such work be done under a

¹A memorandum prepared by R. C. Wallace, president, and E. A. Corbett, director of extension of the University of Alberta, Edmonton, Alberta, and already indorsed by eight of the provincial superintendents of education, and by practically every university president in Canada.

²It hardly needs to be pointed out that under a national system such as is proposed by the Aird Commission and the Canadian Radio League, education is necessarily regarded as a provincial matter and educational broadcasts would necessarily come under provincial supervision.

private system? We have fairly well demonstrated in Canada already that a certain amount of adult educational work can be successfully sponsored by

WHAT RIGHTS has education of youth in the free allotment of channel rights, which soon seek to become property rights? The Committee believes that youth and education have equities in broadcasting which must be safeguarded and placed on a sure and dependable footing . . . The evidence is abundant that education has in radio a new and tremendous tool.

[From the report of the Committee on Youth Outside of Home and School, Section Three, of the 1930 White House Conference on Child Health and Protection called by President Hoover.]

private broadcasting companies, as witness the splendid historical drama series at present being broadcast by the CNR, and the generous space being given to universities thruout the Dominion on various commercial station programs. There is no doubt therefore that a certain limited amount of adult education would be provided for under a private system of broadcasting in Canada until the time should come—as it has in the United States—when evening hours would be considered too valuable from

an advertising point of view to allow time for straight educational programs. Then of course adult education of a consecutive and constructive character would disappear.

In elementary education, on the other hand, the situation is very different. Radio education in the schools is essentially a state affair. No private company can possibly get the necessary cooperation of trustees and teachers to make the school program effective.

The best example of this is the work at present being carried on by the Columbia network where several millions of dollars have recently been budgeted for school programs. No doubt thousands of schools thruout the United States will be equipped with receiving sets in order to take advantage of these lectures. But the experience of the Department of Education of Ohio—which has some 6000 schools under state supervision equipped with receiving sets and receiving daily programs arranged and broadcast by the Department of Education—is that to get worthwhile results it is not only necessary to have the cooperation of teachers and schoolboards, but that the teachers need a certain amount of instruction while at normal school as to the best way of taking advantage of this supplementary assistance in the regular routine of school work. In other words, *no private system, however powerful or beneficent, can adequately undertake the most important task that radio has to perform in the future, i.e., adaptation of its services to the requirements and opportunities of elementary school work.*

EDUCATIONAL STATION FIRST—More farmers in Ford and Pawnee counties, Kansas, listened to KSAC during 1930 than to any other radio station.¹ The programs of this state agricultural college station—located in Manhattan—were listened to on 151 farms, while only eighty-one listened to the commercial station with the largest following. Increased significance is attached to these findings inasmuch as the survey was made before the college installed its new transmitter. This new, modern broadcasting equipment was first used officially May 7, 1931. ¶Twenty percent of the farms having radios adopted desirable wheat practises as a result of radio instruction. Radio in adult education again has proved its value, since one generally accepted measure of the effectiveness of an extension method is its influence on the adoption of improved farm practises. ¶The survey also revealed the interesting fact that seventy percent of the farmers in these counties have radios, and ninety-three percent use their receiving sets to secure useful farm information. ¶The two counties mentioned are in the western part of the state. One is approximately 150 miles, the other about 200 miles from Manhattan.—¹Jaccard, C. R. *Radio as a Teaching Agency*. Kansas State College of Agriculture and Applied Science, Manhattan, Kansas, 1930.

Radio in Education

CLARENCE G. LEWIS

Secretary to the Director of Education, and Registrar, Advisory Council of Education, Adelaide, Australia

RADIO IS A MAGIC INSTRUMENT of unity and power destined to link nations, to enlarge knowledge, to remove misunderstandings, and to promote truth. It should avoid the crippling restrictions of complete government control, and the unhappy alternative of subject subservience to the profit motive. Broadcasting is fast becoming an integral part of Australian life, and people everywhere, especially in the rural areas, depend on radio for much of their entertainment, diversion, weather information, and market commodity quotations.

As radio is partly an extension of the home, it must be kept clean, and it must aim at elevating the public taste. Wireless has made the world smaller, and brought the constituent nations of the earth closer together. It can play an important part in imperial development, for it is a force that really matters in the affairs of the world.

From the point of view of the public, competition within reason between radio stations is most important in preserving freedom of the air. It must not be said, however, that the dominant purpose of radio is commercial profit. *What appears to be a radio monopoly in America is crushing educational stations, and such a curse must not be imposed upon Australians. The function of broadcasting stations must not be to build up audiences that can be sold to advertisers.*

Above all, the doctrine of free speech must be preserved, and the use of the air for all—not the few—must be protected; for any commonwealth, commercial or advertising monopoly of broadcasting channels would threaten freedom of speech, intellectual liberty, and the right of the individual states to exercise their educational functions. Radio by its very nature is destined to become a public concern, and therefore must be impressed with the trust of the public. Everything practicable should be done to awaken educationists to the possibilities of radio broadcasting in conjunction with the work of schools and colleges. Advertising has a tendency to kill interest in radio broadcasting, for such announcements offend the artistic sensibilities, and

lead to a revolt on the part of the listening public. It should be unnecessary to have to resort to expedients such as advertising in order to secure revenue.

The value of a central control is self-evident. This might be in the nature of a board, comprised of representative interests, particularly educational, and free from political control. In addition to the absence of any commercial motive in broadcasting, and radio being conducted as a public service, a definite policy should be formulated by the board so that the largest number of people possible can listen in on the simplest and cheapest sets. The greatest good to the greatest number should be the aim of the program. The board should be amenable to criticism and suggestions, and should avoid anything in the nature of religious, political, or industrial controversy.

Education by radio is a pioneering movement, and the possibilities of broadcasting need to be explored in the field of education. This discussion represents an attempt to present a few pertinent facts that may prove of some value in the near future. School teaching by radio has become an accomplished fact in a number of countries, and at the present moment an experiment in broadcasting is being conducted in connection with certain schools in South Australia.

Real stimulation is to be received from school radio programs, and not only will radio in schools provide a new medium of education, usher in a new era in instruction, but it will also stimulate the use of sets in the home by those who wish to benefit from instruction by air. There are many points to be watched and considered, however, when introducing a radio program into the schools. What response is likely to be roused in the schools themselves by radio lessons? What results may reasonably be expected, and what is the proper method of meeting the various problems that are sure to be encountered in radio instruction? A careful and thoughtful analysis is likely to cast some light on the proper evaluation and utilization of any efforts that are to be made in the field of educational broadcasting.

There must be some association between broadcasting and education. It

will be necessary for the board to operate thru a series of subcommittees composed of experts, and charged with the responsibility of developing their respective portions of the program. These committees should choose the broadcasting teachers, and should edit the supplementary material which should be published in pamphlet form for use in preparatory and follow-up work. These pamphlets should be illustrated wherever possible, and be designed for the double purpose of bringing about a feeling of intimacy between the listening school children and the broadcasting teacher, and to provide diagrams and illustrations to which the pupils could be referred from time to time during the actual presentation of the lesson. The pupils should be able to purchase pamphlets at a nominal cost.

Lessons in school subjects, such as history, French, nature study, music, biology, hygiene, and English literature, and in more general topics, including mythology and folklore, future careers, modern scientific achievement, English speech, general knowledge, rural science, travel talks, and dramatic readings might be arranged. Committees and teachers must bear in mind that broadcasting lessons are intended only to supplement the work of the class teacher, and, therefore, in addition to a good studio delivery, there must be the cooperation of the class teacher, who must also arrange for good reception in the classroom. The personality of the broadcaster is another important factor which must be sufficiently analysed. Broadcasting lessons should not be compulsory, nor should they replace personal instruction provided by competent teachers.

Let us consider briefly the points that are likely to produce success in school radio. The following appear to be of importance and worthy of consideration:

[1] Consider the curriculum and timetable of each school, together with its general character and special needs, before deciding to participate.

[2] Take all necessary steps to obtain good reception.

[3] Place the loud-speaker in a position which will insure that every pupil will hear the lesson in comfort.

[4] Remember that the broadcasting

lesson is a supplement to the efforts of the teacher.

[5] Study the aims and technic of each broadcast lesson.

[6] See that proper arrangements are made for the provision of maps, specimens, charts, and the like, as indicated in the pamphlets issued to schools.

[7] Arrange for supporting notes or lists of difficult words to be written, if possible, upon the blackboard beforehand.

[8] Practise auditory perception, so that children may learn to cultivate the habit of disregarding extraneous noise.

[9] Remember that the broadcasting lesson is a form of cooperation between a teacher in the classroom and a teacher at the microphone.

[10] See that each child uses his pamphlet as directed during the lesson, referring to the pictures and diagrams at the instance of the broadcasting teacher.

[11] Practise children in making continuous and neat notes during the broadcasting lesson. See that care is taken to avoid the noisy movement of papers.

[12] Revise and follow up the lesson and encourage research and individual practical work, for this applies with special force to broadcasting lessons where transient auditory impressions are the chief element.

[13] See that questions and exercises play an important part in the revision of broadcasting lessons.

[14] Remember that the broadcasting teacher regards the class teacher as a colleague, and will be glad to be consulted freely on any point of difficulty connected with the course, and considered criticisms both of the lessons and of the pamphlets, together with suggestions for improvement, will be greatly valued.

[15] See that the children are in their seats earlier than would otherwise have been the case.

[16] Obtain the cooperation and interest of the children.

[17] Supply suitable listening appa-

ratus, if possible, similar to that used in other schools. Sets used should be obtained at a reasonable cost, be simple to manipulate, and give a good standard of reception.

[18] Arrange for the periodical visits of an expert wireless mechanic, obtain his technical advice, and let him inspect and maintain the set in an efficient state.

[19] Encourage regular correspondence from pupils, and particularly the sending in of essays and tunes.

[20] See that the broadcaster is an expert, possesses a good delivery and the qualities of a teacher, has some teaching experience and some knowledge of the conditions prevailing in the schools, and has studied the special problem of wireless teaching.

[21] See that the classroom teacher is not out of sympathy with educational broadcasting, and has some knowledge of the subjects treated.

[22] Relieve the class from the strain of uninterrupted listening, by providing individual work in the following lesson.

[23] Arrange for lecturers to speak clearly and slowly, and spell any difficult words, keep a clear thread running thru their lessons, recapitulate the main points at regular intervals, and confine themselves to as simple a presentation of their subjects as possible.

[24] Issue a syllabus giving details of times and subjects for the coming term at the end of each term, and circulate same.

[25] Organize demonstrations of class reception in various parts of the country.

[26] Forward a periodical questionnaire to all participating schools.

[27] Give a class as many changes as possible from passive listening.

[28] Arrange for lectures, except in special circumstances, to be no longer than twenty minutes.

[29] Arrange for the lecturer to communicate with the teacher during the lecture, and for the teacher to comply with such requests.

[30] See that the wireless lesson is taken in the quietest room suitable acoustically.

RADIO CONTROL IN AUSTRALIA

BEFORE the Australian Parliament was dissolved on November 26, it was announced in the House of Representatives that the government would assume control of broadcasting from June 30, 1932.

Hitherto, broadcasting from the A-class stations owned by the government has been operated by a private firm—the Australian Broadcasting Company—under a contract which expires on June 30. In accordance with the labor policy of government control of public utilities, a national broadcasting board would be established to take over full control of radio broadcasting.

A board representing all interests, with a predominance of government representation, would be appointed. Complete divorce from political interference would be effected by giving the board fixed tenure and wide powers, making it virtually independent of the government.

An interesting feature of the new policy would be the establishment of a national orchestra comprising the best Australian talent, subsidized by a portion of the revenue from license fees. The present license system is to be continued. All Australian owners of radio sets pay a license fee of 24 shillings and this money is divided between the government and the broadcasting company.

The A-class stations are located in the six state capitals. The only revenue from these is provided by license fees. Advertising matter is rigidly excluded. Control over programs is exercised thru the Postal Department which has complete powers to regulate the programs in accordance with the regulations.—From the *Christian Science Monitor*, December 18, 1931.

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\$100,000,000

To the schools of America, radio is worth at least \$100,000,000 a year. This figure is based on the simple calculation that by a careful coordination of radio with the textbook and with the personal guidance of the teacher our schools can be made five percent more effective. Experience in the best schools suggests that five percent is a conservative estimate. For rural schools greater gains would be possible. Can Congress afford to make the schools depend on commercial interests in New York to set up their education by radio?

Commercialized Radio to be Investigated

THE ACTIONS of the radio trust in its effort to monopolize air channels and to subordinate education to commercial management have grown so serious that a resolution has been passed by the Senate calling for an investigation of the situation. The Senate Resolution 129, introduced on January 7 by Senator James Couzens of Michigan, provides:

Whereas there is growing dissatisfaction with the present use of radio facilities for purposes of commercial advertising: Be it

Resolved, That the Federal Radio Commission is hereby authorized and instructed to make a survey and to report to the Senate on the following questions:

[1] What information there is available on the feasibility of Government ownership and operation of broadcasting facilities.

[2] To what extent the facilities of a representative group of broadcasting stations are used for commercial advertising purposes.

[3] To what extent the use of radio facilities for purposes of commercial advertising varies as between stations having power of one hundred watts, five hundred watts, one thousand watts, five thousand watts, and all in excess of five thousand watts.

[4] What plans might be adopted to reduce, to limit, to control, and, perhaps, to eliminate the use of radio facilities for commercial advertising purposes.

[5] What rules or regulations have been adopted by other countries to control or to eliminate the use of radio facilities for commercial advertising purposes.

[6] Whether it would be practicable and satisfactory to permit only the announcement of sponsorship of programs by persons or corporations.

[7] Any information available concerning the investments and the net income of a number of representative broadcasting companies or stations.

The resolution as passed included the following amendment proposed by Senator Clarence C. Dill of Washington state:

[8] Since education is a public service paid for by the taxes of the people, and therefore the people have a right to have complete control of all the facilities of public education, what recognition has the Commission given to the applica-

tion of public educational institutions? Give name of stations, power used, and frequency.

[9] What applications by public educational institutions for increased power and more effective frequencies have been granted since the Commission's organization? What refused?

[10] What educational stations have been granted cleared channels? What cleared channels are not used by chain broadcasting systems?

[11] How many quota units are assigned to the National Broadcasting Company and the other stations it uses? To the Columbia Broadcasting System and other stations it uses? To stations under control of educational institutions?

[12] In what cases has the Commission given licenses to commercial stations for facilities applied for by educational institutions?

[13] Has the Commission granted any applications by educational stations for radio facilities previously used by commercial stations? If so, in what cases? In what cases have such applications been refused? Why refused?

[14] To what extent are commercial stations allowing free use of their facilities for broadcasting programs for use in schools and public institutions? To what extent are such programs sponsored by commercial interests? By chain systems?

[15] Does the Commission believe that educational programs can be safely left to the voluntary gift of the use of facilities by commercial stations?

In the face of these specific questions it will be rather difficult for the Federal Radio Commission to whitewash itself of the favoritism it has shown commercial radio interests and the radio trust.

Meanwhile, the radio situation was receiving attention on the House side of Capitol Hill. Representative Ralph A.

Horr of Washington state suggested a congressional investigation of the Federal Radio Commission which he called "one of the most extravagant and arbitrary of the government agencies."

Representative Horr cited a Bureau of Efficiency report which recommended an annual budget of \$284,060 for the Commission. His statement read in part as follows:

In striking contrast to this recommendation Congress, under strong lobby pressure, appropriated \$450,000 for the fiscal year 1931, almost double the amount found necessary. . . .

This extravagance is overshadowed by other abuses in the Commission. Both in regard to its own personnel and in the allocation of its favors, the Commission has been guilty of high-handedness scarcely precedented. Civil Service rules have been violated with flimsy subterfuge. Instead of promoting its trained personnel, it has asked Congress for permission to hire experts at large salaries. Often the "experts" turn out to be inexperienced youngsters, or men who received low salaries elsewhere.

Attitude on monopoly—Favor of monopolistic control is the most vicious tendency of the Commission. This is evidenced by the hold the NBC and RCA have upon the Commission. Incidents of unfairness which almost amount to tyranny are numerous. Stations have been given increased time and power without even formal petition, when smaller stations whose facilities have been attacked have had to spend large sums of money to retain high-priced counsel and prove convenience and necessity at a hearing.

Senator Dill's amendment to the Couzens resolution is worth re-reading.

Its questions are to the point and inescapable. If the questions are answered completely, they will do much to substantiate the contentions of educators who have held that the Federal Radio Commission has been indifferent to the point of contemptuousness to the rights of educational broadcasting. Such indifference is utterly indefensible in a governmental agency supported by taxes on the people.



THIS PHOTOGRAPH from the Washington Evening Star of December 13, 1931, shows the chairman of the Federal Radio Commission sitting between David Sarnoff, president of the Radio Corporation of America [left], and Merlin H. Aylesworth, president of the National Broadcasting Company. Aylesworth was formerly managing director of the National Electric Light Association whose effort to use the schools for power trust propaganda was exposed by the Federal Trade Commission.

Wisconsin Gives Communication Course

THERE HAS BEEN a long felt want in the radio field for a school of recognized standing to give a complete, comprehensive, wellbalanced course in radio communication, to be complete within itself and capable of being finished within a reasonable time. Realizing this need the University of Wisconsin extension division in Milwaukee is giving such a course to fit students for advanced places in radio activities. This is a new type of college training of a semi-professional nature with the object of training young men for positions existing in a field between the skilled craftsman and the trained professional engineer.

All trades and professions are now demanding that the men participating in them shall be thoroly trained in the theory and fundamentals of the trade or profession in question. The ever-expanding science of radio is possibly more exacting in this than any other because of the extremely technical nature of the subject and of the enormous responsibilities upon the shoulders of an operator. A few years ago a man could be a fairly good operator or technician without any particular training, but today, if a man expects to succeed in this field he must be thoroly grounded in the theory and practical applications of the fundamental principles of radio communication. The question has been to the serious-minded person, "Where can I secure such an education without taking a regular degree in engineering?"

The course given in Milwaukee is not an experiment for it has grown out of auxiliary courses given during the past six years and is planned as a definite preparation for the actual problems met in practise. The work given is substan-

tially of collegiate grade, requiring only a high school education or the equivalent for entrance. The training is very intensive, requiring the entire time of a stu-

dent which assure a thoro understanding of the various phases of the theory and practical applications of receiving and transmitting circuits. These correlated subjects include elementary electricity, high-frequency currents, thermionic vacuum tubes, and laboratory work which is divided into three parts:

- [1] actual experiments,
- [2] design of apparatus and circuits,
- [3] adequate drill in international Morse code.

The entire list of studies is completed more easily because of a study of technical mathematics as applied to electricity and technical English, which pertains to the writing of reports and experiments. The satisfactory completion of the course qualifies a student for the government examination for a second-class commercial operator's license or he may enter an allied branch of the radio industry.

The University of Wisconsin is one of the great state universities of America. It has long been noted for its progressive and pioneer attitudes. It has always been a champion of free speech and the interests of the people. It is one of the first universities to see possibilities in education by radio, and to cooperate with other educational interests and departments to develop this service for the citizens of the state. Just as those states which first developed efficient schools became the leading states in America, so those states that use radio to elevate the intelligence of their people will occupy first place in the America of tomorrow.

The communication course offered by the University of Wisconsin may have its counterparts in other states. Reports of such pioneering work will be published in the bulletin, space permitting.

Radio's Functions

GLENN FRANK

President, the University of Wisconsin

TO SERVE the agricultural interests of the state by furnishing technical and market information.

[2] To serve the households of the state by furnishing technical counsel on the construction, care, and conduct of the efficient home.

[3] To serve the adult citizenry of the state by furnishing continuous educational opportunities beyond the campus of the university.

[4] To serve public interest and public enterprise by providing them with as good radio facilities as the commercial stations have placed at the disposal of private interests and private enterprise.

[5] To serve the rural schools of the state by supplementing their educational methods and materials.

[6] To serve the interests of an informed public opinion by providing a state-wide forum for the pro and con discussion of the problems of public policy.

dent for two semesters. The entire day is occupied from eight until four-thirty with lectures, class work, laboratory experiments, special problems, and assignments to be completed after class hours. This same course may be taken in evening classes over a period of two years or by correspondence.

The principal course of a complete training in radio communication is strengthened by supplementary subjects

WE COMMEND the splendid work of the Ohio School of the Air. We believe that "the radio broadcasting channels belong to the public and should never be alienated into private hands." We appreciate the fact that in Ohio certain channels are assigned exclusively to educational and civic purposes. We indorse the work of the National Committee on Education by Radio and the Ohio School of the Air in their efforts to protect the rights of educational broadcasting and to utilize certain definite means for educational purposes only. ¶We most emphatically voice our objection to the continuous exploitation of our schools by various agencies that claim they are assisting in the education of our youth, but in reality they are using the schools mainly for the purpose of advertising. We urge superintendents and teachers to exercise their best judgment in permitting all such agencies to interfere with school work, particularly in this time of stress when all educational units are hard pressed, to maintain proper educational standards.—Resolutions adopted by the Southeastern Ohio Education Association, Athens, Ohio, October 30, 1931.

Pivotal Questions in Radio

SERVICE OR PROFITS?—Are you interested in curing disease or preventing it? The college of medicine of the Ohio State University under the supervision of Dean John J. Upham, is conducting an informative campaign on disease prevention over WEAO, the university radio station. The talks given furnish practical means of preserving health.

Allotted but 750 watts and one-third time by the Federal Radio Commission, this educational station is doing its bit in giving the public dependable information to combat the vicious drug advertising carried by chain broadcasters and commercial stations.

The demands of various departments of the university to be given broadcasting time, which under the present arrangement was impossible, led officials of the university to apply to the Federal Radio Commission for additional hours. On November 24, 1931, representatives of the institution, at considerable expense, presented their case before a commission examiner in Washington. They were of course opposed by representatives of the commercial station with which the university shared time. As was expected, the Federal Radio Commission's examiner decided against the educational station.

Other January programs from the forty departments of instruction in the university include such series as business conditions, economics, French, Spanish, Italian, debating, drama, international problems, art, and various agricultural topics. Thru the radio, the services of the one thousand faculty members and the facilities of a twenty million dollar plant are made available to its listeners.

ORGANIZED TO PROTECT—It was the request of land-grant institutions for help in protecting their broadcasting

stations against the alleged injustice of commercial broadcasters and the Federal Radio Commission that led to the organization of the National Committee on Education by Radio.

The Committee proposed the reservation of a small proportion of the radio channels, primarily for the existing state-owned and state-authorized stations.

The proposal was immediately attacked by commercial broadcasters. The attack was supported by members of the Federal Radio Commission. The Commission, as one of its first official acts, had summarily ordered some state-owned stations off the air during hours wanted by commercial broadcasters, according to statements from officials at these stations. These acts appear to reveal strategy for placing all broadcasting channels in the hands of a commercial group dominated by a corporation which has been finally adjudged guilty of violation of national laws. Another element in the strategy, apparently, is the Federal Radio Commission's continuance and extension of the privileges of a lawbreaking corporation, in spite of the radio law which two members of the Commission interpret as prohibiting violators from using radio channels.

The states will make it clear to the Federal Radio Commission that they will continue to meet their responsibility for public education, even when that involves the use of radio. No other agency of the federal government ever has been permitted to interfere with the educational functions of the states and the sovereign states will not submit to the dictation of a little official group which some critics claim is disregarding the law itself and submitting to the domination of a corporation whose conviction for illegal practices has been confirmed by the Supreme Court of the United States.

TAXING RADIOS—The radio industry has done its best to make it appear that a tax on radio receivers would be impossible. In South Carolina commercial radio interests secured a decision from a federal court preventing the state from taxing radio receivers as instruments used in interstate commerce. On the other hand the industry dodges all responsibilities as a common carrier.

Now there is a proposition before Congress to tax all receivers and, in the opinion of one writer, "it seems definitely settled that purchasers of radio receiving sets will have to pay some tax and the only question remaining is how much."

Apparently the strategy of the industry is to break down the rights of the states in radio and, if there is to be any income from radio taxes, to have it go to the federal government.

In the meantime, European governments, by charging very moderate license fees for the use of radio receivers, are raising substantial sums which are used to assist in financing the governments on the one hand and, on the other hand, to provide radio programs such as the public wants, free from the advertising nuisance.

ENGLAND SPEAKS—The whole system of American broadcasting, where it appears to us strange, is merely a reflection of American life still outside our comprehension; the public consciousness which, on the one hand, submits to what we in this country could only describe as the tyranny of commercial competition, and, on the other hand, solemnly declares that "the American sense of freedom would not permit of applying set licenses and license fees," clearly springs from a specifically American conception of democracy.—British Broadcasting Corporation year-book, 1932, p47.

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J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Business is Good in The Schools

BUSINESS IS GOOD when there is a steady demand for products which serve genuine and important needs and when that demand is being fairly met. Measured by this standard the business of education has never been so good as in the United States at this moment.

There are more young people in school than ever before. They are in charge of the most alert and best trained teachers that have ever blessed the nation. These teachers are presenting the strongest curriculum so far perfected and are seeking to make it better. They are working in the best buildings that ever housed the nation's millions of young students. They are supported to a remarkable degree by an intelligent, informed, and sympathetic public.

These teachers are working at their problems. During the summer of 1931 more than 270,000 of them took special courses to improve their service. Over 700,000 in the State Education Associations and 200,000 in the National Education Association are cooperating to improve education. More than 5,000 are life members of their great professional body. Tens of thousands of school faculties are holding regular meetings to study their problems.

These facts are of the utmost significance for men and women in every other line of business. They mean that better times lie ahead. The first wealth is human wealth. Upon that all other wealth is built. These thirty million students are getting the best education ever given to the masses of people. They are learning to live on a higher plane of life. They are building up health and vitality. They are being taught to value a fine home life and to plan for it. They are learning how to learn and to keep on learning as a life-long enterprise. They are learning citizenship by practising it in the schools. They are being trained in essential vocational skills. The higher uses of leisure are opened up to them in the fine arts and in the recreational and social life of the school. Above all, they are seeking to develop fine character—to quicken ambition, aspiration, courage; to cultivate industry and thrift; to establish all the virtues that underlie excellence and happiness of life.

These products of the schools are the pride of America. They are the basis of all other production and the promise of a quality of consumption such as the world has not yet seen. The business man who is prepared to serve the improved product of the schools will reap a rich reward. Dishonest business must grow less and less. The saloon is gone. Gambling has few defenders. Speculation has had a hard blow. Poverty can be wiped out. Graft can be abolished. Efficiency can take the place of weakness. Honest, intelligent, courageous industry and business can lift America. They can achieve the only goal worthy of an intelligent system—economic security for all from the cradle to the grave. *Today* business is good in the schools. *Tomorrow* business will be good in the factories, the shops, the stores. By living up to the motto *Children First* America is laying the foundation for a new revival.—From the *Journal of the National Education Association*.

Federal Radio Examiner Proposes To Interfere With Education In Ohio

OHIO STATE UNIVERSITY is due to lose some of its best radio broadcasting hours if the report of Examiner Ralph L. Walker is sustained by the Federal Radio Commission.

In reporting the case the *United States Daily* on January fourteenth said:

The examiner recommended that station WEAO be allowed forty-two hours a week, six more than it has at present.

This recommendation authorizes the college station to operate six hours a day, seven days a week. Heretofore silent on Sundays, WEAO averaged six and one-third hours a day in its broadcasts. Investigations both in the United States and abroad suggest that Sunday programs should preferably be of the type usually designated as entertainment or religious, rather than strictly educational. The examiner's assignment of a six-hour Sunday schedule is a manifest example of the interference of the federal government in the educational affairs of a state. To use this time effectively the university will be compelled to change its programs from the strictly educational type, to a kind that at present it is not prepared to give. While a radio station operated by a university may vary its program by using a proportion of entertainment features, the very fundamental nature of an institution of higher learning demands a program which is primarily educational.

The new schedule provides for the use of the following hours: 9 to 11AM, 12:30 to 2:30PM, and 5 to 7PM.

Under the previous arrangement the university operated from 9 to 11AM, 12:30 to 2PM, and 4 to 5PM daily except Sunday; 7 to 10PM Monday; and 7 to 11PM Wednesday and Friday. In addition, during October and November the period from 2 to 5PM on Saturdays was used for broadcasting football games, while five periods between 8 and 9PM were used for broadcasting games during the basketball season.

The operating schedule requested by WEAO was for the hours 9 to 11AM, 12:30 to 4:30PM daily except Sunday; 7 to 10PM Monday and Thursday; 7 to 11PM Wednesday and Friday; 8 to

9:30PM Saturday, and, in addition, the hour 4 to 5PM Saturday during October and November. No Sunday time was wanted by the university station; it was deemed unsuited for its radio programs.



SENATOR JAMES COUZENS of Michigan, an outstanding citizen and statesman, whose devotion to youth is symbolized by the millions of dollars he has given from his personal fortune to advance the welfare of children. Senator Couzens sponsored Senate Resolution 129 calling for a thoro investigation of commercialized radio and the possibility of public ownership of broadcasting facilities.

The director of the educational station carefully prepared a plan for use of the time requested, and, in addition, secured competent engineering evidence as to the technical efficiency and superior coverage of WEAO in comparison with the commercial station with which it shared time. The examiner did not seek the advice of competent educational authorities concerning the value of the programs broadcast by the university. Among other conclusions, he arrived at the following:

The service rendered by Station WKBN [a commercial radio station sharing time with the university] is more diversified and of more general interest than are the programs of Station WEAO [Ohio State University].

Profit-making was the primary aim of the commercial station attempting to secure a change in the hours of the university station. One commercial representative was heard to remark that the station would have to have more evening hours or it could not afford to continue operation. Not a word did he utter of a desire to secure more evening hours in order to render a more acceptable service to his listeners. On the other hand, the university authorities desired more evening hours in order to broadcast for certain groups of the Ohio population who could not be reached at other times.

In connection with the hearing, representatives of the commercial station spent approximately five thousand dollars for evidence alone, according to a prominent Washington radio attorney. It is manifestly contrary to public policy for an educational institution supported by state appropriations to spend large sums of money in legal battles of this sort.

The case was clearly drawn. The university had a well-prepared plan and a more dependable state coverage than the commercial station with which it shared time, but when it made a proper application to the Federal Radio Commission, the examiner not only did not recommend granting its request, but in exchange for some of the present hours, gave the educational authorities hours which they are not now prepared to use effectively. Findings like this have convinced educators that radio education will secure its rights from the Federal Radio Commission only when Congress passes a law giving educational institutions preferred consideration in the allotment of radio broadcasting facilities.

The Fess Bill [S.4] is a step in the right direction. It was designed to meet just such situations as the one described. It is calculated to protect the rights of educational stations before a commercially-minded Federal Radio Commission. The situation in case suggests that in spite of commercial ballyhoo to the contrary, there are other than financial difficulties which are crowding educational stations off the air.

Is a Radio Budget Justified?

PAUL V. MARIS

Director of Extension, Oregon State Agricultural College, Corvallis, Oregon

SINCE THERE IS a very wide range of difference in the extent to which land-grant colleges are making use of the radio as a supplementary means of extending education, it follows that there will be a corresponding variation in expenditures for this purpose. The following situations, and perhaps others, exist at present within our institutions:

[1] Colleges owning and operating radio stations on a fulltime basis.

[2] Colleges owning or sharing in the ownership and operation of radio stations on a parttime basis.

[3] Regular participation in the program of one or more commercial stations.

[4] Occasional participation in the programs of one or more commercial stations.

Since our own institution falls within the first classification, my discussion will be confined to that type of situation. It involves the maximum radio budget.

Danger—We seek in vain for examples of adequately financed college broadcasting stations. The great danger of the present moment lies in the fact that opinions are being formed, policies developed, and rights in the air determined on the basis of meagerly financed educational broadcasting on the one hand, and abundantly financed commercial broadcasting on the other hand. As yet we are quite unaware of the potential possibilities of education by radio.

While I recognize that educational broadcasting over so-called "chain" or commercial stations is now developed and susceptible of further development, and that it will have an important and legitimate place in a complete radio service originating in land-grant institutions, yet I dissent from the opinion that this arrangement can ever completely fulfil the need. I support, rather, the contrary view that the institutions are justified in owning and operating their own stations in order that they may render a service of primary importance which is not likely to be obtainable from commercial stations.

Programs filling state needs—To illustrate my point, we are now giving a course in poultry husbandry over our college station in which upwards of six hundred poultrymen have definitely registered. Hundreds of others are undoubt-

edly listening in and receiving benefit. Many of the registrants have purchased textbooks. They are receiving supplementary literature and assigned readings. We have considerable evidence that this

WHILE I RECOGNIZE that educational broadcasting over so-called "chain" or commercial stations is now developed and susceptible of further development, and that it will have an important and legitimate place in a complete radio service originating in land-grant institutions, yet I dissent from the opinion that this arrangement can ever completely fulfil the need. I support, rather, the contrary view that the institutions are justified in owning and operating their own stations in order that they may render a service of primary importance which is not likely to be obtainable from commercial stations.

is not an indifferent class, but rather that it consists of a group of persons trying to make a living in the poultry business, eager to learn, and following closely the lecture course offered by the head of our poultry department. In four centers, groups are assembling to listen to the lectures and then discussing them. We have had other radio classes in other subjects and we are therefore not going beyond our experience in citing this as a field of large potential possibilities. Such courses constitute a legitimate, justifiable, worthwhile use of college broadcasting stations. On the other hand such programs, in the nature of the case, are not appropriate for chain broadcasts by commercial stations. In fact, offering such programs over stations which seek primarily to attract general audiences would only serve to create prejudice against the programs. Furthermore, our agricultural and home economics programs are intended for Oregon farmers and homemakers. We do not intend them for the people of other states, or expect colleges

in other states to seek to instruct our people. Our whole system of experiment stations is predicated upon the principle that special and local problems require solution and, accordingly, we have set up separate organizations in the separate states to solve these special problems.

Commercial stations inadequate—Since the special service to limited groups cannot appropriately go out as network broadcasts, there remains the possibility of using commercial stations when they are not broadcasting chain programs, or broadcasting over independent stations that are not affiliated with a chain. When the matter is narrowed down to this point the inadequacy of the commercial station for our purposes becomes apparent. In the first place the big stations are broadcasting chain programs a good share of the time. We cannot be permanently satisfied with anything but the best time for our special purpose, and the big stations cannot give it to us and at the same time be chain stations. When we eliminate the chain stations and place our reliance upon the independent commercial stations, I believe all will agree that this is a very uncertain and precarious reliance.

I feel that the conclusion is warranted, therefore, that the needs of the land-grant colleges from the standpoint of rendering a localized service cannot be met by commercial stations. Furthermore, the type of localized service to which I refer is the most important of all possible service by radio.

Dollars and cents—How much can land-grant colleges afford to invest in radio equipment and operation? This is a question worth settling in general terms, even if there are many institutions which cannot immediately secure the funds which might legitimately be so expended.

Heretofore we have not been dismayed by the fact that an addition of a thousand students calls for the erection of one or two new buildings costing a hundred thousand dollars or more, or necessitating an increase of fifty thousand dollars a year in operating expenses. On the basis of relative values can we not lay down the proposition that an investment of between fifty and one hundred thousand dollars in radio equipment, and

that an annual operating budget ranging from twenty-five to fifty thousand dollars are justified, and that this expenditure will provide new and supplementary educational facilities and services at a lower cost than others we are now rendering? Radio need not supersede other types of service. In numerous instances costs can be reduced by remote control arrangements connecting institutions located near each other.

Oregon's objective—Our aim in this state is an all-state station used jointly by the institutions of higher learning and the state offices and commissions located at the state capitol. Its program will then include daily, except Sunday, broadcasts from the campus of the University of Oregon at Eugene, by means of remote control facilities; daily, except Sunday, broadcasts from the state capitol at Salem, to be participated in by numerous state offices and commissions such as the governor, secretary of state, state treasurer, state superintendent of public instruction, librarian, department of agriculture, department of police [for educational purposes only, not including apprehension of criminals], highway commission, industrial accident commission, state forester, fire marshall, corporation commissioner, public service commissioner, department of vocational education; and participation by three state normal schools and, if desired, by Willamette University, a privately endowed Methodist college located at Salem.

The combined program resources of the educational institutions and public agencies enumerated above, including the leased wire connections with the market news service of the United States Department of Agriculture, will permit full compliance with the twelve-hour minimum program service required by the Federal Radio Commission, and provide the citizens of the state of Oregon with an educational and service program of inestimable value.

\$50,000—The thirty-sixth legislative assembly of Oregon authorized the state board of higher education to extend the facilities of the station to other institutions of higher learning and to various state offices as outlined above. A reduc-

THE GREAT DANGER of the present moment lies in the fact that opinions are being formed, policies developed, and rights in the air determined on the basis of meagerly financed educational broadcasting on the one hand, and abundantly financed commercial broadcasting on the other hand.

tion in available funds precludes the immediate consummation of the expansion program. The remote control facilities mentioned, and appliances called for by a recent order of the Federal Radio Commission, will altogether entail additional capital outlay approximating fifty thousand dollars. A like sum will be required for annual maintenance and operation costs, exclusive of the payment for the time of faculty members and public officials appearing on the programs.

Service record—KOAC is wholly dependent upon public funds or private donations for support. It was first established in 1922, when a fifty watt transmitter was built by the State College physics department. In the fall of 1925, a five hundred watt transmitter was placed in operation, and the program enlarged. In the summer of 1928 the present modern Western Electric equipment, with a thousand watt crystal-controlled transmitter was purchased and installed in the new physics building on the campus. The station and studio equipment, exclusive of the building in which it is housed, represents an investment of approximately \$35,000.

Twenty percent of Oregon's radio audience is within a radius of fifty miles of KOAC; 89 percent of the state's radio audience is within a radius of seventy-five miles of the station, and 97 percent is within a hundred mile radius. This includes the city of Portland, over the larger portion of which KOAC is well received. Excluding Portland from the consideration altogether, 47 percent of the state's radio audience remains within the hundred mile radius from the station.

Popularity—Reliable checks indicate that the daily farm broadcasts, the market news reports, the homemaker hour, the 4-H Club programs, the business reviews, the special lecture courses on various subjects, and other program features, are widely received and greatly appreciated by the people of the state.

As the above statements indicate, the record of the station is one of progress. Notwithstanding large reductions in contemplated expenditures for other higher educational activities, a 50 percent increase is contemplated for the maintenance and operation of KOAC for the year beginning July 1, 1931. In view of the number of persons reached, education by radio is relatively inexpensive.

Filling a need—The programs described will be of special interest and benefit to the citizens of Oregon. Their local application, which adds to their value, tends in fact to render them inappropriate for chain broadcasts covering groups of states. It is our experience and judgment that it is only by owning and operating its own broadcasting station that the state of Oregon can best be served with educational programs such as those contemplated in plans for expanding the scope of KOAC's schedule. Loss of any part of the time now assigned to the station, or any other circumstance preventing the final consummation of our objectives, will be distinctly against the public interest, convenience, and necessity which Congress, by its enactments, has sought to safeguard.

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Going Over the Heads of Parents

The home is the richest soil ever given for the growth of human life. It deserves every aid and protection, that wise and devoted parents may rear intelligent and upright children. Is not high-powered advertising aimed at children over the heads of their parents a menace to the integrity of home life? Can we afford to allow smartalecky salesmen on the air to invade our homes—even on Sunday—and to destroy the ideals of sincerity and good taste which are at the heart of sound character?—From *Special Bulletin Number Five* of the National Congress of Parents and Teachers.

The Weakness of American Radio

SENATOR CLARENCE C. DILL on his return from Europe last year decried the weakness of American radio in materials of an educational and informational nature. He was convinced that several European countries are far ahead of the United States in broadcasts of this type.

In a recent interview the Senator related his experiences with the Federal Radio Commission in attempting to secure higher power and better frequencies for educational radio stations. He was given to understand that educational authorities did not have the money to finance high-powered stations. This was clearly a subterfuge to cover up their activities which favor commercial broadcasting interests, since the Senator called attention to the fact that in his own state one of the educational institutions was prepared to build a ten kilowatt station, but was denied authorization by the Commission.

The specific questions he has given the Federal Radio Commission [Dill amendment to the Couzens Senate Resolution 129. See *Education by Radio*, Vol. 2, No. 3, p9], if answered by impartial evidence, should clearly indicate one reason why American radio programs are weak. To quote Senator Dill's own statement concerning the questions:

I am anxious to ask the questions covered by the amendment in order that we may have the record of the Commission as to what it has done in the way of permitting educational stations to be built up in this country. American radio is weakest on the educational side. The Radio Commission in interpreting the words "public interest"—and some one has called them the "magna charta" words of the radio law—has interpreted those words too narrowly by overemphasizing the part played by advertising over the radio. Judging from their grants of licenses and their refusals of licenses, the Commission seems to take the view that the "public interest" is best served when stations whose owners have large amounts of money and are able to put on popular programs are given the cream of the radio facilities. I am sure the answer to these questions will show that again and again educational stations have asked for better wave-

lengths, for permission to use more power, and to have time upon wavelengths that would be desirable in the states where it was asked for, and that the Commission has refused these applications.



HONORABLE EWIN L. DAVIS, *United States Representative from the Fifth District of Tennessee, chairman of the House Committee on Merchant Marine, Radio, and Fisheries. Representative Davis is sponsoring important radio legislation. He believes the air is too cluttered with advertising which the Federal Radio Commission might have cleaned up under existing radio laws had it not "fallen down" on its job.*

It has given as the reason, generally, that the educational station is not prepared to give programs that the public desires, and similar reasons, when it seems to me that the Commission should have taken into consideration the fact that there is a large percentage of the public that would welcome more education by radio. It might well do something to develop a love of educational programs. The Commission should divide time upon cleared channels which it has created in order that more people might hear educational programs. It could do this by permitting state universities and colleges and even public-school systems to use wavelengths for certain hours when they are desired, and then allow commercial stations to

use the remaining time for commercial and sponsored programs.

I hope that the information that will come from the Commission will be such as to make the public realize how the Commission has discriminated against educational stations and stations that are ready to put on educational programs, and that thereby we will build up a public opinion in this country that will induce the Commission to take a proper view of the words "public interest" from the standpoint of education. If we can do that, it will be far better than attempting to legislate, by provisions of a statute, the priorities of different services to be granted by the Commission.

Education over the radio should be free from commercial interests. It should be independent and free, just as our systems of public education are free and independent.

A program sponsored by a commercial client cannot be classed as truly educational. A year ago, when the Commission attempted to compare the relative amounts of educational programs broadcast by commercial and by educational stations, a serious fallacy resulted. The educators were scrupulously particular in classifying their program material, while in a great many cases, programs no responsible educator would class as educational were so classed by commercial operators.

These conclusions, based as they were on such unscientific procedure, were used many times in attacking the standing of many of the fine radio stations operated by educational institutions.

In any attempt to secure facts called for in the senatorial radio investigation, scientific principles of investigation must be rigidly followed. Terms must be so accurately defined as to leave no opportunity for individual opinions to bias the results. Any samplings made must follow acceptable scientific procedures.

The people have a right to a fair and impartial survey of the radio situation in this country. From the dissatisfaction expressed on every hand with things as they are now, they will certainly not be content with anything that endeavors to whitewash those in whom the responsibility for the present state of affairs rests.

EDUCATION OVER THE RADIO should be free from commercial interests. It should be independent and free, just as our systems of public education are free and independent.—
Senator Clarence C. Dill.

Going Over the Heads of Parents

THE ADJACENT ADVERTISEMENT appeared on page twenty of the January 16, 1932 issue of *National Broadcast Reporter*, a comparatively new radio magazine, published in Washington, D. C., and an outspoken representative of commercialism in radio.

Look again at the advertisement. Keep looking at it until the full force of its damnable message sinks in! That innocent-looking little girl, standing in the center, is *your* daughter. That boy with the violin, and the straightforward look on his face—he's *your* son. Will you have them the pawns of commercial hawkers of merchandise? It's true that the United States shelters the ablest businessmen the world has known. It also is true that these men are fathers of sons and daughters. Shall the children be sacrificed on an altar of dollars-and-cents? Let's rid ourselves of this kind of thing once and for all. Let's keep the integrity of *children first!*

Here's how Bart E. McCormick, secretary of the Wisconsin Teachers Association, feels about it. Writing in the latest issue of the *Wisconsin Journal of Education*, he said:

There is no source from which so much sugar-coated propaganda comes to the desk of the editor as from commercial radio. The commercial aspect is usually in the form of goodwill advertising, nicely coated with an *educational frosting*. And the promoters expect the *Journal* to advertise these programs free of charge and urge schools to use them. Why not?—the newspapers donate hundreds of thousands of dollars in space a year. But the *Journal* believes there is a principle involved and refuses to advertise them. *We believe that school people should refuse to permit the school to be used as a medium for advertising, by refusing to tune in on so-called educational programs prompted by and promoted for commercial purposes.*

That kind of spirit will kill child exploitation. That kind of spirit is needed in the homes and schools of America. Boycott all child exploiters!

WNAX

YANKTON

SOUTH DAKOTA

526 Meters

570 Kilocycles



ROSEBUD KIDS ORCHESTRA—Kiddies' Hour

Certificates of Merit were issued in 1931 to sixteen hundred grade school children for bringing average grades up to ninety or better. The competition was keen for a gold medal offered to the one showing the greatest average increase from month to month. Teachers and parents were enthusiastic.

In this way, WNAX of Yankton, S. D., has built up a Kiddies Hour from 5:30 to 6:00 P. M. daily that has a regular audience of tremendous proportions.

Have you ever considered the importance of the "Kids" recommendations to Ma and Pa on your product?

SELL the KIDS and you have SOLD the PARENTS.

This period is open at present.

WRITE

WNAX, Yankton, S. D.

For Details

THE COMMON SCHOOLS belong to the people. They are managed by the people thru carefully chosen representatives. They are in charge of teachers licensed by public authority. They are financed by public taxation. Every effort to misuse the schools for selfish ends is a menace to their integrity and success. These efforts have been particularly pronounced during recent months. Radio advertising both direct and indirect is making great efforts to get into the schools. Of course it will be kept out of the schools just as advertising has been kept out of textbooks. But just now teachers, parents, and citizens need to be alert to protect the classrooms from this vicious tendency.—J. E. M.

Radio Lawsuits—Another American Monopoly

A. R. BURROWS, secretary-general, International Broadcasting Union, reports:

There have been no lawsuits, either of a national or international order, in Europe over the allotment or use of radio channels. Should disputes arise between two countries and these disputes not be settled amicably [as has been the case hitherto], the preliminary efforts at settlement would be an affair of the postal and telegraphic administrations concerned. Should this fail, then the matter would be one for an arbitration committee such as is foreseen in article twenty of the Washington Convention. . . .

I think it can honestly be stated that the existence, for nearly seven years, of this Union where the directors of European broadcasting organizations meet as friends and realize the responsibilities which exist one towards the other, has enabled an early and friendly settlement of wavelengths problems likely to be of a really serious character. Even now, when the European wavelength situation has been taken up officially by the administrations, our Union, acting as an expert advisory body, is repeatedly arranging minor adjustments which avoid international troubles.

In the United States, on the contrary, 1096 cases were set for hearing before the Federal Radio Commission between September 1930 and June 1931; 430 were answered and docketed; 666 withdrawn; 343 were heard—258 by examiners, 28 by the Commission, and 57 were still to be reported; 212 were decided by the Commission. Thirteen appeals from decisions of the Commission were pending in the courts at the beginning of the period. Twenty-five new cases were appealed by broadcasters during the period and in one case the Commission appealed from a decision by a court.

The securing of evidence in some cases costs more than \$5000. Then there are lawyers' fees and other expenses. Estimating the cost of each case heard at \$2000, the broadcasters paid \$686,000 for defending their rights or attacking

the rights of others. The expenditures of the Commission for the fiscal year were \$444,179.94.

It is adding insult to injury to compel

SO I BELIEVE that, after all, this question of radio channels is merely a part of a much larger issue of which you and I will hear much more in the next ten years than we have heard in the past ten years. And that question is the question whether we, as an American people, can rely upon any monopoly to maintain its kindly attitude and its fair treatment of us, and whether or not we should supinely set ourselves in a position of taking only the crumbs from the table, or set aside radio channels as we set aside, thru the Northwest Territory, a certain section of land, forming the basis of the success of the schools in all that territory.—Benjamin H. Darrow, director, Ohio School of the Air, before the National Advisory Council on Radio in Education in New York, May 21, 1931.

the American radio audience to pay this legal bill in order that broadcasters may continue to fill the air with advertising—the bill for which is also charged to the public. The manufacturer pays the advertising agency to prepare its broadcasts, and pays the broadcasting company for time. Mr. and Mrs. John Smith reimburse the manufacturer whose ad-

vertising bill has been figured into the cost of the product.

The absence of lawsuits in Europe is due not only to the good work of the International Broadcasting Union but also to the fact that broadcasting there is administered for the public benefit and not for the benefit of advertisers and broadcasters who wish to exploit the public. Advertising by radio is negligible.—Armstrong Perry.

RCA TO OBTAIN CONTROL of RKO's capital—By completing arrangements to advance ten million dollars to the Radio-Keith-Orpheum Corporation to meet payment of its maturing debenture bonds, majority control of RKO's capital will pass to the Radio Corporation of America, it was revealed today.

Other stockholders of RKO, it was stated, failed to exercise their rights under a refinancing plan announced several weeks ago. As a result, they were penalized 75 percent of their stock equity, under the plan. By advancing the necessary money, Radio Corporation will increase its interest in RKO from 9 percent to 66 percent of RKO's capital stock.

The \$127,000,000 Radio-Keith company is one of the largest four motion picture and entertainment companies in this country. To meet financing needs, the company on December 12, 1931 offered \$11,600,000 of its debenture bonds and 1,740,000 shares of new common stock to its stockholders. Only \$1,500,000 of the debentures, it was stated, were absorbed by stockholders other than Radio Corporation, which consented to absorb the balance of approximately ten million dollars.—From an Associated Press news report of January fourteen, as published in the *Christian Science Monitor* of that date.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
R. C. Higgy, director, radio station WEOO of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

You Pay

FOR POWER TRUST ADVERTISING

Some day tune in on all radio programs sponsored by gas, electric, and service companies—the power trust group whose efforts to corrupt the schools and misinform the public were revealed by the investigations of the Federal Trade Commission. You will be amazed at the extent to which these “goodwill” sales talks fill the air. Then ask yourself why you, as a helpless user of gas or electricity, should have to pay for these sales-talk radio programs and thus to preserve the commercialized radio domination of free speech. Is not the power trust still paying your money for highpriced public relations racketeers in an effort to fool the people?

T.L.

Ohio Rises To Defend Its People

IN AN ABLE, CLEARCUT, AND COURAGEOUS BRIEF Attorney General Gilbert Bettman of Ohio has come to the defense of the Ohio State University radio station WEOA against the recommendations of the Federal Radio Commission's Examiner Ralph W. Walker. This brief is worthy of your careful reading. It reveals a situation typical of the continued and persistent efforts of the federal government thru the Federal Radio Commission to encroach on the educational rights of the states. Isn't it time for members of Congress to take a hand and call a halt?

Federal Radio Commission Washington, D. C.

Docket No. 1322—In re application of Ohio State University [WEOA], Columbus, Ohio, for renewal of license.

Docket No. 1339—In re application of WKBN Broadcasting Corporation [WKBN] Youngstown, Ohio, for renewal of license.

Motion to remand to an examiner for the introduction of additional evidence—Now comes the Ohio State University, station WEOA, by its attorney, Gilbert Bettman, attorney general of Ohio, and moves that the above-captioned case be remanded to an examiner for the purpose of the introduction of additional evidence upon the following grounds:

[1] An unavoidable accident on November 23, 1931, prevented the duly constituted attorney for the Ohio State University from personally appearing at the original hearing on November 24, 1931, and necessitated the employment of local counsel on the morning at the hour of the hearing, thereby precluding a presentation of WEOA's case by an attorney who had had the opportunity to familiarize himself with and prepare his case.

[2] Material and necessary evidence which is vital to a fair adjudication of the issue involved is not in the record and should be introduced to enable the rendition of a decision based upon the public interest, convenience, and necessity.

[3] The issues involved are vital to the state of Ohio and every other institution of the nation interested in using radio to further the ends of national education and culture, and the Commission should accordingly have the benefit of a full and complete record of all material evidence.

Respectfully submitted,

[Signed] Gilbert Bettman,
attorney general of Ohio, attorney
for Ohio State University, station
WEOA. January 25, 1932.

Exceptions to Examiner's Report No. 318

Present Assignments	WEOA	WKBN
Frequency	570 kc	570 kc
Power	750 watts	500 watts
Hours of operation	Sharing time	

Appearances:

Gilbert Bettman, attorney general of Ohio,
for WEOA.
Paul D. P. Spearman, for WKBN.
Hobart Newman, for the Commission.

IT IS RATHER FOR US to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people shall not perish from the earth.—
Abraham Lincoln.

Statement of the case—Station WEOA, owned and operated by the Ohio State University, Columbus, Ohio, and station WKBN, owned and operated by WKBN Broadcasting Corporation, Youngstown, are licensed to "share time" on a common frequency.

The parties were unable to agree upon a division of time and file such agreement with their respective applications for renewal of license as required by general order 105, WEOA contending that, there having been no express agreement heretofore as to the division of hours between the parties, it is entitled to share time equally with WKBN and that such equal division of time will best serve the public interest, convenience, and necessity.

Hearing was held to determine the issue of what division of hours between the parties would best serve the public interest, convenience, and necessity before Examiner Ralph W. Walker on November 24, 1931, at which hearing WEOA was represented by Horace L. Lohnes, attorney, Washington, D. C., due to the illness of Gilbert Bettman, attorney general of the state of Ohio. WKBN was represented by Paul Spearman, attorney.

WEOA has been operating on the following schedule of time since July 1929:

- 9 to 11AM Daily except Sunday
- 12:30 to 2PM Daily except Sunday
- 4 to 5PM Daily except Sunday
- 7 to 10PM Mondays only
- 7 to 11PM Wednesdays and Fridays only
- Additional time for broadcasting all Ohio

State football games and varsity basketball games

At the hearing November 24, WEOA asked for the following schedule:

- 9 to 11AM Daily except Sunday
- 12:30 to 4PM Daily except Sunday
- 7 to 10PM Monday and Thursday
- 7 to 11PM Wednesday and Friday

Time for football and basketball games

Under date of January 9, 1932, Examiner Walker issued his report to the Commission recommending that WEOA be given the following schedule:

- 9 to 11AM Every day
- 12:30 to 2:30PM Every day
- 5 to 7PM Every day

This recommendation of the examiner thus deprives WEOA of its present schedule of hours which is less than half time, takes away all evening hours, and almost entirely curtails the service of the station to which the public is entitled.

Examiner Walker's recommendation should be disregarded. His report is unsound at law, biased, unfair, and directly opposed to the public interest, convenience, and necessity.

Errors—[I] The facts as reported by the examiner are generally erroneous, misleading, and wholly prejudicial and unreliable for the use of the Commission.

[II] The conclusions and recommendation of the examiner are not based on the material facts as disclosed by the record, are contrary to and in utter disregard of material facts, and contrary to the public interest, convenience, and necessity as defined by the courts.

I. THE FACTS AS REPORTED BY THE EXAMINER ARE GENERALLY ERRONEOUS, MISLEADING, AND WHOLLY PREJUDICIAL AND UNRELIABLE FOR THE USE OF THE COMMISSION.

[A] The first glaring misstatement of fact in the examiner's report appears in the third paragraph where it is stated that the program material is all obtained without expense.

The transcript of Mr. Higgy's testimony discloses [p31] that to a material extent programs consist of lectures upon matters of public interest and education delivered by members of the faculty of the Ohio State University, which faculty members are employed by the University and paid salaries by the state of Ohio to perform this service as part of their official duties at the University. In addition to that, the record of Mr. Higgy's testimony [p31] discloses that the actual cost of these programs to the state of Ohio is estimated at approximately \$200,000 each year. In the face of this

evidence, the examiner states that the program material is obtained without expense. It is difficult to conceive of a more flagrant disregard of material facts than appears in this one statement alone. It is obviously indicative of prejudice and bias and is misleading to the Commission.

[B] The examiner's finding that "with the exception of talks by prominent men of the state, the program material is composed entirely of university talent," is erroneous, not supported by the record, and grossly misleading.

In the first place, this finding of the examiner disregards the fact that WEO has been broadcasting talks by prominent men outside of Ohio. The record of Mr. Higgy's testimony [p241] discloses a few of the nationally-known speakers who have appeared over WEO during the past year, such as Vilhjalmur Stefansson, Arctic explorer; Glenn Frank, president, University of Wisconsin; William M. Jardine, former Secretary of Agriculture of the United States; R. W. Dunlap, Assistant Secretary of Agriculture; Ernest Thompson Seton, naturalist; Edgar Guest, poet; William John Cooper, United States Commissioner of Education; F. D. Farrell, president, Kansas State College of Agriculture; and John H. Finley, of the *New York Times*.

The program material of WEO other than talks by prominent men of the state and nation is not composed entirely of university talent as found by the examiner. The entire city of Columbus is drawn upon for talent as well as surrounding cities [R. of Mr. Higgy's testimony, p31].

[C] The fifth and sixth paragraphs of the examiner's report of "the facts" are misleading to the Commission; they contain half truths, and are not substantiated by the facts.

The examiner's reference to the hours "for what are generally referred to by this station as educational programs" discloses bias and prejudice and is totally unwarranted by the record. There is no evidence to the effect that the educational programs of the Ohio State University are not in fact educational programs. The language of the examiner by subtle inference would indicate that some question had been raised as to whether or not these programs are in fact, and have been in fact, educational. No question in this respect was raised at any place in the record and therefore the finding of the examiner is unreliable for the use of the Commission.

The remaining substance of the examiner's findings of fact set forth in the fifth and sixth paragraphs, here under consideration, is to the effect that WEO has not used all the time which has been heretofore available to the station. This is but a half truth and, in the absence of any explanation or consideration as to the reasons for it not being used, is misleading to the Commission and prejudicial to the public interest, convenience, and necessity.

It is submitted that the Commission should take judicial notice of the fact that the purposes of a broadcasting station of a great university of one of the states, devoted in a large measure to education, vary from the purposes of a purely commercial station devoted primarily to the purpose of profit for itself rather than for the public good.

Universities are, of course, closed on Saturday afternoons. The Saturday afternoon hours heretofore available and assigned to WEO have only been needed during the football season. A mere cursory examination of the hours heretofore assigned to WEO will disclose certain hours which are unsuitable for broadcasting purposes of an educational institution, and it is with a view of making available to the people of Ohio the benefit of the services of the Ohio State University during the hours when those services are needed, that WEO is now before this Commission. The examiner highlights the failure of WEO to use all time heretofore allotted and then recommends that there shall be allotted to the university still more unsuitable hours, and that there be taken from the university those hours in the evening which have been entirely used and which are most suitable. In the broadcast of lecture programs when the station is compelled to cease broadcasting at a given moment, there must inevitably be a safe margin allowed in order to prevent the possibility of the use of the channel beyond the allotted time as required by the Commission. This results occasionally in a talk being terminated five or ten minutes before the end of the hour. This condition obviously inheres where the program is a lecture of substance rather than, for instance, the continuous prattle of a comedian, or the constant jingle of a jazz band.

The examiner has again highlighted the fact that a small percentage of the time has been used in broadcasting phonograph records. Again a half truth totally misleading to the Commission. The record discloses in the testimony of Mr. Higgy that of these records "98 percent, I will say, are classical selections, broadcast with announcements in connection with music appreciation" [p77 of record of Mr. Higgy's testimony]. The mere reference in the examiner's report to phonograph records tells but half of the truth, the remaining half being that these records are of a far higher caliber than usually used in broadcasts. Insofar as the report is concerned, the Commission would be led to believe that the records are made up largely of jazz bands instead of records of outstanding artists and symphonies, playing classical compositions.

[D] The finding of the examiner that the programs of WEO are dictated by the desires and needs of the university itself rather than the listening public is wholly false.

The record discloses [testimony of Mr. Higgy, p13] that the university has a grant of fifty thousand dollars which it is spending for the purpose of ascertaining the desires and needs of the listening public. The station conducts an annual survey of its radio audiences for the very purpose of determining the desires and needs of its listening public and frames its programs in conformity therewith. [See Mr.

Higgy's testimony, p20 and WEO Exhibit No. 6.]

This entirely erroneous statement of the examiner is apparently predicated upon the theory that the desire and need of the listening public is for still more programs which are purely entertaining and still fewer educational programs. *It is submitted that cultural and educational influences are essential to the happiness and welfare of the public, and are also entertaining.*

In the last analysis, even if it were true that the programs were dictated by the desires and needs of the university itself rather than of the listening public, these programs would still be dictated by the desires and needs of the listening public, because *we are not here considering a privately-owned broadcasting station which is operated for profit. WEO is the station of the public itself, supported by the taxpayers' money, managed, controlled, and operated by the representatives of the people themselves and consequently the desires and needs of the University of Ohio are the desires and needs of the people of Ohio.* The examiner seems to be completely oblivious to this fact and apparently has considered the station as tho it were a private enterprise. *Ohio has a representative government, and its institutions are of, by, and for its people.*

[E] The examiner's findings appearing in the fourth paragraph on p3 of the report with respect to the programs of WKBN are wholly inadequate, misleading, and biased.

Reference is made to the fact that there is local talent available to the extent of seventeen hundred persons. In a city the size of Youngstown [170,002], this means that the examiner considers one out of every one hundred persons as "talent." If in Youngstown there are seventeen hundred persons that may be classed as "talent," the caliber of the "talent" is obvious, and needs no comment. The report with respect to station WKBN contains no percentage of time given to jazz orchestras and commercial propaganda and is therefore valueless to the Commission, being clearly prejudiced. *In order that the Commission may fairly determine the relative merits of the programs given by the two stations, it is submitted that the Commission must have a full and unprejudiced report as to the programs of each station.* Reference is made to educational programs of WKBN. There is no mention as to the standing, or rather lack of standing, of institutions furnishing such programs. Notwithstanding the conclusions of the examiner with respect to the programs of WKBN not predicated upon the record, the matter is summarized as to that station that their programs are "well diversified and generally of merit," inferring a lack of merit and diversification of the programs of station WEO. A mere examination of WEO Exhibits 1 and 2

discloses the inaccuracy of the report in this respect.

[F] The examiner's finding with respect to other stations in Columbus and Youngstown is wholly misleading.

The report of the examiner contains the allegation that WKBN is the only station in Youngstown and that there are four stations in Columbus, including station WEAO. The testimony of T. A. M. Craven shows clearly that WCAH and WSEN serve the city of Columbus only [R. p212] and that station WAIU is a limited-time station for daytime operation only. Because of these limitations WEAO is the only station in central Ohio that reaches outside the city and into the territory immediately contiguous thereto and, during evening hours, including within an area of 11,404 square miles, [the one millivolt service area of WEAO], a population of one million and a quarter [testimony of Mr. Higgy, p88]. Here again there appears in the report of the examiner a half truth, obviously misleading to the Commission, and sufficient in itself to warrant the Commission in disregarding the report in its entirety.

[G] The finding of the examiner that the people of Youngstown "nearly 500,000 are entirely dependent upon station WKBN for service in addition to that received from high-powered, or clear channel stations" is false.

Mr. Craven and other members of the WKBN staff testified that programs of WADC, Akron, Ohio, are received in Youngstown and this last mentioned station duplicates the WKBN chain programs [R. p183].

[H] The finding of the examiner as to the disparity in service area of WEAO and WKBN is misleading.

He attempts to explain away this disparity by explaining that this is due to the higher attenuation factor in the vicinity of Youngstown as well as the difference in power between the two stations. This again is a half truth; the other half, which the examiner does not mention, being the fact that WKBN uses an acknowledged inefficient type of antenna as shown in WKBN's application for renewal of license under Section 15a.

[I] The observation of the examiner as to his interpretation of the term "shares time" is contrary to the position taken by the Commission itself.

The official communication to station WEAO under date of June 17, 1931, signed by James W. Baldwin, secretary of the Commission, clearly states that "the term 'shares time' when used in a license, there being no proportions or specified hours of operation designated in the license, means to divide the time equally." WEAO's Exhibit 9 was the original letter from the secretary of the Commission offered in evidence and improperly ruled as not admissible by the examiner. It was numbered for identification and the exceptions of WEAO noted as to this ruling. This ruling would indicate a complete disregard of the official communications of the secretary of this Commission, who is duly authorized under the rules

of the Commission to sign all official documents and letters.

II. THE CONCLUSIONS AND RECOMMENDATION OF THE EXAMINER ARE NOT BASED ON THE MATERIAL FACTS AS DISCLOSED BY THE RECORD, ARE CONTRARY TO AND IN UTTER DISREGARD OF MATERIAL FACTS, AND CONTRARY TO THE PUBLIC INTEREST, CONVENIENCE, AND NECESSITY AS DEFINED BY THE COURTS.

[A] Conclusion No. 1 is grossly misleading and drawn in absolute disregard of the respective purposes of the two stations.

The record discloses [WEAO's Exhibits Nos. 1 and 2] that all evening hours have been fully used. The non-use of certain daytime hours heretofore assigned has been occasioned by their unsuitability for the purposes of a university station, such, for instance, as Saturday afternoon hours outside of football season, when the university is closed. The examiner is apparently using this fact upon which to predicate a recommendation to assign to the university still more unsuitable hours which the university is unable to properly use, and to take from the university all those hours which are suitable and which have been used in full. WEAO's Exhibit No. 2 discloses that the station is now using 100 percent of its allotted time with the exception of Saturday afternoon hours hereinabove commented upon. As an illustration of complete disregard of the public interest, convenience, and necessity, altho the experience of years has shown Sunday to be unsuitable for educational broadcasts of a university station, the examiner now recommends Sunday hours. The inconsistency, the misleading characteristics, and the complete absurdity of conclusion No. 1 is obvious.

[B] Conclusion No. 2 is misleading to the Commission and disregards area served and hours of operation.

As hereinabove set forth in detail, two of the Columbus stations render local service only to the city of Columbus and the other station [WAIU] is substantially limited to daytime operation only. The examiner has apparently attempted to use this half statement as a reason for depriving nearly one third of the area of the entire state of all evening radio service, except that which may be received from high-powered distant stations. None of these last-mentioned stations interferes with WEAO. The examiner also fails to state, as hereinabove indicated and disclosed by the record, that WKBN is giving substantially local coverage only while occupying a regional channel.

A more misleading conclusion and a more complete disregard of the functions, purposes, and aims of the Federal Radio Commission would be difficult to conceive [see Federal Radio Act of 1927].

[C] Conclusion No. 3 is wholly erroneous and drawn with a view to precluding the Commission from making any comparison between the service rendered by the two stations.

The report is peculiarly silent as to the diversification of the general interest of the programs of station WKBN. WEAO's programs are diversified and of general interest. The following is clearly disclosed by an examination of WEAO Exhibit 1:

While education is the primary object, much of the time is devoted to entertainment and information of a general type.

Actual time devoted in the evening to education talks—5½ hours per week.

Additional time in evenings devoted to high class musical programs—four hours per week.

Evening time devoted to presentation of plays, news, popular music, and student programs—1½ hours per week.

The musical programs of WEAO are particularly varied. They offer every type of program offered by the commercial station and, in addition, have unlimited university talent. Listed in WEAO musical programs are professional musicians and organizations from Columbus and from various towns in the state. Frequently nationally-known visiting artists take part in the programs. Very few phonograph records are used. WEAO music is both classical and popular, and includes the following variety:

Symphony orchestra, voice ensemble, string ensemble, band, dance orchestra, string trio, vocal trio, piano duos, soloists, excerpts from grand opera, pipe organ, old-time music.

WEAO's educational programs are drawn not only from the campus, but from internationally-known educators who are brought to the campus for special lectures. The lecture series as given in the November bulletin [WEAO Exhibit No. 1] embraces a wide range of interest. *Thruout the year WEAO, with an unlimited fund of knowledge from which to draw, is able to program any type of lecture series which is justified by the demands of its audience, and does not at any time program a lecture simply because a department wishes to broadcast.* Following is a list of educational features as printed in the November bulletin:

Home economics [including talks on every branch of homemaking and child care]—Agriculture [including talks on all branches of agriculture]—History—Public speaking—Travel—Sports—News—Interviews—French lessons—Spanish lessons—Italian lessons—Story-telling, adult and children—Physical education—Medicine—Economics, national and international—Business and employment—Science—Engineering—Drama—Conservation—National history—Psychology—English.

Every lecture given is especially prepared for broadcasting, and the program director, in cooperation with the heads of departments, makes a careful selection of speakers. Frequently the speaker is a man who lectures thruout the state for a very good fee, and is widely known as a magnetic speaker and a scholar.

In the building of programs every effort is made to find out what the people of Ohio want in radio education.

Programs of more complete diversification and general interest could not possibly be drawn. It is submitted that the programs of a purely commercial station do not have the diversification of the programs of a great university station such as the Ohio State University station WEAO.

[D] Conclusion No. 4 is totally erroneous, not supported by the record, and contrary to the record.

The examiner concludes that taking away all evening hours heretofore allotted to WEAO will enable the station to render any substantial service heretofore rendered by it. The following considerations, completely ignored in the report, clearly refute and disclose the error of such a conclusion:

[1] Loss to farmers of farm night lectures. Farmers cannot tune in for daytime broadcasts, except for noon hour, and for short market periods. Professors of the College of Agriculture are employed in classrooms until 5:00 P.M. Extension agents cannot get in for 5:00 to 7:00 P.M. talks. The hours between 5:00 and 7:00 P.M. are valuable for entertainment programs, but are not desirable for educational programs. The primary object of WEAO's service to the farmer is educational.

[2] The following lecture series now scheduled for evening hours cannot be moved to daytime hours, because—[a] professors are employed in class until 5:00 P.M., [b] adult audience cannot be counted upon for daytime educational programs:

French and Spanish lessons prepared for adults—Economic discussions—Medical lectures—Business and employment—Engineering—Debates.

[3] The following general items now scheduled for evening hours cannot be moved to daytime hours:

WEAO Players [conflict with classroom]—Sun Dial [conflict with classroom]—Basketball [all games played in the evening].

[4] Loss of music department concerts, including:

Band—Symphony orchestra—Glee Clubs—Chorus—Salon orchestra.

Student organizations, comprising a large number of students, cannot broadcast on daytime programs, because of classroom conflicts.

In general the taking away from the leading educational institution of Ohio of all her evening hours which for nine years have been used by the Ohio State University with consistently good programs, educational and entertaining, is directly against the public interest, convenience, and necessity and contrary to law.

In the case of Chicago Federation of Labor vs. Federal Radio Commission, 41 F. [2d] 422, the court held as follows:

It is not consistent with true public convenience, interest, or necessity, that meritorious stations like WBBM and KFAB should be deprived of broadcasting privileges when once granted to them, which they have at great cost prepared themselves to exercise, unless clear and sound reasons of public policy demand such action. The cause of independent broadcasting in general would be seriously endangered and public interests correspondingly prejudiced, if the licenses of established stations should arbitrarily be withdrawn from them, and appropriated to the use of other stations.

The only policy which would authorize such a procedure would be the policy of taking away the most dominant service to be rendered by radio, to wit, education.

[E] Conclusion No. 5 is contrary to law.

The examiner concludes that the public interest, convenience, and necessity will best be served by authorizing the division of time contained in his recommendation. It is true that the radio act does not specifically define "public interest, convenience, and necessity," but it is submitted that it has the same significance here as elsewhere employed in legislation which grants a special privilege to one person or class of persons that is denied to others. The term has so often

been interpreted and clearly defined by the courts that the matter is no longer subject to debate. It requires a showing that the privilege is to promote the public good. *No contention is made that the public good is advanced by educational programs alone, but it is equally untrue to say that the public good is best served by the almost total exclusion of educational programs and the devotion of substantially all time to commercial broadcasts* Shall this be the Commission's conception of the public good? The examiner's final conclusion and recommendation is obviously predicated upon this assumption. Station WEAO of Ohio State University is the one and only outstanding station of the state of Ohio primarily devoted to educational programs, and even it has so balanced its programs as to contain ample diversification with respect to entertainment features.

Section 89, Title 47, U. S. C. A., provides *inter alia* as follows:

It is hereby declared that the people of all the zones established by Section 82 of this chapter are entitled to equality of radio broadcasting service, both of transmission and of reception, and in order to provide said equality the licensing authority shall as nearly as possible make and maintain an equal allocation of broadcasting licenses, of bands of frequency or wavelengths, of periods of time for operation, and of station power, to each of said zones when and insofar as there are applications therefor; and shall make a fair and equitable allocation of licenses, wavelengths, time for operation, and station power to each of the states, the District of Columbia, the territories and possessions of the United States within each zone, according to population. *The licensing authority shall carry into effect the equality of broadcasting service hereinbefore directed, whenever necessary or proper, by granting or refusing licenses or renewals of licenses, by changing periods of time for operation, and by increasing or decreasing station power, when applications are made for licenses or renewals of licenses.*

[Italics in original.]

This policy as between zones and states within zones is equally applicable to stations within states.

It is submitted that an adherence by the Commission to the report of the examiner would result in effectuating a gross inequality of broadcasting service directly contrary to the public interest, convenience, and necessity, and contrary to law.

The Commission's attention is respectfully directed to the fact that Ohio State University, altho perfectly justified in view of the record in this case in asking that there be allocated to station WEAO more than half of the time, is in fact only requesting equality. In fact the time requested in WEAO's application for re-

newal is even less than half of the time. The public interest, convenience, and necessity can only be served by an *equal* division of time between these two stations giving to each its just share of evening hours as well as daytime hours.

Conclusion—It is respectfully submitted in conclusion that the recommendation of the examiner is erroneous, misleading, not supported by and directly contrary to the record, prejudiced in favor of commercialism in radio programs, substantially excludes educational programs, and is directly contrary to the public interest, convenience, and necessity of the people of Ohio. The report and recommendation takes from the state of Ohio her greatest natural educational resource and gives it to a small commercial concern to use locally in one corner of the state for private gain.

Wherefore, it is respectfully urged that the Commission reverse the examiner with respect to the matters and things to which exception is herein taken, and find that the public interest, convenience, and necessity will be served by granting to the state of Ohio her application for the renewal of her University station WEAO's license with the division of time herein requested.

Motion for oral argument—Now comes the Ohio State University, station WEAO, by its attorney, and requests permission to appear before the Federal Radio Commission or a quorum thereof and offer oral argument in the support of its foregoing exceptions to examiner's report No. 318 heretofore entered in the above entitled causes on the following grounds:

[1] Station WEAO has served the public interest, convenience, and necessity consistently and efficiently for nine years.

[2] The examiner's report so materially curtails the service heretofore rendered and now rendered by Ohio State University along educational lines as to take from the state of Ohio her greatest natural educational resource.

[3] The examiner's report inadequately presents the facts and law involved in this case.

[4] The basic questions involved in this case are so vital to the state of Ohio, far-reaching and of such tremendous magnitude with respect to the future of radio in America as to make it necessary that the Commission have the benefit of a full and complete presentation of the issues prior to passing thereon.

[5] This case will establish the precedent as to whether radio with its potential educational and cultural possibilities, shall be debauched by commercial interests and prostituted upon the altar of financial gain. This case will establish the turning point in a national policy and the state of Ohio should be heard.

T.L.

Radio Broadcasting in Europe

THE NATIONAL COMMITTEE on Education by Radio sent Armstrong Perry, director of its Service Bureau, to Europe in August 1931. He was instructed to obtain from officials of each country information concerning radio broadcasting.

The United States Department of State gave Mr. Perry a letter of introduction addressed to the diplomatic and consular officers of the United States of America. The United States Commissioner of Education gave him a letter of introduction addressed to educational officials in Europe. In each of the thirty-five countries visited, Mr. Perry called first at the American consulate, unless the consulate had previously made arrangements which rendered a call unnecessary. The consulates arranged for his interviews with radio officials and officials of public education. Usually a member of the staff of the consulate accompanied him and was present during the interviews.

Mr. Perry prepared a report concerning each country and submitted these reports to the consulates which had arranged for his interviews. At his request the consulates submitted the reports to the persons interviewed except in one case in which the consulate suggested that the reports be sent directly to the persons interviewed. Such changes as were suggested by the consulates or by persons interviewed were made.

The report of Mr. Perry's investigation follows:

Albania—No broadcasting station in operation.

Andorra—No broadcasting station in operation.

Austria—Broadcasting stations are operated by *Ravag*, a corporation, under a thirty-year contract with the government. A license fee of two schillings [about 30 cents] per month is charged for each radio receiver. Number of receivers paying fee in 1930, 423,534. Government retained 10% of license fees [about \$152,472.24] plus 12% dividends on capital stock of *Ravag*, of which a large part is owned by the government, plus 50% of that portion of the net profits which remains after payment of 8% dividend. *Ravag* received 90% of the license fees, about \$1,372,250.16. No advertising broadcast. Licensed sets increased 12% in 1930. Further increase of 15,788 re-

ceivers [3.77%] reported January 1 to July 1, 1931.

Belgium—New law in effect June 1930, created the *Belgian National Institute of Broadcasting*, composed of one representative of the government and

In a Nutshell	
No. of countries having stations.....	29
No. of countries having no stations.....	7
No. in which the governments own and operate all stations and provide programs.....	7
No. in which the governments own and operate some of the stations and provide programs on these.....	2
No. in which governments own and operate stations but have programs provided by program companies.....	3
No. in which governments own the stations and grant operating concessions to private companies.....	1
No. in which governments grant concessions to companies which build and operate stations and provide programs.....	17
No. in which governments own stock in operating or program companies.....	4
No. in which broadcasting is supported entirely by license fees from listeners.....	10
No. in which voluntary contributions are the only source of revenue.....	2
No. in which government appropriations are the only source of revenue.....	2
No. in which advertising is the only source of revenue ¹	1
No. in which license fees and other taxes support broadcasting.....	1
No. in which license fees and voluntary contributions support broadcasting.....	1
No. in which license fees and advertising support broadcasting ²	7
No. in which license fees, other taxes and advertising support broadcasting ²	4
No. in which license fees, voluntary contributions and advertising support broadcasting.....	1

¹ Luxembourg. The station is expected to open April 1, 1932.
² The amount of revenue from advertising is negligible.
An important source of revenue in some countries is the sale of program magazines.

nine representatives of civic, educational, religious organizations so chosen as to insure unofficial representation of all political parties. The *Institute* began broadcasting in February 1931. Set owners pay license fee of 60 francs [about \$2.40] yearly. Number of licensed sets in 1930, 81,150.

Government retained 10% of license fees, 486,900 francs [about \$13,633.20]. *Institute* received 90% [about \$122,698.80] plus the proceeds of a 6% tax on all imported vacuum tubes. Advertising is prohibited. The two major stations are operated by the *Institute*. One college station and ten small local stations are operated by their respective managements, but are not permitted to sell time for advertising. Licensed sets reported in July 1931, 69,437.

Bulgaria—Only broadcasting station is operated by *Rodno Radio*, a private organization of listeners, under temporary permission from government. There

are about 6000 members. Each pays 500 levras [about \$3.58] per year. Programs controlled by a commission of educators appointed by the government. Government collects a license fee of 500 levras from each set owner [3024 in 1930] and retains all of it. Revenue from this source about \$10,825.92.

Czechoslovakia—Broadcasting stations owned by the government. Operated by *Radio Journal*, a corporation in which the government owns 51% of the capital stock. *Radio Journal* has no contract with the government and no assurance of continuation of privileges. The government pays some of the operating engineers. *Radio Journal* pays the research engineers. Government collects license fee of 120 crowns [about \$3.60] annually on receiving sets. Licensed sets in 1930, 315,241. Total license fees, about \$1,134,867.60. Government retained 50% [about \$567,433.80].

Radio Journal received the same amount. Sets reported as 325,000 in July 1931. Advertising prohibited as "impossible and undesirable." American radio receivers and others imported into the country are subject to royalties which must be paid to the Telefunken Company.

Danzig—Only broadcasting station is owned and operated by the government. A license fee of two and one-half gulden [about 50 cents] monthly is collected from each of 20,000 set owners. Total revenue, \$120,000 per year. Balance after paying expenses, 10% [about \$12,000]. Total time used for advertising, about five minutes daily. The listeners complain about this and it is believed that no more would be tolerated. Number of receiving sets reported as 16,000, July 1931. The Danzig station has connection with all German stations and those of central Europe thru the Königsberg station.

Denmark—Government owns and operates stations. Advertising prohibited. News broadcasting handled by *Pressens Radio*, an organization representing the newspapers and financed by the government. In 1922 listeners sent in voluntary contributions amounting to \$15,000 to finance programs. Government operation started 1925. Number of licensed sets in 1930, 420,000; 1931, 450,000 [13% of the population, highest percentage in Europe]. Set owners pay ten kronen [about \$2.67] yearly. Income from this source, about \$1,000,000 yearly. Operating ex-

pense is from about \$667,500 to about \$801,000 yearly. Law prohibits use of license fees for purposes other than broadcasting, so balance is used for improvement of plant and programs.

Esthonia—Broadcasting station operated by *Raadio Ringhaaling Company* under permission from the government. Government collects license fees for receivers, \$4 to \$10 per year. Number of receivers April 1, 1931, 13,266. Income above \$60,000 per year. Government retains 15% [more than \$9000]. The balance [over \$51,000] goes to *Raadio Ringhaaling Company*, but government taxes reduce this to \$30,600 up to \$35,700. The company paid a dividend to stockholders in 1928 and since that time has added 10% to 12% of its gross income to its reserve. Number of receivers reported in July 1931, 15,869. Advertising occupies about twenty minutes per day. The income from advertising is too small to affect the policies of the company.

Finland—Government owns and operates all but two stations and will take over these two. Programs are produced by *Osakeyhtio Suomen Yleisradio*, a national organization whose capital stock is owned by universities and other educational and civic organizations, including cooperative societies [which include in their membership about 35% of the population]. The managing board of the company is composed of four representatives of the government and fifteen representatives of the stockholders. The executive committee of the board is composed of five members elected by the board. Said committee, representing the 63 educational and civic shareholding groups, and enlarged by two members representing the government, forms together the program committee, which partly arranges, but mainly only controls the details of current programs. These contain no advertising. The government taxes receivers 100 marks [about \$2.50] yearly. There were 106,559 licensed receivers in 1930 and the income was about \$266,397.50. The government retained about 50% to pay operating expenses and paid the balance to the program organization. This organization pays 7% dividends, which are limited to 1% above the discount rate of the state bank. There is a possibility that the government will take over the program organization. Political propaganda is excluded. Also care is taken to prevent any political party from gaining a preponderance of power in the board.

France—The government operates some stations and others are operated by commercial companies. Advertising is limited to short announcements because the listeners do not want advertising. The government charges a license fee of 10 francs [about 39 cents] yearly for receivers. The number of receivers is reported by a commercial broadcasting company as 2,000,000, but this appears to be an estimate.

Germany—The German Reichspost [mail service] is the central office for all legally sanctioned activities in the field of radio. The government controls *Reichs Rundfunk Gesellschaft*, which is a central organization representing nine broadcasting companies. The *Reichs Rundfunk Gesellschaft* has a majority vote in the nine companies. Another organization, *Deutsche Welle*, receiving income from the operating companies, provides national educational programs. A license fee of 24 marks [about \$5.63] yearly is collected from owners of receivers. Number of receivers in 1930, 3,509,509. Revenue from fees, about \$19,758,535.67. The government retained 40% [about \$7,903,414.26] and paid 60% [about \$11,855,121.40] to the operating companies. The companies are permitted to make profits up to 10%. Number of receivers reported July 1931, 3,241,725. Advertising is broadcast about ten minutes daily from each station. Revenue from advertising goes to the government. Listeners object to the advertising, and an effort is being made to reduce the time.

Great Britain—Stations operated by *British Broadcasting Corporation*, which is chartered by the government. This corporation succeeded the *British Broadcasting Company*, dissolved because it was under control of the radio industry. Because of this control it came to be felt there was no guarantee against exploitation of listeners. The Postmaster General is the agent of liaison between the corporation, the Crown, and Parliament. He has the right to issue licenses for the construction and operation of broadcasting stations, to issue such general orders and particular instructions as he considers useful, to demand such proof as he desires of the execution of his instructions, to examine the accounts and annual reports of the corporation, and to authorize or forbid the liquidation of the corporation.

The mention of the producers of a phonograph record that is broadcast, or of the sponsor of a program, is permitted, but nothing else in the nature of advertising.

The government charges a license fee of ten shillings [about \$2.43] yearly for receivers. The number of receivers [1931] was nearly 4,000,000. The income from license fees was well over \$7,000,000. The government retained 12½% of this amount [about \$875,000]. The national treasury department took approximately 25% [about \$1,750,000]. Total revenue for the government, about \$2,625,000. To help the government in the financial depression of 1931, the corporation voluntarily offered to pay \$1,000,000 into the treasury out of the balance put aside for future development.

Greece—No broadcasting station at present. A concession has been granted to *Durham & Co., Inc.*, of Philadelphia, Pa. The government retains full control of its radio channels. A license fee will be collected from set owners by the government, which will give the company money to finance its operations in Greece. Brief advertising announcements will be permitted between programs. Number of receivers at present about 3000.

Hungary—The government erects, operates, and maintains the broadcasting stations. The programs are provided by *Magyar Telefonhirmondo es Radio*, a corporation. A tax of 2.40 pengos [about 40¢] per month is collected from owners of radio receivers. Additional amounts are collected from hotels and other concerns using one master receiver to serve numbers of patrons. The government retains one-half the tax and gives the balance to the program company. There were 307,909 licensed receivers in 1930. Revenue to the government about \$1,477,963.20. Same amount to the program company. The company's share will be reduced and that of the government correspondingly increased if the number of set owners increases beyond a certain stipulated total. Advertising by radio is prohibited as contrary to the best interests of the government, the company, and the listeners. Program plans are submitted in advance for the approval of the government, and certain hours are reserved for use by the government. Hungary began broadcasting music and news over telephone lines to homes in 1896, and is believed to have had a longer experience with program service than any other country.

Irish Free State—The government owns and operates the broadcasting stations. They are financed by a license fee of ten shillings per year [about \$1.70] plus an ad valorem duty of about 33 1/3% on imported radio apparatus. Number of licensed sets [1930] 26,000.

Revenue to the government about \$44,200. Advertising time is sold to reputable concerns selling Irish products, or foreign products not competing with Irish products, but the demand for time is small.

Italy—The broadcasting stations are erected and operated by *Ente Italiano per le Audizione Radiofoniche*. Program plans are submitted in advance to a commission appointed by the government. The commission comprises representatives of the musical, scientific, artistic, and civic interests of the nation.

The government collects annual license fees of 72 lira [about \$3.60] yearly on radio receivers. Number of receivers [1930] 170,000. Income from this source about \$612,000. The government also collects duties on imported radio receivers, and compulsory contributions from all town and city governments in places of more than 1000 population, and from hotels and other places of public entertainment. Advertising announcements are permitted during the daytime, but not in the evening. The demand for advertising time is small because listeners object to advertising. The government retains about 4% of the license fees and 10% of the contributions. Profits of *Ente Italiano per le Audizione Radiofoniche* are not limited by law, but the demands of the government for the development of facilities and programs tend to limit the profits.

Latvia—The government owns and operates the only broadcasting station. A license fee of two lats [about 40 cents] per month is collected from owners of radio receivers during the winter, and one lat [about 20 cents] per month in the summer. Number of receivers [1930] 38,740. Revenue to the government about \$162,708.

The League of Nations—The League of Nations has made a contract with Radio Suisse, a communications company, for the use of a short-wave station at Geneva, Switzerland. Addresses and news of the League will be broadcast to all parts of the world, by radiotelegraphy at first, but later possibly by radiotelephony. The broadcasting will be financed at first by handling commercial point-to-point communications.

Liechtenstein—No broadcasting station. The government has a contract with the government of Switzerland under which the radio laws of Switzerland, among others, apply to Liechtenstein. Owners of radio receivers pay a license fee of 15 francs yearly [about \$2.92] to Switzerland.

Lithuania—The government owns and operates the only broadcasting station. The broadcasting of programs is under the supervision of the Ministry of Education. Owners of crystal radio receivers pay two lits [about 20 cents] per month, if they live in cities, and one lit [about 10 cents] per month if they live in rural areas. Owners of tube receivers pay license fees of five lits [about 50 cents] per month if they live in cities and three lits [about 30 cents] per month if they live in rural areas. Revenue to the government in 1930, about \$32,860. Of this, 90% went to the Ministry of Education and covered between 60% and 65% of the broadcasting expense. The balance was paid by the government. Advertising is broadcast from two to five minutes two or three days a week. Advertisers pay 15 lits [about \$1.50] per minute. Income from advertising about \$600.

Luxemburg—The government has given a concession to *Compagnie Luxembourgeoise de Radiodiffusion*, a commercial company which is erecting a 200,000 watt broadcasting station. It will derive its revenue from advertising. An official of the company stated that it was associated with an international trust which includes in its membership the dominant American and European radio corporations. He stated also that when the powerful station of his company began broadcasting it would be difficult for many weaker stations in other countries to continue. The contract calls for the appointment by the government of two commissions to control the operations and programs of the company. Of the net profits, 5% will be set aside for the obligatory legal reserve; then 6% of the balance for dividends to stockholders; then 15% of the balance may be taken for gratuities for the board of directors. The government will receive 30% of what remains of the net profits.

Monaco—No broadcasting station. A small license fee is collected from owners of radio receivers but they are few in number and the income is inconsiderable.

The Netherlands—The two stations, by consent of the government, are operated by two broadcasting organizations which represent civic, educational, and religious interests. Two other major, and seven minor, organizations are given time on these stations. Advertising has been prohibited by law since 1928, altho it paid 70% net profit to the broadcasting organizations until it was prohibited. No license fees are collected from owners of radio receivers. Broadcasting is depend-

ent entirely on voluntary contributions from listeners. Listeners increased rapidly after advertising was prohibited. One organization with 132,000 regular contributors, accumulated a surplus of \$600,000 in two years. Another has 125,000 regular volunteer contributors who send in an average of four florins [about \$1.60] yearly, and has accumulated a large surplus. The four major organizations received contributions amounting to about \$800,000 in 1931, according to a reliable estimate.

Norway—Broadcasting is mainly in the hands of one private company, *Kringkastingselskapet, A. S.* The government collects license fees of 20 krone [about \$5.34] yearly from owners of receivers and retains 25%. Also a sales tax of 10% on the retail prices of receivers is collected. The broadcasting companies receive 75% of the license fees and all of the tax. The total amount is divided among the companies according to the number of licensed receivers in their respective territories. Out of this income the salaries of the government employees who have charge of the technical operation of the station, are paid, as are all other broadcasting expenses. Number of receiving sets [September 1931] about 100,000. Income from license fees, about \$534,000. The profits of the company are limited by law to 7%. On account of technical difficulties which prevent complete coverage of the mountainous country, the number of set owners is not sufficient to provide that percentage of profit at present. The *Oslo Broadcasting Company* whose total income for 1930 was about \$516,360 received \$18,760 from advertising, which is confined to a short period at about 7PM and not connected with other programs. Because of complaints from listeners, the limitation on advertising is expected to continue.

Poland—The government owns 40% of the stock of the operating company, *Polskie Radjo, S. A.* This stock is in a class by itself, the other classes of stock being preferred and common. No stock can be sold or transferred without the consent of the board of directors. A monthly license fee of three zlotys [about 35 cents] is collected from owners of radio receivers. The government retains 15% and *Polskie Radjo* receives 85%, under a 20-year contract. Number of receivers [1930] 246,000. Income from license fees, about \$1,033,200. Each of the six stations in Poland sells 20 minutes a day to advertisers, but the revenue from this source is too small to affect the gen-

eral policies of the company. There was no intention [August 1931] of increasing advertising time. *Polskie Radjo* pays 15% dividends on preferred stock and 10% on common. An advisory committee to develop programs consists of five representatives of the government and four of the company.

Portugal—Provisional licenses for the erection and operation of broadcasting stations are issued to reputable persons or concerns. The broadcasting of advertising is prohibited. No license fees are collected from owners of receivers. Stations are operated mainly by radio dealers and experimenters. The government has appropriated \$200,000 for a government broadcasting station of 20 kilowatts or more.

Roumania—Broadcasting is done by the *Societe de Difusion Radiotelephonique de Roumanie*. This is a joint stock company with \$300,000 capital. Sixty percent of the stock belongs to the government and 40% to banks which subscribed \$12,000, when the company was organized. An annual license fee of about \$4.80 is collected on tube sets and about \$1.40 on crystal sets. There were 51,199 licensed sets in 1930. The number in November 1931 was estimated at 75,000. Radio shops pay a tax of \$6 yearly; clubs, \$12; motion picture theaters, \$18; public establishments, \$30. Broadcasting was subsidized by the government to the amount of \$30,000 in 1929, but in 1930 the stock of the broadcasting company paid a 10% dividend. The erection of two regional stations depends on the attitude of the American company which has the telephone monopoly in Roumania.

Russia—Broadcasting is operated as an instrument of special utility in fixing the attention of the masses on the fundamental questions of the socialist construction, in industry as well as in the socialistic sector of rural economy. The Commissariat of Posts and Telegraphs was charged to furnish all the republics, countries, and regions in the Soviet Union, and also the principal autonomous republics and regions, with broadcasting stations during 1931 and 1932. The Supreme Council of the National Economy was charged to erect, in 1932, three stations of 100 kilowatts power and eight stations of 10 kilowatts. The Commissariat of Posts and Telegraphs was charged to construct six stations of 10 kilowatts, and to begin, in 1932, a Radio House [headquarters] to be finished in 1933. In 1932 a factory is to be built for the production of radio receivers at the annual rate of 1,000,000. Factories for the production of tubes and other accessories are also provided for. Loud speakers are to be produced at the annual rate of 4,000,000 in a factory to be finished in 1932. Programs will be transmitted by wire lines and radio to all parts of the country, and reception will be assured by the production of receivers to meet the conditions in lumber camps, mines, hunters' cabins, fishing boats, farming districts, villages, towns and cities, and

on the highways. All suitable wavelengths will be organized and employed. Russia already has many broadcasting stations. Programs are broadcast in many languages, and are heard thruout Europe and on other continents.

The Saar—No broadcasting stations or plans.

San Marino—No broadcasting stations, few receivers, no radio laws, and no license fees. Programs from all parts of Europe are heard.

Spain—The privilege of erecting and operating broadcasting stations is granted free of charge to acceptable persons and organizations. A license fee of five pesetas [about 50 cents] yearly is collected from owners of radio receivers. The government retains all of this, and gives general supervision to the programs to see that information and education are given a proper proportion of the time and that no laws are violated. The only company operating on a large national scale is *Union-Radio*, which owns and operates six stations and operates a seventh station which is rented from the government for certain hours. Advertising is permitted. Listeners are invited to contribute toward the expense of programs. About 15,000 listeners in Madrid give from ten cents to fifty cents monthly. The government may take over all broadcasting or place a monopoly in the hands of a radio organization.

Sweden—The government owns and operates the major stations. Only a few low power local stations are in private hands. A license fee of 10 krona [about \$2.70] yearly is collected from owners of radio receivers. Number of receivers [1930], 482,300. Revenue from licenses, about \$1,302,210. The production of programs is placed in the hands of a private company, *Aktiebolaget Radiojanst*. This company receives one-third of the license fees, and is permitted to take from this a profit of 6%. Any balance remaining after program expense and profits are paid is used for improvement of plant and programs, or returned to the government. The private local stations receive a percentage of the license fees collected in their respective areas and are permitted to broadcast the national programs. Representatives appointed by the government in the Ministries of Education and Commerce serve as advisers to the broadcasting companies with a view to maintaining satisfactory standards for programs. Advertising and political propaganda are excluded from radio programs.

Switzerland—The government reorganized its broadcasting system in 1931. The private companies which had operated the seven broadcasting stations in the country were brought into one national organization, called the *Swiss Radio Corporation*. The number of transmitting stations was reduced to two, which were connected with all the local broadcasting studios. A third station will be erected. Advertising is prohibited.

The *Swiss Radio Corporation* is not a business concern, but a program organization. The Swiss

government has five representatives in the corporation. Each of the local program organizations is represented. A license fee of 15 francs [about \$3] yearly is collected from owners of radio receivers. Number of licensed receivers [October 1931], 127,000, an increase of over 25% from the preceding January. Revenue from this source, about \$381,000. The *Swiss Radio Corporation* receives 80% of the license fees. The government retains the balance. Three private companies have been granted concessions from the government for distributing radio programs over private wire circuits to listeners.

Turkey—The two broadcasting stations in Turkey are operated by *Telsiz Telefon T. A. S.*, a corporation which has a concession from the government extending to 1937. Radio is used only to a negligible extent for advertising. The government collects \$2 per kilogram on imported radio apparatus plus 10% ad valorem, plus 25% ad valorem. The latter percentage goes to the broadcasting company. Users of radio receivers pay an annual license fee of about \$1.50. The number of licensed receivers [October 1931] was about 2500. The broadcasting company is capitalized at about \$50,000. Much of the stock is in control of a bank in which the government has an active interest. The company's office is in the post office at Istanbul and its relations with the government are close. Broadcast advertising occupies only a negligible part of the time.

Vatican City—The government has a short-wave radio station which includes apparatus for the transmission of still pictures. The station is used mainly for point-to-point radiotelegraphic communications of the Church, but programs are broadcast twice daily on week days and once on Sundays. Efforts to induce the Pope to authorize a regular program service, relayed to America thru American chains, have failed. Broadcasting of advertising is not permitted.

Yugoslavia—The government has given concessions to two broadcasting companies and one society. Each operates one station and serves principally one section of the country. The law permits the government to control the programs and to take over the stations at any time. A license fee of 25 dinars [about 50 cents] monthly is collected from owners of radio receivers. Number of receivers [1931], 42,478. Revenue from licenses about \$254,868. Each of the three broadcasting organizations receives from 65% to 85% of the license fees collected in its service area. The balance is retained by the government. Advertising is permitted but the listeners object to it so much that it is limited to a few brief announcements. The leading company is considering eliminating all advertising. The government permits the broadcasting organizations to make profits up to 20%. Anything over that is to go to the government. No profits were made up to 1931, but the increase of receiving sets indicates that there may be profits later.

The Music That Is Broadcast

B. H. HAGGIN

New York Musician and Lecturer at the People's Institute

THE YOUNG PRESIDENT of an American system of broadcasting stations returns from abroad, and is asked what he thinks of European broadcasting.

"Well," he replies, "they are progressing rapidly, but they haven't made anything like the strides that we have. This, I think, is because of the lack of competition over there."

This idea—that American programs are better, because competition among privately-owned stations is better than, say, England's public monopoly¹—is the idea of most Americans. But everything depends on the objectives of competition or monopoly; and often the superior objectives of English broadcasting result in programs incomparably finer than our own. In its handling of so-called classical music, for one thing, the BBC offers a model of correct use of the new medium, beside which American practise must be judged inferior.

Musical programs of the BBC—Because it recognizes an obligation to an important part of our cultural heritage, and to the important minority who are interested in it, the BBC keeps the masterworks of musical literature constantly on view in rotation [thus, it rotates Bach's church cantatas on Sundays]; provides hearing of minor works and those interesting for historical or other reasons; keeps the British public informed of the work of living composers; makes it aware of the achievements of British composers dead and living; and devotes a short period each evening to music infrequently heard and little known ["Foundations of Music"]. It broadcasts several full-length chamber-music and symphony concerts each week from the studio and concert hall, including its own series of orchestral concerts in Queen's Hall—the programs ranging from Bach to Hindemith, with a few devoted to contemporary music exclusively. It broadcasts com-

plete operas—*Pelleas et Melisande* among others—from the studio, and complete acts—of German as well as Italian operas—from Covent Garden.

ALL the broadcasting stations in America combined only have \$28,000,000 invested in their stations and all of their equipment and apparatus, whereas the great listening public of America has \$1,000,000,000 invested in receiving sets.—Representative Ewin L. Davis of Tennessee, chairman of the House Committee on Merchant Marine, Radio, and Fisheries, Congressional Record, February 10, 1932, p3790.

It broadcasts its own public performances of works which ordinary concert organizations would find too expensive—Schönberg's *Gurrelieder*, Stravinsky's *Oedipus Rex*. And it now gives and broadcasts the famous summer Promenade Concerts. Beyond its broadcasting, then, the BBC makes a large and important contribution to London musical events for which even the concertgoer must be grateful. And the person who stays at home is sure of hearing the best music every evening, usually one or two hours of it. This is only a minor part of the evening's time on the two wavelengths, and there is nearly always an alternative program; hence the BBC stands firm in the face of opposition. It realizes, also, that only if the music is performed can people discover that they like it; and results have in fact justified the BBC's working rule, "Give the public something slightly better than it now thinks it likes."

The commercial idea of music—The preceding account is based on examination of London programs for August 1930, November 1930, and March 1931: evenings from six, Sunday all day, and the two wavelengths—National and London Regional—to which a low-priced receiving set might be restricted. Examining New York programs for the

same periods, one discovers that in November, for example, there are five evenings a week in which the two wavelengths of the National Broadcasting Company do not carry a note of the major works of the great composers; that the Columbia Broadcasting System is only one evening better; and that on three evenings a week there is nothing from all wavelengths combined. There is only one full-length, first-class symphony concert a week, that of the New York Philharmonic; and, for a few weeks, one hour of the Detroit Orchestra [the Philadelphia Orchestra is heard for an hour four times during the season; the Boston Symphony not at all]. There is the one full-length Lewisohn chamber-music concert a week, which is not very good; and a good performance of one work by the Perole Quartet. Once in three or four weeks John Barclay's fifteen-minute period is given to German *Lieder* and other good songs. As for totals: NBC's two wavelengths offer two hours a week, as against the BBC's thirteen; Columbia, three hours; all wavelengths combined, nine hours, of which four are on Sunday. On three weekdays, then, the listener can hear nothing; and on Sunday he cannot listen to all that is offered. Moreover, the programs are not the equal of the BBC's programs in either range or quality of music. The organizations I have mentioned are conservative, and at that they cover only part of the standard literature; the weekly hour of the National Oratorio Society is devoted to Gounod, Elgar, and Deems Taylor more often than to Bach; the weekly broadcast of the Chicago Opera occurs on Saturday, which is the "pop" night [and the hour from ten to eleven is assigned without regard for beginnings and ends of acts].

The advertiser dictates—All this is supposed to be inevitable with commercialization. The American broadcasting station gets its revenue from the sale of time and programs to advertisers [and conserves this revenue, incidentally, by shifting to advertisers the cost of expensive features]. In theory the public gains by the competition among advertisers to provide attractive programs;

¹ Broadcasting in England is a government monopoly, but not, as Americans have been misled to believe, under government control. The monopoly is in the hands of the British Broadcasting Corporation, which the government created, and to which it assigns part of the \$2.50 a year that it collects from owners of receiving sets, but which is selfgoverning under the terms of its charter. The BBC, then, is a public-utility corporation in the real, as opposed to the American, sense of the expression.

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but in fact only a part of the public gains. The advertiser is out to please the largest number; and the largest number, he thinks, does not want classical music. Thus, when station WBZ, Springfield, broadcast the regular Saturday-night concerts of the Boston Symphony in 1926, it was because the orchestra's fee and the line charges were paid by "a public-spirited citizen of Boston who used symphony broadcasts in the advertising of his coffee business." And after two seasons he decided his coffee would be better advertised by the concerts at the Hotel Touraine.

Today the advertiser satisfies the public's interest in the celebrated fiddlers and singers whom it hears and reads about. But he presents them as fiddlers and singers; and his only concern with music is that it be what people want. Atwater Kent and other advertisers present Gigli, Ponselle and other such singers in popular operatic arias and numbers like *Song of India*, *Liebesträum*, *Santa Lucia*, and *The Rosary*; and up to the last minute there are replacements of numbers which it is feared are not popular enough. Commercial programs or orchestral music, such as the General Electric Hour under Walter Damrosch, include occasionally a single movement of a popular symphony, but chiefly numbers like Rubinstein's *Melody in F*; Massenet's *Elegy*; Händel's *Largo*; Delibes' *Sylvia*; *Flight of the Bumble Bee*, *Turkey in the Straw*, *Whispering Hours*, *Heart Wounds*.

Symphony via snippets—The programs of advertisers take up almost all the evening time of the stations, leaving only a few scattered snippets [time being sold in short periods] which are not suitable for the regular concerts of any of the orchestras, or any program of concert length. NBC broadcasts only a half-hour of *Wozzeck*; and then the listener is reminded every few minutes that he is hearing the broadcast thru the courtesy of the American X—Company, which has graciously surrendered the time, the final announcement being made while the music is still being performed. And an important by-product of commercialization may be noted here: cutting the evening into little snippets of time results in programs of little snippets of music. Philco crowds six or seven numbers into its weekly half-hour, besides sales talks and announcements. The result: no more than one movement of any symphony [if two movements, then from two different symphonies]; this, or any long number,

atrociously cut; and everything atrociously speeded up. "We play everything faster now—have to," Howard Barlow, Philco's conductor, is quoted as saying. "It's the new expression, that's all. The faster tempo doesn't distort the music. It sounds just as well faster. The quick nervousness of our current interpretation of the master scores puts a new vitality into them."

The broadcasting station itself, which might balance the popular music in commercial periods with classical music in unsold time, is out to create as large a permanent audience as it can, so that it may better sell its time, and therefore shows the same desire to please, the same fear to displease, the majority. NBC, which offered a string quartet for half an hour once a week in August 1930, withdrew even this inadequate offer by November: not enough stations of the network would buy it, and therefore not enough people wanted it [on the other hand, the price may have been too high]. We see here the unwillingness to lose the majority listener for as much as a half-hour; yet, with the competition among stations, he is bound to shift from one to the other, and they might interest different groups at different times, as the BBC does.

The exception proves the rule—There are exceptions, and their success proves, among other things, that the broadcasters are too timid. Philco, advertising itself with Stokowski and his Philadelphia Orchestra in a special series, accepts what he chooses to play; and Columbia, for the same reason, accepts Toscanini's New York Philharmonic programs. The names, they figure, have sufficient advertising value even with the music, and make the music itself acceptable. But actually the music is quite inoffensive: Stokowski's intransigence is no more than another advertising point [and in this quite typical of him], for having made the necessary hullabaloo with Stravinsky's *Sacre*, he plays only the Franck symphony, Mozart's G-minor symphony, and other favorites; while Toscanini's programs are notoriously conservative. And actually people listen to this music because, given a chance to hear it, they find it interesting. From this it appears that the British working rule is the correct one; also that American broadcasters, in their fear of exceeding the limit of what the public will accept, do not even reach this limit; and finally, that the limit itself is a product of their own timidity: afraid that the public might not like

classical music, they created a fear of it in people unacquainted with it, and then deferred to this fear.

The omniscient chains—The same timidity operates in the time that is assigned to classical music. The reasons for assigning it vary. The executives of NBC claim to know from their surveys that the public doesn't want classical music; but they claim also to have ideals—ideals, they contend, which certain practical difficulties make it impossible to attain at once, but which they know better than impractical idealists how to attain in the long run, and toward which they are moving, slowly, all the time [an impractical idealist might answer that they want to sacrifice ideals and have them]. Columbia, on the other hand, poses as a "quality" broadcasting system which offers the best to a public that wants it; and its surveys reveal a great hunger for classical music. A certain period, then—all of a half-hour or an hour—is assigned; but at once the broadcasters begin to worry: the music may be too difficult, a whole symphony may be too taxing [and besides they will sooner give a single movement from each of four quartets, as Columbia does in its Continental String Quartet period, than all four movements of one quartet]. One must not go too fast, they argue; one must educate the public by degrees; tho after several years of such education the question arises whether it is not rather the broadcasters who need simple courage. And tho this half-hour is supposedly for persons who need no preliminary education, who already appreciate the best music and are accustomed to hearing quartets and symphonies in their entirety, nevertheless the program is adjusted to the unknown capacities of anyone else who may tune in; and so, after all, the half-hour is not given to the best music and to the public which wants it. The broadcasters, it appears, will satisfy this more sophisticated minority, if it will be satisfied with what the less sophisticated majority can appreciate. The greater right of the greater number is not merely a right to the greater amount of time, as in England; it is deferred to in every period.

The wrecks of great composers—At each step one encounters this business of ostensibly—and ostentatiously—giving the best, and really not giving it. In the case of WOR, which offers the Perole Quartet and Bamberger Little Symphony, it is merely a fear of maintaining a high level thruout: a Mo-

zart quartet or Haydn symphony is followed by *Ciclo e Mar* or *Dance of the Hours* from *La Gioconda*. [This is called balancing the program, a balanced program being one that has something to displease every taste.] But NBC presents *Works of Great Composers* [thirty minutes once a week, for one month out of every two or three], but not always great composers, and not their great works. Beethoven, for example, is represented by the last movement of his *First Symphony* and the Overture, *Coriolanus*; and for the rest by unimportant works. Mozart is represented by one movement from the *Jupiter* symphony and an aria from *The Marriage of Figaro*; and for the rest by youthful trifles. And Debussy and Sibelius, too, are utterly misrepresented by trivial or minor works. NBC also offers *Pro Musica* [forty-five minutes once a week, for four weeks]: "A program bound by no traditions except that of the finest music presented by the best artists. The result of extensive research and critical effort, *Pro Musica* should be a chapter in the progress of radio towards high standards in unusual and excellent music." All of which seems excessive for a program consisting of Ravel's *Ma Mère l'Oye* and the *Dream Pantomime* from *Hänsel und Gretel*; or a Wagner program of popular excerpts from the early *Flying Dutchman* and *Lohengrin*. As for NBC's studio broadcasts of opera [one hour a week], only the "essentials" are broadcast—in other words, the best known barrel-organ excerpts; and for the most part only the barrel-organ operas: *Cavalleria*, *Pagliacci*, *Gioconda*, *Rigoletto*, *Traviata*, *Aida*, *Carmen*.

Columbia's cajolery — Columbia provides a striking example. It claims to broadcast the New York Philharmonic as part of its campaign for the best music, and in response to the demand for this music. The Philharmonic concerts end in April, and for the same audience Columbia continues with a symphonic hour of its own: "For one hour we bring you a great symphony orchestra; a guest artist of world renown, in the person of Toscha Seidel, one of the great violinists of today; and a program chosen from the best in the world's instrumental repertoire." But tho the audience is the same, the music is not. Featuring Seidel at each concert means showy concerti and trashy little pieces like *Tambourin Chinois*, which

are never heard at symphony concerts. A Brahms concerto is too much for one Sunday; it must be divided between two. And for the orchestra there are chosen, outside of Mozart's G-minor, only the light numbers that appear on "pop" programs or possibly at the end of a regular program: Saint-Saens' *Rouet d'Omphale*, Charpentier's *Impressions d'Italie*, Tchaikovsky's *Nutcracker Suite*, Ippolitov-Ivanov's *Caucasian Sketches*, a polka from *Schwanda*, a dance from *The Bartered Bride*, and so on [the orchestra, incidentally, is nondescript, the conductor anonymous, the performances terrible].

More absurd: as evidence of Columbia's interest in classical music, an executive sends me an announcement of *Savino Tone-Pictures*:

In presenting programs over WABC, Mr. Savino feels he has a great opportunity to develop an interest in the best music and to bring his own imaginative works to a larger public. He has great faith in American musical ideals, and believes that the standard of appreciation is improving rapidly.

Here is a specimen program:

<i>Blue Is the Night</i>	Fischer
<i>Intermezzo, Gay and Wistful</i>	Savino
<i>Ay, Ay, Ay</i>	
<i>In Tientsin</i>	Savino

Here, also, is a program of an RCA hour in which, "in addition to a half-hour of dance music, a quarter-hour will be devoted to the works of American composers and the same period to compositions of international fame":

<i>Syncopated Love Song</i>	Suesse
<i>Lotus Land</i>	Scott
<i>Mood in Blue</i>	Pollack
<i>Jeannine, I Dream of Lilac Time</i>	Shilkret
<i>Air de Ballet</i>	Chaminade
<i>Memory</i>	Shilkret
<i>The Rosary</i>	Nevin
<i>Introduction and Tarantelle</i>	Sarasate
<i>Danse Russe</i>	Tchaikovsky

A "General Motors Family Party" devoted to *Music of Living Composers*:

<i>Aria, Cavalleria Rusticana</i>	Mascagni
<i>Madrigal</i>	Chaminade
<i>Country Gardens</i>	Grainger
<i>Pomp and Circumstance</i>	Elgar

Simple ignorance—*It becomes evident that behind the timidity which produces these grand empty gestures is ignorance; and that the important difference between English and American broadcasting is the difference between the people in control there and here.* It is not because they have a monopoly and are assured the revenue they need that the BBC executives handle classical

music as they do; but because *they are men for whom such things are important.* In other words, they would do pretty much the same thing even under American conditions; and American broadcasters, on the other hand, would act as they do even if they had a free hand. *What has been fatal to American broadcasting is not that it has been commercialized, but that commercialization has placed it in the hands of the American commercial class with its ignorance, indifference, or even contempt for anything "high-brow."* American broadcasters either don't feel obliged to give classical music; or if they do, they don't know what it is; and then they are sure they give a great deal of it, and become impatient with criticism. The BIG EXECUTIVE of radio, whose tastes incline away from Wagner operas and symphony concerts, and toward "a good singer in a good song," and who thinks that his love of music goes as far as anyone's need go—the BIG EXECUTIVE, looking about him, finds that good, or good enough music *is* being broadcast, and decides that the people who complain are cranks who deserve no consideration from sensible, busy executives. "Hour for hour, we get more good music here than they do in England," he says to a critic. "All they get over there is religious speeches. Your statements are not based on careful examination of the facts." And in a public address he announces, "We do not need any high-brows to tell us what is good."

This means that while there may be changes, improvements, there will be nothing so comprehensive, so intelligently planned and executed, as the program of the BBC. For this, the people now in control of American stations would have to set aside time in which they surrendered their control to qualified persons, giving them the power to devise musical programs without the slightest regard for the notions current in broadcasting circles—the notion that when an opera comes over the air, an hour's "essentials" are enough, or that more than one movement of any one symphony is too much. For this, in turn, they would have to be dissatisfied with present procedures, and recognize that these procedures represent not superior knowledge, but ordinary ignorance. And of this, as we have seen, there is at present no sign.

Federal Radio Commission Interferes with Education in Arkansas

THE right and duty of the states to control and foster education within their borders is one of the cornerstones of the American system. Will Congress protect this right? The following statement from President J. C. Futrall of the University of Arkansas is typical of a condition that is nationwide:

“In brief, the action of the Federal Radio Commission was this: We shared fultime 50-50 on a certain wavelength with a purely commercial station in Little Rock. The Little Rock station made application for fultime on the wavelength. The Federal Radio Commission granted them three-fourths of the time and set apart for our one-fourth of the time certain specific hours almost all of which are totally unsuitable for educational broadcasting. For example, we have the hour from seven to eight in the morning and the period from five PM to six-thirty PM. None of this time is suitable for our purposes. The only other time that we have is the period from eleven AM to one PM, a part of which is satisfactory for broadcasting farm programs. Incidentally, I might say that the Little Rock station is a member of the Columbia chain system and that people in Little Rock and vicinity who have reasonably good radio receiving sets can receive the Columbia chain from any one of a number of other stations.”

Two vicepresidents of the Columbia Broadcasting System—Henry A. Bellows and Sam Pickard—were formerly members of the Federal Radio Commission.

Teaching Arithmetic by Radio

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MANY PERSONS interested in radio in education believe that radio teaching should merely supplement classroom work, so as to vitalize and enrich curriculum content. Others contend that radio teaching should be an integral part of classroom instruction, carefully planned so that it will furnish the curriculum in a given subject for a given grade. The radio experiment in Cleveland is based on the latter belief.

Research workers in Cleveland have not been satisfied with the results of regular classroom instruction in arithmetic. Too many students who complete the junior high school lack the arithmetic skills and technics that would enable them to compute accurately and to reason to advantage. Many arithmetic teachers feel that power in arithmetic can be created and developed if particular attention is paid to the tasks the child is asked to do and the things he is asked to think about. Radio provides the medium for experimentation along these lines. Radio lesson sheets and drill sheets contribute tasks for the child to perform; radio talks tell him what to think and do as he performs these tasks.

The teacher's part—Technics employed in teaching arithmetic by radio parallel in many instances technics used by classroom teachers of arithmetic. To reach the desired goal in arithmetic teaching—power to reason as well as skill to compute—the intelligent radio or classroom teacher clearly outlines a method of procedure, perceives the importance of contributing factors, and persistently endeavors to reach the desired end. She carefully organizes the learning material that she is to present to make sure that it utilizes children's interests and experiences; takes care of the various habits needed for computation and reasoning; provides for individual differences; and measures achievement at regular intervals. She studies the learner to make sure that his participation is backed up by genuine interest and understanding.

Radio lessons in arithmetic are sent directly to Cleveland classrooms two days each week. Lesson sheets allow the child to participate during the teaching period, while, between broadcasts, drill sheets afford practise on the abilities presented

in the lesson. This plan means that the person at the microphone not only controls the amount of learning material, but also directs the method of learning this content.

Technics used—Perhaps the best



SUPERINTENDENT R. G. JONES, *Cleveland, Ohio, under whose leadership masterteaching by radio is going forward on an effective scientific basis.*

way to describe teaching technics used in this radio experiment is to discuss technics used in a group of radio lessons. Since the 3A curriculum calls for certain abilities in each of the four processes as well as the ability to solve one- and two-step problems, we shall center our attention on 3A material. The first three lessons in the 3A schedule are tests on the work in addition, subtraction, and multiplication covered in Grade 3B. These tests are followed by Lessons 13 to 18 in Multiplication, which are a continuation of the multiplication taught in Grade 3B. Then follow Lessons 1 to 6 in Short Division; Lessons 31 to 33 in Addition and Lessons 25 to 27 in Subtraction; Lessons 19 to 24 in Multiplication; Lessons 7 to 12 in Short Division. This radio teaching material is built in units of six lessons, the sixth of each series being a test on the five preceding lessons. For example, Les-

son 18 in Multiplication tests the radio class on the material taught in Lessons 13 to 17, Multiplication.

The last two lessons of the year are Lessons 3 and 4 of the *Classroom Situation* series. In Lesson 3, the class is asked to plan how it will spend its time—the number of hours spent in school, at meals, at play, for free time, and for sleep. In Lesson 4, it is asked to help Tom, Will, and Joe plan their garden. They find out the size of the garden, the cost of seeds and garden tools, and each boy's share of the expense. On drill sheets accompanying these lessons are two twenty-minute tests on the learning material taught in Grade 3A. These tests are given by the classroom teacher.

The Cleveland course of study outlines in detail the quantity of learning material for Grade 3A. This outline furnished the basis for the selection of content for the radio lessons. Conferences with many teachers of radio classes helped the builders to eliminate certain abilities and add others so that the material would fit a large number of average 3A children.

A radio advantage—Right here lies one advantage of radio teaching. Curriculum material tried out, revised, and tried out again on many 3A classes of average ability should be a better test of the fitness of that learning material than a curriculum committee's idea of its fitness. It is a distinct advantage to get the reactions of many classes and many teachers to definite material presented to all children in the same manner with like practise material available for individual difficulties.

Ways of presenting this 3A curriculum material contribute much toward the success of the radio experiment. Let us examine in detail technics used in multiplication and in problem solving.

The carrying figure—The process of multiplication presents difficulties. Many children know their multiplication facts but find it difficult to add a carrying figure to an unseen partial product. In multiplying 869 the child must not only

6

know 6×9 , 6×6 , and 6×8 , but he must be able to add the carrying figure 5 to 36 and the carrying figure 4 to 48. To add carrying figures to unseen partial

products requires much practise of various sorts. The radio material gives different drills to strengthen and perfect this hard ability. Let us suppose that the following exercise is on the radio lesson sheet:

Row A. Write the answers only:

2 6 8 4 9 0 7 3 5 1
 — — — — — — — — — —

In this case the broadcaster gives the following directions:

"This drill will help you add the carrying figure in multiplication. Multiply each number on your paper by a number that I call out; add a carrying figure; write the answer only. Pencil below the first line. Ready? Eight 2's and 5. Ready? Nine 6's and 7. Next: Six 8's and 4, and thus to the end."

Another drill is given in this form:

Row C. Multiply each number by 8 and add 7 to the product. Write the answer only.

6 0 8 2 4 9 1 7 3 5
 — — — — — — — — — —

These drills also help the child to add the carrying figure in multiplication:

Row A. Add:

3	6	4	8	9
48	49	54	16	35
—	—	—	—	—

Row B. Write the answers:

$[6 \times 8] + 4 =$	$[7 \times 9] + 5 =$
$[4 \times 6] + 2 =$	$[8 \times 7] + 6 =$

When learning certain difficult combinations such as 7×7 or 6×8 and 8×6 , where the sum of the product and the carrying figure is usually in the next decade, the radio material includes the addition of carrying figures to 49 and 48. Such drills as these are given:

Row A. Study these:

Multiply: Add:

7	2	4	3	5	1	6
7	49	49	49	49	49	49
—	—	—	—	—	—	—
49	51	53	52	54	50	55

Row B. Write the answers only:

Add:

3	5
49	49
—	—
$[7 \times 7] + 3 =$	$[7 \times 7] + 5 =$
2	6
49	49
—	—
$[7 \times 7] + 2 =$	$[7 \times 7] + 6 =$

Row C. Study these:

Multiply:

6	4	5	783	760	791
49	49	49	7	7	7
—	—	—	—	—	—
55	53	54			

Besides the tests at the end of each six-unit series, radio lessons test frequently the various abilities in each process

and furnish examples for further practise. Such a test is given on Lesson 17, Multiplication.

Row A. Can you do these different kinds of multiplication examples?

[1]	[2]	[3]	[4]	[5]
624	280	782	186	745
2	5	4	3	7
—	—	—	—	—

Three examples similar to each example in this row are given on Lesson 17, Drill 1.

Row A. Multiply:

[1]	[2]	[3]	[4]	[5]
532	624	261	378	576
3	4	8	5	7
—	—	—	—	—
901	105	670	543	388
2	9	8	9	6
—	—	—	—	—
410	748	762	475	265
5	2	4	3	8
—	—	—	—	—

A sheet furnished to each 3A teacher of a radio class tells her that in example number [1] there is no carrying; in number [2], carrying from ones' to tens'; in number [3], carrying from tens' to hundreds'; in number [4], carrying from ones' to tens' and from tens' to hundreds'; in number [5], carrying from ones' to tens' and from tens' to hundreds', one or both sums in the next decade. An *Abilities Required* sheet for each radio lesson tells the teacher what the radio teacher is asking her children to do and think. These sheets actually outline for the teacher the 3A curriculum in arithmetic.

The builders of radio lessons in arithmetic believe that the child should know where hard abilities in each process lie; that he should be aware of drills that will help him to acquire these hard abilities; that he should practise enough to insure mastery. This belief means that builders of radio lessons must not only be able to do detailed work but must also be able to see arithmetic over a wide range, so as to fit abilities together in an advantageous arrangement.

Adding a carrying figure in multiplication is similar to adding in the higher decades in addition. The teacher must help the child to make this connection, and must utilize habits used in decade additions as a foundation for similar habits in multiplication. Finding the answers to $\dots \times 2 = 12$, $2\text{'s} = 12$, $12 = \dots 2\text{'s}$ in multiplication help the child to find the answer to $2)12$. Radio lessons help the child to make the connections in this manner: Row A.

$6 \times 2 = 12$	$\dots \times 2 = 12$	$\dots 2\text{'s} = 12$	$2)12$	$12 \div 2 =$
$4 \times 5 = 20$	$\dots \times 5 = 20$	$\dots 5\text{'s} = 20$	$5)20$	$20 \div 5 =$

Practical considerations—Sizing up quantitative situations and solving problems also present difficulties. The builders of radio lessons in arithmetic believe that the three most important places for a child to meet the vocabulary of arithmetic are [1] in activities; [2] in directions associated with the processes; [3] in problems. The radio teacher assumes that activities are being carried on in each classroom and, as she broadcasts, she suggests suitable problems to which the

child is to find the answers. The 3A radio lessons include such activities as: *Going Camping*; *Earning Money*; *Saving Money*; *Making Covers for Library Chairs*; *Buying for the Home*; *Planning for a Picnic*; *Adding Bank Deposits*; *Planning How You Will Spend Your Time*; *Helping Tom, Will, and Joe Plan Their Garden*. As these activities are taught, vocabulary associated with each process is placed in its proper setting. It is assumed that the teacher also associates arithmetic vocabulary with each process as she carries on activities in the classroom.

Radio teachers give further drill to make sure that the child associates addition with finding the total amount; subtraction with finding how much farther he traveled; multiplication with finding the cost of several toys; division with finding each child's share of the cost of a present.

Proper expressions—Instead of using repeatedly the expressions add, subtract, multiply, and divide as directions for drill exercises, radio lessons often use expressions associated with each process to direct the procedure. These illustrations will make the meaning clear:

Adding Bank Deposits. Row A. Find the total amounts of these deposits:

Tom	May	Ann	Roy
\$1.65	\$1.95	\$2.00	\$1.50
2.34	.35	1.00	1.30
1.22	2.64	.95	1.25

Motoring. Row B. How much farther did Tom travel on Monday?

Mon. 307	Mon. 307	Mon. 307	Mon. 307
Thurs. 279	Fri. 208	Sat. 192	Wed. 200

This procedure gives drill on the processes and also associates *Total amount* with addition, and *How much farther?* with subtraction. In other words, it gives practise in associating expressions with processes. Teachers, as well as builders of radio lessons, feel that this procedure is a factor that has made for success in problem solving. If a child associates *How much farther?* with subtraction in such drills as these, he is likely to subtract to find the answer to this problem:

Tom and his father are driving to Columbus, a distance of 350 miles. On Monday, they drove 225 miles. How much farther must they drive to reach Columbus?

Creators of radio lessons feel that it is just as important to keep a close check on the number of times that such expressions as *total amount*, *in all*, *altogether*, *more expensive*, *cheaper*, *share equally*, and the like, are included in the learning material as it is to check on the frequency of 8×7 or $9 + 6$ or $13 - 7$ or $18 \div 3$. Carefully planned check-sheets enable the builders to check not only on the combinations associated with each process but also on the various words, expressions, and questions associated with addition, subtraction, multiplication, and division in one-step and in two-step problems.

Questions to fit problems—Another procedure that has proved a factor for success in problem solving is having the child select one of two questions to fit a given problem. If he selects the question to fit the problem, he must read the problem carefully and size up the quantitative situation it describes. These drills make this point clear:

Row A. Choose the question that fits the problem. Write it. Solve the problem.

Mr. Allen drove for 3 hours. He traveled 96 miles.

1. At this rate, how many miles did he go in all?
2. At this rate, how many miles did he go each hour?

Row B. Choose the question that fits the problem. Write it. Solve the problem.

Ruth's mother bought a radio for \$96 and a chair for \$64. She is to pay for them in four equal payments.

1. What will she pay in all?
2. What will she pay each time?

Completing problems—These exercises are followed up by many problem statements where the child completes the problem by asking the question, such as:

Buying groceries—Write a question at the end of each problem. Solve the problem.

1. Mary's mother bought 2 pounds of meat at 46 cents a pound.

2. Jack went shopping with his mother. They bought a quart of milk for 12 cents, a can of peas for 24 cents, and a pound of nuts for 35 cents.

3. Bob bought a pound of candy for 85 cents. He gave the clerk a dollar bill.

Radio teachers are aware of problem standards and have tried to include worthwhile problems in the radio material. They also encourage the child to gather data and write problems of his own for members of his class to solve. Interest in problem solving as well as interest in computation is created and fostered in various ways.

Thruout the radio experiment, attention has been directed to the child—to his experiences, to his interests, to his ways of learning—and the builders of radio lessons have endeavored to use these in radio teaching. They have tried to connect arithmetic with its world uses; to present learning material in an educative way; to arouse a desire for accurate computation, thus making quantitative thinking worthwhile; to provide enough practise material on the various skills and abilities; to measure achievement at regular intervals; to organize the learning material in such a way that it is possible for each child to find his difficulties; to provide drill so that he can overcome these difficulties.

So far, results of radio teaching of arithmetic are very encouraging—so much so, that lessons for Grade 4B are being broadcast this semester.

The National Committee on Education by Radio Believes

That colleges and universities with radio broadcasting stations have in their possession one of the most powerful and effective tools for popular education which exists at the present time.

That the broadcasting activities of educational institutions should be looked upon as major educational enterprises within these institutions, comparable in service and importance with other major departments.

That the officers of these institutions, their boards of control, and legislative bodies to which they look for appropriations, should regard their services to individual students and the general public rendered by means of radio as an important and appropriate extension and supplement to similar services rendered within the classrooms of the institution.

That such services have a valid claim to public support and justify expenditure for equipment and personnel.

That the use of radio broadcasting as a constructive educational procedure is in its infancy.

That the radio channels which are now in the possession of institutions are immensely valuable; that they should be retained and their use further developed looking toward the growth of adult education which is now taking place thruout the country.

That this development of programs of adult education by radio stations associated with educational institutions will help to offset the present tendency toward centralization and network monopoly.

The National Committee on Education by Radio looks upon the service of radio stations associated with educational institutions as a service of the whole people. Such service is one of the highest uses to which this national resource can be put. Because such service concerns the entire body of citizens it should be given first place when the question of assigning radio channels is before legislative bodies, the Federal Radio Commission, or the courts.

The Platform of Commercial Broadcasters

THE PLATFORM of commercial broadcasters is set forth in the following statements—all of which may be verified by referring to the records as indicated on this page.

We demand the control and unlimited use of all of the nation's broadcasting channels.^[1]

We deny the right of the state or federal governments to use these channels, except with our permission and thru our stations.^[2]

We deny the right of the state or federal governments to grant the use of any broadcasting channel to any person or corporation not engaged in the advertising and amusement business.^{[1][2]}

We deny the right of the state or federal governments to grant the use of broadcasting channels to state universities, state departments of public instruction, chartered educational institutions, or any institution or organization for any purpose except commercial advertising.^{[1][2]}

We claim and exercise the right to grant or deny the use of the public broadcasting channels to any person or organization seeking to use our facilities.^[3]

We claim and exercise the right to censor any statement of fact or opinion, or other material offered for broadcasting, and the right to separate any speaker or other person from the radio audience, by operating a switch, at any time during any program.^[8]

We maintain that the broadcasting of information or instruction by the President of the United States, by a Justice of the Supreme Court, by the governor of a state, a senator, a representative, or any other public official, for the benefit of the public, is interstate commerce, in common with the broadcasting of commercial advertisements.^[3]

We claim and exercise the right to make an address by the President of the United States, or by any other official or person, a part of an advertising campaign for the sale of cigarettes, securities or anything else advertised over our facilities.^[4]

We claim and exercise the right to attack state-owned broadcasting stations, or other stations operated primarily in the public interest, convenience, and necessity, and to force them to spend, in self-defense, educational funds appropriated

by states or received as contributions. We claim and exercise the right to force them to appear before the Federal Radio Commission, and in court, as often as we please, regardless of their priority on the

THE GREAT TROUBLE with the hearings by the Federal Radio Commission is that they are before ignorant, inexperienced, incompetent, inefficient examiners, and the examiner passes on what testimony he shall admit in the record and upon that which he shall exclude. He keeps out all evidence he does not want to go in, and the record which finally reaches the commissioners is a biased, prejudiced, incorrect, incomplete, warped record that is both unfair and unjust.—Representative Thomas L. Blanton of Texas, *Congressional Record*, February 10, 1932, p3794.

radio channels belonging to the public and regardless of their record of public service.^[5]

We maintain that our business is interstate commerce but that our use of the public broadcasting channels places upon us no obligations as common carriers. We maintain furthermore that neither the Interstate Commerce Commission, nor any other governmental agency has the power to limit the rates which we charge for our services.^{[3][6]}

We claim and exercise the right to transmit our advertising programs into foreign countries, regardless of the wishes of their governments or people.^[7]

We deny that the conviction of a broadcasting company or its owners or agents for violation of law constitutes a valid reason for limiting or denying the use of public radio channels to such companies or persons, the radio law to the contrary notwithstanding.^[8]

We demand that the public radio channels be placed in our hands permanently and exclusively, as our vested property, to have and to hold forever.^[9]

[1] See Federal Radio Commission records for applications of: commercial broadcasting station KLRA for facilities of the state-owned station KUOA; commercial station WOW for facilities of the college station WCAJ; and similar cases too numerous to mention.

[2] See Federal Radio Commission records for applications of: the state of Wisconsin for permission to consolidate its stations WLBL and WHA; the city of New York for increased facilities for station WNYC; and others.

[3] See statement by M. H. Aylesworth, president of National Broadcasting Company, at the hearing before the Interstate Commerce Commission on the complaint of Sta-Shine Products Company, Inc., and proceedings of the Ninth Annual Convention of the National Association of Broadcasters, p60.

[4] Listeners will recall that the President's address on Lincoln's birthday 1931, and his later address on the Red Cross, were announced as made on time of the American Tobacco Company programs. Another address was made a part of a Halsey-Stuart program.

[5] See the records of hearings before the Federal Radio Commission which involved state-owned broadcasting stations.

[6] See proceedings of the Ninth Annual Convention of the National Association of Broadcasters, p63, ¶ 8.

[7] This is a common practise at short-wave broadcasting stations, operating on experimental licenses, in connection with commercial broadcasting stations. See record of Federal Radio Commission's dealings with the shortwave station of the General Electric Company, Schenectady, New York.

[8] See Federal Radio Commission record of hearing on Radio Corporation of America licenses, following the conviction of the latter company for violation of the Clayton Act. 35 F [2d] 962 [D.C. Del. 1929] *aff'd*, 47 F [2d] 606 [C.C.A. 3d, 1931]; *certiorari* denied, 283 U.S. 847, 51 Sup.Ct. 493 [1931].

[9] See *United States v. American Bond and Mortgage Company* 31 F [2d] 448 [N.D. Ill. 1928]; *White v. Federal Radio Commission* 29 F [2d] 113 [1928]. Also see proceedings of the annual meetings of the National Association of Broadcasters.

Commercial Broadcasters to Intensify Lobby

THE COMMERCIAL RADIO monopoly interests have at last begun to realize that the American people are disgusted with glaring evils which have been allowed to grow up in American radio by a negligent and commercially-minded Federal Radio Commission.

The Couzens-Dill Resolution, calling for an investigation of commercialized radio, is the immediate cause of the alarm. Just as selfish street railway interests in Detroit sought to block Senator Couzens in his effort to protect the rights of the people to honest transportation, the greedy radio monopoly is seeking to thwart his efforts to secure an impartial survey of commercialized radio, looking toward the possibility of bettering conditions thru public ownership and operation.

The president of the National Association of Broadcasters has sent an SOS letter to its members. *He promises that replies will not be made public.* Here is the letter:

The passage of the Couzens-Dill Resolution by the Senate has presented to the entire broadcasting industry a new problem, which at the time of the annual convention of the National Association of Broadcasters in October was hardly apparent. The entire American Plan of broadcasting, based on private ownership and advertising support, is now definitely under fire.

This situation presents an opportunity for constructive work on the part of the National Association of Broadcasters such as it has never had before. It also presents the most serious danger which the American broadcasting industry has ever faced.

Obviously, if the National Association of Broadcasters is to do a real job, particularly in providing the broadcasting stations with material designed to present to the American public the real facts regarding the broadcasting industry, it has got to spend some money. This expenditure is clearly additional to any expenses which were considered when the budget for the current year was laid out. The Association cannot increase its dues, nor would it be desirable to do so if this were possible. It does not want to lay any additional burden on any station which cannot well afford to assume such a burden. At the same time, it wants to give every member of the Association a chance to take part in this tremendously important increase in the activities of the Association.

For this reason, under instructions from the Board of Directors, I am writing this letter to every member of the Association. We are asking each member to contribute, not as a special assessment, not as an increase in dues, but as a special contribution to meet a special emergency, whatever sum his station feels it can afford in order to safeguard the entire broadcasting industry of America in the face of this new attack. If you do not feel that under present circumstances you can contribute anything, please do

not feel that this will in any way affect your position as an active member of the Association. We know that some stations can afford to make contributions and will gladly do so. We know that others, which would be eager to help if they could, are in a position where they simply cannot do anything. We want to give every member a chance to help in this emergency work to the full extent of his ability and willingness, but we do not want to tax anybody. Furthermore, *we are not going to make public anything regarding the replies to this letter.* Accordingly, please write me frankly and tell me exactly what you think you can do in this situation.

If you can contribute it will help the cause of American broadcasting, and the more you can help, the better. If you cannot do so, we shall still feel just as strongly that you are with us in the battle against government monopoly as those who are just at present more fortunately situated. The Association needs your active cooperation even more than it needs your money. At the same time, the situation created by the Couzens-Dill Resolution is one which can be met only by an active campaign, and we want every member of the Association who can possibly do so to take part in this campaign to such an extent that its success will be certain.

Why are the broadcasters afraid?
Here is the Senate Resolution:

Whereas there is growing dissatisfaction with the present use of radio facilities for purposes of commercial advertising: Be it

Resolved, That the Federal Radio Commission is hereby authorized and instructed to make a survey and to report to the Senate on the following questions:

[1] What information there is available on the feasibility of Government ownership and operation of broadcasting facilities.

[2] To what extent the facilities of a representative group of broadcasting stations are used for commercial advertising purposes.

[3] To what extent the use of radio facilities for purposes of commercial advertising varies as between stations having power of one hundred watts, five hundred watts, one thousand watts, five thousand watts, and all in excess of five thousand watts.

[4] What plans might be adopted to reduce, to limit, to control, and, perhaps, to eliminate the use of radio facilities for commercial advertising purposes.

[5] What rules or regulations have been adopted by other countries to control or to eliminate the use of radio facilities for commercial advertising purposes.

[6] Whether it would be practicable and satisfactory to permit only the announcement of sponsorship of programs by persons or corporations.

[7] Any information available concerning the investments and the net income of a number of representative broadcasting companies or stations.

[8] Since education is a public service paid for by the taxes of the people, and therefore the people have a right to have complete control of all the facilities of public education, what recognition has the Commission given to the

application of public educational institutions? Give name of stations, power used, and frequency.

[9] What applications by public educational institutions for increased power and more effective frequencies have been granted since the Commission's organization? What refused?

[10] What educational stations have been granted cleared channels? What cleared channels are not used by chain broadcasting systems?

[11] How many quota units are assigned to the National Broadcasting Company and the other stations it uses? To the Columbia Broadcasting System and other stations it uses? To stations under control of educational institutions?

[12] In what cases has the Commission given licenses to commercial stations for facilities applied for by educational institutions?

[13] Has the Commission granted any applications by educational stations for radio facilities previously used by commercial stations? If so, in what cases? In what cases have such applications been refused? Why refused?

[14] To what extent are commercial stations allowing free use of their facilities for broadcasting programs for use in schools and public institutions? To what extent are such programs sponsored by commercial interests? By chain systems?

[15] Does the Commission believe that educational programs can be safely left to the voluntary gift of the use of facilities by commercial stations?

Why are broadcasters unwilling that Congress should consider without prejudice national radio systems which, in other countries, are yielding broadcasting companies net profits of from six to fifteen percent yearly? Why do they demand every air channel in the United States to force advertising into the home in an effort to control the lives of children over the heads of parents?

Why do they demand that no public official, from the President of the United States down, shall have the right to broadcast without being subject to the censorship of a corporation which the Supreme Court has adjudged guilty of violation of the Clayton Act—a corporation which the Department of Justice is suing to dissolve?

Why are commercial broadcasters planning to create a great lobby fund to thwart an honest inquiry which concerns the public intimately and vitally?

What right have these stations to use public channels, which have been assigned to them temporarily as trustees of the public interest, as instruments to thwart the honest efforts of Congress as it seeks to protect free speech?

American Leisure

IN THE LAST GENERATION there has been a decrease in the average working day of about three hours. This decrease promises to grow for a number of reasons. One reason, particularly, is due to what we economists call technological unemployment; whereby the machine, the time-study, the great merger, are moving down upon the industrial structure and displacing working men and women at an unprecedented rate.

It is quite obvious that the only long-swing solution for a situation like this—whereby we can produce the necessary food, shelter, and clothing in less and less time—is that the hours of labor should also follow the curve of the technical arts and that men should work less time. The use of leisure, accordingly, becomes increasingly important.

We see much of America's leisure devoted, not to first-hand participation, but to second-hand, or third-hand participation. A recent study has been made, by Mr. Lehman and Mr. Witty, of 13,000 school children in Kansas, children both rural and urban. They included boys and girls from ten to sixteen years of age. Altogether some 200 forms of play and recreation were listed. The children engaged in over 200 different sorts of things, but among the twelve most frequent were: reading the funny papers, motoring [which means at that age, of course, that somebody else drives you around], going to the movies, watching sports, listening to the radio, playing the phonograph. Six of the twelve most frequent forms were mechanized, were impossible to engage in without machines. And I call this particularly to your at-

tention, the most frequent form for both boys and girls at all ages was reading the funny papers.

THE TRAINING OF THE HUMAN PLANT—All animal life is sensitive to environment, but of all living things the child is the most sensitive. Surroundings act upon it as the outside world acts upon the plate of the camera. Every possible influence will leave its impress upon the child, and the traits which it inherited will be overcome to a certain extent, in many cases being even more apparent than heredity. ¶ The child is like a cut diamond, its many facets receiving sharp, clear impressions not possible to a pebble, with this difference, however, that the change wrought in the child from the influences without becomes constitutional and ingrained. A child absorbs environment. It is the most susceptible thing in the world to influence, and if that force be applied rightly and constantly when the child is in its most receptive condition, the effect will be pronounced, immediate, and permanent.—Luther Burbank.

We have here in the whole country something in the order of thirty million radio listeners a night. Fifty million people pass weekly thru the gaudy doors of our moving picture palaces. Thirty-five million copies of tabloids and newspapers are distributed every day, and fifteen million copies of the popular magazines make their rounds every month. Our pleasure motoring bill runs to the astounding total of five billion dollars a year.

Our whole bill for recreation [play,

very broadly defined] I have calculated at twenty-one billion dollars, which is about one-quarter of the national income.

The battle is on between people who know something about the essential values of life, and the high-pressure fraternity who want to pack leisure full of jumping-jacks. On one side, you have participating forms—mountain climbing, camping, gardening, naturizing, sunbathing, swimming, amateur acting, and books, good books.

On the other side, you have second and third-hand forms: clicking turnstiles, Roman-stadia, burning up the roads, Hollywood, jazz, Coney Island, comic strips, wood-pulp confessions, and books, *bad* books—compounding the stresses and strains of our day-by-day work to a large extent.

In the field of commercial and mechanized goods, there are a number of very amusing and interesting things to do. We do not want to abolish this whole twenty-one billions of turnover. It is a case of selection, of proper balance, of not letting the high-pressure fraternity rush us, force us too hard.

Here in the United States we are like children with new toys, and must go thru a period of picking them to pieces, of examining them, of admiring them. In the end we are coming out on the right side, but it is going to be a long struggle. We are up against twenty-one billions of dollars devoted to commercializing and mechanizing our leisure time.—Stuart Chase, Labor Bureau, New York, N. Y., in the *Pittsburgh School Bulletin*.



Wholesome play means health, vigor, normality, cooperation, happiness.

The Jesuit Educational Association Speaks

WHEREAS the Jesuit Educational Association is an organization representing twenty-seven universities and colleges and thirty-seven secondary schools with a total student registration of approximately sixty thousand students, and

WHEREAS the use and development of radio as a medium for education is one of the important problems confronting educational agencies and institutions :

NOW THEREFORE BE IT RESOLVED: That the Jesuit Educational Association believes that the radio broadcasting channels of the United States should not be subordinated to the interests of particular commercial groups but that a reasonable share of these channels should be reserved and safeguarded to serve the educational and civic interests of the locality, the state, and the nation.

BE IT FURTHER RESOLVED: That this association commends the efforts of the National Committee on Education by Radio to further legislation securing to the people of the United States the use of radio for educational purposes.—Approved by the Eastern, Central, Western, and Southern Sections of the Jesuit Educational Association, January 15, 1932.

Radio in the Rural Schools

WAYNE SOPER

Research Associate, New York State Education Department

ONE OF THE DISTINGUISHING FEATURES of American democracy is the excellence of its public-school system. But the reputation has been earned not by the rural, but by the urban schools. While there are a few superior rural schools and a few sadly inferior city schools, the contrast between rural schools and city schools is most marked. In every aspect of education the schools of the urban centers have more nearly kept pace with modern educational thought and industrial progress. The rural schools have lagged behind. Today they are the darkest picture in American education.

There are approximately twelve million children in the United States who depend upon the rural school for their education.

Free schools were established to enable every child to secure the essential elements of an education, so that each might participate as a useful citizen in the nation which educates him. With each decade, the essential elements of that education have increased in importance and in number until now they exceed the three R's by a wide margin. Yet, for the majority of rural-school children conditions have remained stationary. Are we not shortchanging the rural child when we fail to put within his reach the additional elements of modern schooling made necessary by social progress?

Four rural school necessities—There are at least four major needs of the rural schools if their educational offerings are to compare favorably with those of the city schools.

[1] Buildings of modern design, well-heated, lighted, and ventilated; adequate in size to provide for a diversity of activities.

[2] Teachers—better trained and more of them. It is humanly impossible for one person to teach a group of children of all ages and grades without assistance and do a perfect job of it.

[3] Supervision—the surprising thing is that we have had as good teaching in the rural schools as we have had with so little supervision.

[4] Broader curriculum—the regular courses of study are not sufficient to give rural children a training such as will best fit them to continue into adult life.

How many of these needs can be procured? Except for a gradual replacement of the older schools by more modern structures, the country child will have to

WITHIN A GENERATION the radio station of a state will be its most important single educational institution, linking together all other institutions in one mighty service to the people at all hours of the day and week when an audience can be found. Our excellent common schools will be still further strengthened by the wise use of this most economical medium of teaching. Master-teachers at central points in the states and cities will lift the whole level of teaching and free a part of the time of classroom teachers for special service to individual pupils.

be patient for many years yet before he is comfortably and sanitarily housed.

It is beyond reason even to dream of the time when more than one teacher shall be provided for a one-room school.

If the rural teachers were today to have the same amount, type, and quality of supervision as their city sisters, it would require a staff of supervisors so large and so expensive as to border upon bankruptcy of rural communities.

Admittedly under existing sources of revenue, there is faint hope of raising the level of the country child's educational opportunities to the level of the city child's if reliance upon old methods and man power is to be made. But the farmer today does not rely upon old methods entirely and upon man power alone as he did in the days of his grandfather. The tractor, the reaper, the auto have replaced the ox team, the scythe, and the stage-coach. *Now is an opportune time to apply the latest of great inventions to rural education.*

Radio school supervisors—*Radio stands ready to assume the gigantic task of carrying expert supervision to every rural school in the nation.*

What a step in advance will be made when other state public-school officials undertake a program of supervision by radio similar to the one now being formulated by State Superintendent E. C. Giffen of South Dakota, who says:

Our plans are still in the making, but we have taken some very definite steps toward a state-wide program of this kind. We expect to work it out thru this department in cooperation with the state university, state agricultural college, and particularly with the four state teacher training institutions. We propose to have a very definite program of supervision for county superintendents and teachers generally thruout the state. We realize that this is a new and big undertaking but that it can be done to great advantage in the interests of special supervision which can be furnished largely from the supervisors of our own department and by special supervisors in the teacher-training institutions.

This department expects to take care of the installation of microphones in its own offices and of receivingsets in those of the county superintendents. You probably have heard of our South Dakota Young Citizens League with a local chapter organized in more than ninety of our rural schools. We will depend upon their efforts for the installation of sets in the schools in which they have organized local chapters.¹

It is not difficult to visualize what a mint of supervisory assistance the rural teacher will have at her command. One day she may hear the state superintendent himself, an opportunity seldom available under present conditions. Another day she may have in her audible presence the best supervisor of reading or of any other subject that a teacher-training institution affords. Another day she may "attend" in her own schoolroom one of the finest inspirational lectures that the state can supply from talent ordinarily reserved for annual conventions.

A practical example—Illustrative of the type of supervisory assistance which can be given rural teachers is the following outline of one talk on teaching and testing reading. It must, of course, be assumed that lectures have preceded this one, building up a knowledge basis in the teachers' minds and providing a continuity easily followed by the average rural teacher. It is even probable that printed literature to supplement the radio super-

¹ From a letter from State Superintendent E. C. Giffen of Pierre, South Dakota, under date of October 22, 1929.

vision will be placed in the hands of teachers, some of it as material to be read before the lectures occur, some of it as follow-up suggestions and outlines after the "radio visit." The whole program of radio supervision presumes a well-organized, carefully developed schedule. No hit-and-miss supervision of any type is valuable. The supervisor may on this particular occasion be concluding a group of supervisory talks on reading. She says:

Good morning, teachers! Let us continue our discussion of yesterday in which we approached the matter of testing how well and how rapidly your children read. While many standardized tests are available for doing this very thing thoroughly, it is really not necessary at this juncture to use them. Each teacher can readily devise her own test if she will observe the following directions. Remember, we are talking about measuring how well and how rapidly pupils read. If you do not get all of what I have to say, send for Circular No. 85.

Observe this procedure:

[1] Choose a selection of about 300 to 400 words which is new to the pupils and is a little easier than the reading this particular group has been doing.

[2] Prepare a list of ten or twelve questions from the reading selection; that is, questions that can be answered by reading the selection. They should not be catch questions—just ordinary ones that you would ask if you desired to find out whether a child got the thought of the selection.

[3] When ready, give the selection to the children to be tested. If in a book, have markers at the right place.

[4] Say something like this to the children: "We are going to see how rapidly and how well you can read the story which I have chosen for you. When I say 'Go,' you may open the book where the marker is and begin reading carefully but rapidly. When I say 'Mark,' I want you to put a ring around the word you were reading when I said 'Mark.' Then go on and finish the story."

[5] After exactly a minute say "Mark," and then tell them to finish reading the story.

[6] When all have finished, ask them to count the number of words from the beginning down to and including the one encircled. They may check each other for accuracy. The number read gives the child his reading rate per minute.

[7] When this is done, have books closed and direct the children to answer the questions which you have made out. These should have been previously mimeographed or put on the blackboard and covered up. The number of correct answers gives the comprehension score.

[8] From experiments, it has been learned that rural children should be able to read the following number of words per minute on the average:

Grade 4—160	Grade 7—250
Grade 5—180	Grade 8—280
Grade 6—220	Grade 9—320

Tomorrow I shall want to meet all of you to discuss *The Causes of Slow Reading*.

No one will question the value such "visits" will have for the rural teacher

who heretofore has been compelled to be satisfied with one or two short visits per year from the county superintendent during which no constructive help could be

A LARGE NUMBER of the stations with high power and with cleared wavelengths are on what is known as the National Broadcasting chain. I will state I do not think they should be. I have repeatedly spoken on that here. I have said that it is not right for one group to have the cream of the broadcasting facilities. I have said it before and I say it again, that there is no reason why a station, because it is a chain station, should be on a cleared wavelength or should have high power, because the two leading companies which furnish chain programs have networks extending all over this country, and each station feeds the program to its area, and for that reason they do not need high-powered stations.

I should think that if each of those groups had one cleared wavelength in three sections of the country it would be ample. I have inveighed against that; I have criticized it. I know the objection of people to getting the same program everywhere they turn the dial.—Representative Ewin L. Davis of Tennessee, *Congressional Record*, February 10, 1932, p3800.

given. The fact that a continuing, organized program of supervision can be instituted in this manner guarantees values not even dreamed of.

The possibility of expert assistance should not be lost sight of. While, under the old plan of supervision, it is generally true that a supervisor is strong in one phase of his work, he may be weak or uninterested in other equally important phases. But the radio can for one week or a limited time bring to the rural teachers the best there is in reading. This unit may be followed by assistance in geography from the best supervisor of geography the state affords in its educational institutions. Then may come experts in teaching arithmetic, language, and other subjects. The composite result of all this should be

a value as great as if one supervisor in person should actually visit the rural teachers at regular and somewhat frequent intervals.

An aid to the rural-school teacher—It is possible that the radio may be of even more assistance to the rural teacher in the classroom. Here again there must be a carefully developed program, keyed to the syllabus which the teacher is expected to follow. While one county or similar political unit may undertake this project, for the sake of uniformity and a wider selection of expert assistance, *the state should be behind the undertaking*.

As in the matter of supervision, the radio can carry to the rural teacher expert assistance in every subject of the curriculum.

The rural pupil needs most to have access to the finer things of living. This is now possible by means of the radio.

An experiment in England—These proposals are not dreams or unrealizable theories. They have been tried out in several places. One of the best planned and most successful experiments with radio as an assistant teacher was carried out in Kent County, England, in 1927-28 under the auspices of the Carnegie United Kingdom Trust. It is significant to our problem that this project was in the elementary schools, some of them small rural, some semi-rural, some in larger towns. Each set of procedures lasted one semester. Various subjects were taught by radio, thru the teacher's guidance. A digest of the opinions of teachers regarding the success of the experiment will surely convince the most skeptical that there is great possibility in radio instruction for rural schools.

The teachers generally agreed that:

The broadcast lessons

- [a] Imparted a knowledge of facts.
- [b] Stimulated interest in ways which could not be definitely observed.
- [c] Created impressions as durable as those produced by their ordinary lessons.
- [d] Did not encourage inattention.
- [e] Were particularly stimulating to clever children.
- [f] Supplied views and information which the teachers themselves could not have supplied.
- [g] Gave teachers fresh ideas for lessons.
- [h] Interested some of the parents in the work that their children did in school.²

What more conclusive argument need be brought forth than the above enumerated benefits of the radio to teachers and pupils? That teachers themselves derived fresh ideas for their teaching bears evidence of its being a supervisory factor not

² See *Nature*. 122:301, September 1928.

to be discounted. In other words, the teachers were observers of the teaching of masters and were themselves learning better ways to teach.

California meets success—In the United States, several extensive experiments have been carried to a successful conclusion. In California a program was initiated for the special benefit of the isolated rural schools whose contact with other schools and communities was scant. Music, history, and geography were the subjects stressed in this series of broadcasts. So popular became the broadcasts that other schools provided equipment to join the program until several broadcasting stations were required to supply the demand, and several program committees were necessary to keep abreast of the work required in setting up desirable programs. Those commenting on the experiments say that the "possibilities for this method of teaching are almost unlimited. By the use of radio, the work of a great teacher can be immeasurably extended. Such a system of lessons by radio, together with plans and suggested readings and activities, could bring the most scientific methods into the most remote districts."

The rural-school's radio alcove—The one-room school presents the serious problem of having two voices in action at the same time. In fact, it always presents the problem of the recitation of one group interfering with the study of another. While it is possible to alternate teacher class periods with radio instruction, it would greatly facilitate both recitation and study to make provision for a radio alcove. This can be done at no great cost by erecting a sliding, hinged partition. In order that the teacher may exercise supervision over this portion of the room, part of the partition should be of glass. Ordinary folding doors with glass panels should prove very suitable. They are common equipment in many churches, Sunday school rooms, and other buildings. They may be erected to slide between two

rows of seats with a wide aisle and when not in use may be pushed against the wall.

During radio instruction, at a time when the regular teacher is conducting another class, those pupils participating in the activities of the "radio" teacher take seats within the alcove, the teacher tunes in for them, then goes back to her other class, keeping an eye on those within the alcove just as she would if the temporary partition were not there.

All of the before-mentioned activities fit precisely into the rural pupil's daily work. He is already overburdened with study time because of the necessity for very brief recitation periods. He is eager for a diversity of activities. He will revel in the opportunity to broaden his activities in every subject. Subjects will become real and interesting. School will become a place of inspiration.

Possibilities in larger rural schools—If the foregoing discussion points to great things for rural children in the one-room school manned by one teacher, it also suggests as great possibilities in rural schools of two-room, three-room, and consolidated type of organization. In such schools there will be no necessity for the radio alcove since classes may exchange rooms for radio and non-radio instruction. Consolidated schools may go so far as to install more than one receiving set so that two or more different courses may be offered simultaneously.

[1] Supervised study may be undertaken in some degree by the rural teacher when she is assisted by her "radio co-workers." There will be many periods during each week when she can assist her slow pupils during a time when the "radio teacher" is holding the attention of the other groups.

[2] Additional subjects may be insinuated into the already crowded curriculum for boys and girls who have outgrown the group they are in or who have lost interest in general school work. Home economics lectures and agricultural courses over the radio may prove the

vitalizing element for uninterested girls and boys, for whom the humdrum routine of rural school classes has made school a bore. Such additional things might turn the current of some rural children's lives to more promising things.

Conclusion—He who has read thoughtfully will surely agree that "when the possibilities of broadcasting as a formal and deliberately organized means of education are considered there can be no doubt that an instrument of incalculable value will be shaped for the service of mankind." The rural pupil, whether in the one-room school or in the consolidated school, need not longer passively accept the outgrown type of schooling to which he has been subjected, but by a relatively small outlay of radio equipment will be able to participate in those additional advantages which have come to his more favored city brothers and sisters.

The rural teacher not only will become a better teacher because of more direct supervision thru radio contact, but can provide for herself an assistant teacher in every unit of her activity.

No longer will lack of contact with the great leaders of the world handicap the teacher and the pupil in the isolated community when this modern invention's possibilities for education are realized. Admiral Byrd will be as wellknown to the rural child seated in a log schoolhouse in the mountains of Tennessee as to the city child sitting in a million-dollar school building.

Features that none but the largest schools can now enjoy are possible for the smallest school thru radio instruction.

The relief from monotony that the radio can bring with its new voices is in itself worth the whole cost of installation. It will energize the whole day's program and make each rural schoolhouse a place of delight rather than a haunt of monotonous classes and dull study periods.

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America Is Safe

A MILLION teachers and thirty million youth march steadily forward—a living monument to a nation and a century that has the vision and the courage to put children first. Let the good work go on. Let every child be taught by his parents and led by his teachers to appreciate the glory of the pioneering spirit; to understand the sacrifice and hardship that go with great achievement; to realize that vast new frontiers of social, economic, educational, and spiritual possibility are yet to be explored and conquered; that for the youth of today willing to labor and sacrifice as did his parents of old, there are opportunities such as man has never known before . . .

The unconquerable spirit of the teachers; the boundless energy of youth; the tradition of democratic opportunity, and our heritage of high ideals are panic proof. Upon that foundation let us continue to build for the better day.—Joy Elmer Morgan in the *February Journal of the National Education Association*.

I'm Signing Off

A Radio Announcer Betrays His Profession
ANONYMOUS

SOME TIME AGO, under the usual pressure, thru the good offices of an influential friend, and with no previous experience in the business, I entered radio station XXX as announcer and utility man. I am, I suppose, of average intelligence and sensibilities, of a typical American background and adequate education. Additionally I own to a decent general knowledge of music and a proficiency at the piano and in singing. I am—I confess it reluctantly—the average young man. Station XXX [not a thousand miles from Fifth Avenue] is correspondingly average, representing the typical large American broadcasting station.

I arrived, much flustered and slightly apprehensive. The business manager, Mr. A., told me to "look around for a day or so and get the hang of it." And for three days I did nothing more than that, observing what Milton Cross, one of the better known announcers, termed in a New York *Herald Tribune* article "the very highly specialized activity" of the "art" [his word] of radio announcing.

I observed how the microphones, condenser, and carbon were placed in their varying relations to instruments, singers, speakers, and announcers; observed the effects of certain wall surfaces upon microphone reception; listened to voices that "blasted" and produced "peaks," and to voices that did not. I learned something of the mechanism and management of the mixing panel. I learned the necessity of programs that ran smoothly and on time, and of average quick thinking on the part of the radio staff. I learned that an "artist" was anyone who entered the studio in a professional capacity.

Then abruptly I added to my stock of knowledge. The business manager informed me that I was to go on the air this evening, I was to get in there and show 'em how it was done, I was to put that smile into my voice, give 'em that winning personality. And so he came finally to his peroration: "Now, B., I know you're a college man . . ."—I was, along with five million others—" . . . well, don't show it! I'm educated myself,

but I don't even let the fellows here know it. They don't like it. Public don't like it. Give 'em what they want when you announce. Way to make good!"

I should have been prepared for this information, but I wasn't. And it staggered me. I had assumed that my business, since it had to do with English speech, with a wide range of knowledge, and with the entire library of music, would make unlimited demands on my mental furnishings. I was to learn later that the only virtue proper to the great announcer is showmanship.

The daily program—First of all there was the run of the day's work. Did it suggest art in content or arrangement? Was it wellbalanced, varied, amusing? Did it rise occasionally to the plane of normal intelligence, taste, and cultivation; did it at seemly intervals bear the blazon of the vaunted educational institution which the majority hold the radio to be?

Well, from seven to eight in the morning was the children's hour, and as such quite legitimate and laudable, filled with much ringing and clattering of bells, buzzing of clockworks, mechanical hoots, and the other effects which, all program directors are convinced, children love. Included also was an adventure yarn by "Captain Bert," which was advertised as having been drawn from his actual experience. Captain Bert, tho wellqualified for his post, hard-working, and absolutely dependable save when overtaken by *la crise japonnière*, was pressed for time. So I undertook the writing of true adventures for him to sponsor. I remember with a little mortification and with great pleasure his exploits in Borneo, for example. Borneo, by the time I had done with it, was as savage and thrilling as a circus poster, and Captain Bert was a hero cased in triple brass. One morning he engaged in a hand-to-hand struggle with two full-grown orangutans—and did them in, what's more.

Following the Captain's epic doings came jazz and allied popular music from eight o'clock to ten. From ten to ten-thirty, home economics. The purpose behind this program was commendable: in theory, the women of the city profited, as did the station and the sponsoring grocer.

But unfortunately the "Kitchen Kourse" was as new as my presence in Station XXX. And the woman in charge, while she had the requisite elocution teacher's "vocality," was otherwise inexperienced and furthermore busy. So I stepped into the breach. My first paper—on pies—was interesting if not sound. It was in fact definitely lyric; by hewing closer to Shelley than to Fanny Farmer I managed to avoid flare-backs from knowledgeable housewives and at the same time to win the omnipotent business manager's approval.

From half-past ten to eleven I played the piano and I sang . . . and I began to learn many things about music from my audience of a million as well as from Mr. A. Such as: that the C-Sharp Minor Prelude is good for a down any time; that the march from Prokofieff's *L'Amour des Trois Oranges*—as fine a piece of musical humor as ever was written—is "terrible"; that Shutt's *À La Bien Aimée* is "a good deal highbrow"; that the public wanted *good* music and that I'd better sing *Somewhere in Old Wyoming*. Thereafter I sang *Somewhere in Old Wyoming* and told comic stories, cherishing one invaluable truth that by process of trial and error I had discovered, namely, that my public liked the better music only when a recognizable and famous man executed it, or when by dint of weary repetition the music itself had become familiar and therefore acceptable. Exceptions may be taken, I know; but the rule holds.

For the next half-hour, a program devoted to the selling of a fraudulent electro-therapeutic machine. And then thirty minutes of old-fashioned church services, to the material profit of both the organizer and the station.

By that time it was noon at XXX and we settled into our paying stride. To be sure, stray wedges of the clock were given over to bridge forums, historical reminiscences [whatever they were], travel talks, epi-Guestric poets, and critics. But the stock commodity for the afternoon was this: ten minutes of market reports, five minutes of police alarms . . . and sponsored dance music.

Somewhere between six and midnight an hour's tribute was paid to the sober-

sided muse. An orchestra played, or, more likely, a string trio for cheapness' sake. This is a typical offering:

TwilightFriml
The Garden of My HeartBall
In Elizabethan DaysKramer
SerenadeSchubert
Scarj DanceChaminade
Kammenoi OstrowRubenstein

The final number here, Rubenstein's bell-ringing exercise, shared honors with *À La Bien Aimée* as the peak of "highbrow stuff."

A tenor sang—usually this sort of cup-shotten program: *Somewhere in Old Wyoming—Promises—Forgive Me—Until We Meet Again, Sweetheart—So Beats My Heart For You.*

It is possible, of course, that since the radio has rendered musicianship unnecessary the "artists" were themselves deceived. They may have thought that they were recreating a profusion of masterpieces. Yet I credit most of them with the knowledge that their repertoires were depraved and dull. In the dark outside lay some monstrous primitive carnivore, OUR PUBLIC, slightly confused with the official who signed the checks, ready to crunch the bones of their reputations if they made a single false step. I say they knew better. But had they done better they would have fared worse.

With trio and with vocal soloist, gravity was ushered in and out. The city's merchants would have none of it, and therefore neither would Station XXX. For the rest of the evening there was usually a "drama," in which the villain and the English language were struck down simultaneously. And there was dance music, some of it good, some bad, all of it jazz.

The programs of the contributing orchestras were wonderfully simple in plan: they were practically identical. To assure myself of this fact, I drew up a sort of frequency chart a few months ago. During one week the following musical numbers were played not less than five times a day, not more than eight, at our station: *The King's Horses—You're Driving Me Crazy—Three Little Words—Fine and Dandy—Walkin' My Baby Back Home.* And they continued to sound as frequently for weeks after. It seems like months.

This is not quite all of the day's labor. We at Station XXX make one truly remarkable effort that is worthy of special notice. On Sunday "Uncle Tim" holds his Kiddie Karnival. Under the yellow shimmer of uncle's teeth the usual theatrical

minors perform for an hour and a half; the usual piercing and uncertain notes are struck, blown, and wrenched from instruments. Thru some kind of magic, music which would be atrocious if played by a visible adult becomes charming when played by an invisible child. Verses are recited or audibly forgotten to an accompaniment of toys drawn across the floor of the studio, because confusion and inadequacy are dear to the nursery heart. Uncle Tim reads the comic strips in a suitable treble. He makes kind, avuncular fun of his Kiddies. Merry childish laughter bubbles up continually to the microphone, under the watchful and expert baton of the uncle.

The next day I saw the resulting letters from the adults for whom this infantile circus was operated; not so many letters, of course, as we would have taken in a few years ago, but still baskets of them. They criticize, suggest, condemn. And for all their mistakes and their pencil smudges, we give them consideration, because thru them speaks the voice of God—disguised, naturally, as the potential customer. We listen, too, when the divine utterance employs the telephone. Once during my apprenticeship I informed the microphone that to my way of thinking a certain notorious mammy-singer was a foul comedian and small potatoes compared with Groucho Marx. Within three minutes we had seven telephone calls beginning thus: "Say! Who does that announcer think he is, anyway! Callin'—no good! Are you goin' to let him get away with that sort of stuff?"

The presiding geniuses—So much for the events of the day at our temple of the muses. I need only say of it that I found room for thought, those first few weeks at XXX. Undoubtedly we made money here and were a thriving business. But were we also good entertainment, high art, higher education? I could find no justification here for Mr. Cross's lofty attitude. Indeed, the moments came more frequently when I looked upon the microphone as a malefic talisman capable of extreme perversion, capable of transforming princesses into scullery maids, full of pernicious charms and brazen in the use of them.

I examined further into my profession. I went from our programs to our managers and announcers. Surely, I thought, if radio is an instrument of enlightenment and the humanities, I should be able to reveal very special qualifications in its high priests, altar ministrants, and acolytes.

The president is a shrewd business man

whose reading list is headed by *V. V.'s Eyes*, and who once when I was practising Bach—for very private reasons—informed me that he *liked* Chopin.

Our vicepresident is likewise a shrewd man of affairs; and in addition he has a tact which is lacking in his superior, for he is content to deal with the finances of the station. Tho he does not acknowledge his ignorance of simple radio technic, of music, and the art of English speech, he at least does not attempt to intertere with our operations.

Not so the production manager. Shortly after I came here he told me that he too was a "college man"! He toils thru the difficulties of our mother tongue like a disabled oyster barge thru a heavy sea, and he once referred to that famous English poet, Coolidge. His ignorance of music is exaggerated in its scope; he fails to distinguish between a Strauss waltz and a military march, between a "major" and "minor," a duet and a quartette. But he superintends production, because he has "a good business head" and "knows how to handle men."

In Mr. A., the business manager, we have what is generally called a dynamo: that is to say, his voice is sharp, his movements brisk, his personal appeal to merchants potent, his capacity for error theoretically *nil*. I found that he is the most significant figure in our station, because he is its most adept salesman and because he believes in and enforces his personal tastes. It is admitted that his selling ability is an excellent thing. But his preferences in speech and music, while wonderful, are not excellent. When he corrects good orchestration into bad, good balance into bad, good continuity, voice manner, and pronunciation into bad, I occasionally protest. His answer is, "You're right, but the public don't know what you mean. Maybe 'lingerie' is what *you* call it, but 'lawn-ju-ray' is what the women buy on the counters. So give 'em lawnjuray!"

Thru Mr. A., D. & T. Maiers, Clothing Merchants, buy half an hour on the air and thereafter feel privileged to dictate every detail of their entertainment. If they say that the word is "en-sem-bul," or that such-and-such is too slow or too soft or too dull, then it is all of those things. If they want the six current numbers played—and they always do—then the six are played. If they say that an announcer with a barytone voice must coo in a tenor fashion like the great Joe Blank at Station YYY, then the announcer takes a gargle and coos. Unquestionably the brothers Maiers have sound

mercantile instincts, and thanks to them Station XXX is a thriving concern. But I do not find it in the Gospels that a business man is necessarily a compendium of all taste and knowledge.

Next to the Maiers in authority comes the gallery of our production staff and announcers—men who have been courteous and generous to me, for whose sake my station and I must remain anonymous in this article. We have had various backgrounds: one of us was formerly a real estate agent and longshoreman, another was in the Coast Guard, another a professional baseball player, another an engineer, and so on. That none of them has had a formal education is irrelevant. But that they have not acquired knowledge informally, that they have never undergone the severe testing which develops a sure taste, that they have no reading, no musical appreciation, that they lack the equipment which should figure most importantly in our profession—this is strictly relevant and a little tragic. These men, whether they will it or not, are powerful agents in formulating the taste, speech, and habits of mind among a million people. Mr. Cross wrote that “announcers must be ever alert about their diction, enunciation, inflection of syllables, and may we say, voice humor.” He even added that “there are scholars among us.” Therefore I thought it fair to expect an inoffensive use of English and a wellgroomed manner, if nothing else, from my fellow barkers. I rarely heard it.

On the other hand, I frequently did hear Uncle Tim, whose type is common in the radio world. Like so many of us announcers, he was once an actor, having spent fifteen years elaborating minor rôles in a Tom-show. The results are astonishing, tho not unique. There is a great deal of the zoo in Uncle Tim, a trait which is shared by almost all radio “uncles” and “captains.” Before his microphone he is full of a soft, childish laughter, and of charming conceits and fantasies; he plays a great deal, so to speak, with his verbal tail, cracks nuts, eats straw, chatters excitedly, and so on. The tempo of his speaking is afflicted with an extraordinary *rubato*, which may be represented thus in musical terms: *sforzando accelerando—sostenuto—accelerando subito—largo largo*. “Down . . . in the . . . well there was . . . [very quickly] the cutest little mou-ou-ou . . . [pause, then a gasp] . . . sie and when he was at . . . home he . . . was . . . in-a-we-e-ell.”

To a layman this may not immediately suggest the human voice, but Uncle

Tim's manner is popular and leads many merchants to Mr. A.'s office. The rest of us do not hesitate to imitate him, since we too must sell. We are radio's high-pressure salesmen, and must poke the rabbits down the gullet of that reluctant anaconda, our public. The trouble is that radio's only staple product is amusement, which is not the result of violence.

Radio authors—Last of all I came to those masters of the lean and racy or the fat and colorful prose—the writers of continuity. By the terms under which I drew my very respectable salary I was also of their number. Continuity, I learned, falls into two divisions—“commercial” and “sustaining.” The former is high-pressure ad-writing, and the latter is that vivid matter which introduces and interrupts all programs, whose function is gracefully to cushion the radio mind against too abrupt an impact with music, ideas, and oral sounds.

I learned what everyone these days is aware of, that the advertising announcements are viciously long and in consequence are a contributing cause of radio's ill health. For a number of our half-hour sponsored programs I have written scripts eight or ten minutes in length. A certain featured “entertainment” at our studio regularly alternates two minutes of paid speech with two minutes of music.

I further learned that “air-ading” has to be written, not untruthfully of course, but . . . well, forcefully. I can honestly say that in Station XXX I have not invented a single concrete textual lie, having found such technic to be childishly inefficient. In place of the lie we put misrepresentation; with due regard to the penal code we state a low-grade truth, a safe generality. So far, so good. There is something too lamblike, however, in a simple truth. And the dominant flavor of advertising is wolf rather than lamb. So by heaping up illogical inferences, implications, slippery suggestions, and repetition we raise the low-grade truth to a proper selling plane—as necessarily we must if we are to inflate our patrons' desires up to and beyond the size of their pocketbooks before delivering them over to our clients. But unfortunately for me, I have the sort of mind that is unable to see the difference between a trap set for a creature's leg and a trap set for his subconscious self.

Sustaining continuity is another thing again, quite removed from the market place. Here the *littérateur*, the gifted Englisher of thoughts, the maker of dreams and creator of atmosphere—here the verbal genius of the radio hits

his stride. And here, I thought, is a line which Messrs. the talented business men will not overstep.

They didn't. But another force did, a special tradition of taste which rules in all broadcasting studios and which in my opinion is on a level with the idealism of the tabloids. Under its tutelage I am forced daily to write English prose that is indescribable. The trick is easy, and I hereby place the secret at the disposal of any continuity writer who may wish to win the backslaps of his manager and the hearty approval of his “radio family.” Overstate all emotion, violate all laws of restraint, use the tritest phrases, the most extravagant similes, the most drenching sentimentality. Strain for cheap verbal effects, employ commonplaces once the property of Chautauqua lecturers and politicians. Walk heavily and use a big stick. In short, write as wretchedly as you can. I quote an example:

When you look into the heart of a great diamond, unearthly glory flickers up into your eyes. But when you read its story, you can see the broad ribbons of blood that flow thru its lovely current. When you pronounce the names of the great stones, the air throbs with harmony, and you seem to hear the waves of poetry breaking with a crystal sound over the far shores of romance. But, reading of their adventurous lives, you shudder as you hear the laughter of the demons that watch over these blazing beauties.

One important use of continuity is to interrupt. Never allow your announcer to say: “Next you shall hear . . .” or, “The song that follows now is called . . .” Exaggerate! Force! Be puerile! Give the script a horse-drench of virile showmanship. Like this: “The *baton* of our *chef-d'orchestre* [pronounced in various ways] presents now for your musical consideration . . .” or, “With bows for brushes and notes for pigment our instrumentalists paint a picture for you of that old sweetheart of yours, *Somewhere in Old Wyoming*.”

My proud stomach does not revolt too fiercely when as announcer I salt down the jazz programs with excrescences such as these for the words and music are mated to each other and to the audience. But I am sickened when I am obliged to ballyhoo Schubert and cheer him on as if he were a famous quarterback doing a broken-field run. I should rather like to hear honest music honestly presented, listen to the play of honest minds, away from this sticky, hypocritical fug of emotion, fellowship, and uplift, barren intellects, and conceited ignorance.

I should enjoy telling the people

that the six current jazz tunes they are about to hear are poisonous after a week of repetition; that this political speaker has called his audience gullible idiots just five minutes before going on the air; that this continuity which I pronounce should be hissed off as stuff of ill effect; that the prize jars of mayonnaise will *not* go to the writers of the first one hundred letters received at the station but will be scattered about where they will do the most good; that this critic and book reviewer has the literary tastes of an hyena and the critical equipment of a beach-comber and that a chain bookshop is "obliged to him" for puffing its particular list; that the air is full of miasma and dullness and they'd best come out of it.

I imagine that after saying these things I should be short on job but very long on self-respect.

And the national chains?—Perhaps conditions at another station would be more tolerable, but I doubt it. I have visited many of them, have met, talked with, and listened to many announcers, attempted to speak with directors of programs and music; I know as dinner companions one or two heads of the business not utterly unimportant. And I venture to say this: that where there is but small flint, tinder, and fuel, one does not look for a bright fire.

Concerning radio at large, my experience and observation have furnished me with three propositions that to me seem almost axiomatic.

First, that broadcasting is by its nature inevitably an educational and a cultural agent.

Second, that as long as the present staff of men is in and above the studios any educational or cultural shift must be a downward one.

Third, that, given the weakness of public protest, radio will not be forced to mend its ways or alter its current methods of milking the public cow.

The very widest possible view of national broadcasting has not led me to abate the edge of these contentions. It is a macrocosm of which Station XXX is an elemental and model part. The analysis which I have tried to make of my own studio may be applied with identical results to the largest one. The national chain announcers share the defects of their lesser known brothers: instead of displaying whatever small enlightenment is theirs, they exploit their illiteracy over the air. They are quite at

home, for instance, with the pronunciation of tongue-twisters and the hard ones out of McGuffey. Dictionary in hand, they can deal with "disestablishmentarianism"; they know their etiquette when faced with peacock brains and beccaficos. But serve beans, and they eat with their knives. Within the past two days I have heard a noted altar ministrant in one of our metropolitan fanes deliver himself of "impotent," "pictewer," "often"—and, in imitation of an aspiring provincial dowager, "lond," "ond," and "monner." That is not the lack of higher education; it is the complete lack of any education whatsoever.

Happily for their peace of mind, the great announcers are preserved from the thought that they are imperfect. Most of them are too busy aping a crowd of gentlemen talking at ease to speak at all naturally — from Lower-Oxford-on-Upper-Ohio they bring an Oxonian accent that would make Buddha blink. And they are so absorbed in the blossom of their own perfection that they touch things which they should not dare to handle: one of the hearty-bluster school, for example, presumes to broadcast events at a boat race when he cannot rightly distinguish a rowing slide from third base.

As for the continuity that these men read, it would be an unpleasant and useless task to set down examples here. The national chain programs they announce are no better. To be sure, we may hear a few good programs, some of them extraordinarily so, and they hang like rich jewels in an Ethiop's ear. The fact is, I suppose, that while an hour of excellent entertainment justifies itself, it cannot justify a whole week or month of tripe. Pleasure in music is not, like truffles, to be taken at the long end of a pig's nose; nor is an oasis of any real benefit to a man if he dies in the desert trying to reach it.

Conscious that isolated periods of decency do not make amends for insufferably long stretches of maladroit advertising and pseudo-entertainment, the two national chains have during the last six months made strenuous efforts, in the news columns, to improve conditions. Famous concert names and bureaus have been merged with them, and the air was full of promise. But the results have been negligible so far. The genuine artists have disappeared, overwhelmed by the mass of "artistes," or their programs have been shorn of interest by the advertiser. Perhaps something will arise later from this official union of talent with commerce. Meanwhile, in our great depression, the

many questionable hours return hand-some profits to the stations.

The station managers, of course, defend themselves by saying that they must give each class what it wants. If so, then their position is indeed an unhappy one, for the air policy of SOMETHING FOR EVERYONE threatens to result in NOTHING FOR ANYONE. And so arises an amusing paradox. They are able neither to understand and accomplish the function of leadership nor to dismiss it. Like a man with a live wire in his hand, they can neither use it nor drop it.

Let us be fair. The blame does not rest entirely with the radio executives. Above them are the advertisers, grimly determined that the people *shall* desire, *shall* buy. In order to impose their will they threaten the air-men with no physical violence; they merely flourish a check—and the air with its public attached is sold to them. The advertiser has bought an hour on the air as he would buy a pound of cabbage. He owns it. And what he says goes! Add public apathy, and the list of evils is complete. The abuses are almost traditional by now, and under their influence radio, like Disraeli's statesman, having been for seven years a bore, is now become an institution. It may be that, in spite of the honest effort being made in certain quarters, its further course must remain unaltered.

Yet I have imagined an ideal broadcasting station. Its owner [myself] will be a man who does not have to make money every hour of the day. Its announcing and production staff will be men of education who will have undergone special training in the arts of speech, music, and restraint. Its continuity writers will be few, their output limited, and the quality of it inconspicuously good. Its advertisers will have the power of suggestion but must leave the command to those who know more about the business in hand than they do. There will be no hypocritical pretense to public service; the programs will make no attempt to present something for everyone—they will be aimed frankly at and above a presumptive upper-middle class; they will accept Broadway standards only in comedy and dance music.

If the quality of these programs cannot be maintained eighteen hours a day, then the station will be on the air for half that period. If under these conditions the station cannot be successfully operated, it will be closed. The public and the advertiser will find the tabloids and the billboards sufficient to their cultural and commercial needs.

The Problems of Radio Education

TRACY F. TYLER

Secretary and Research Director, National Committee on Education by Radio

RADIO EDUCATION, tho a comparatively new field—or perhaps because it is a new field—is right now facing many problems. How these problems are solved may have a revolutionary effect on education in this country in the next ten or fifteen years.

The first problem which must be attacked is one of conservation. Radio has many technical limitations. One of these is that only a limited number of broadcast frequencies is available—a fact which opens radio to monopolistic tendencies. As in the case of many of our great natural resources, there is a limit to radio channels. Ninety-six are available for broadcast use in the United States today. A gentleman's agreement, entered into a few years ago, designated six of these for exclusive use by Canadian stations, while eleven were to be used jointly and with limited power by both Canada and the United States. Mexico was not invited to participate in the conference, and no provision was made for stations in that country. The remaining seventy-nine frequencies are reserved for the exclusive use of stations in this country.

Were this a technical, scientific paper, it would be permissible to point out many other engineering difficulties which radio faces. Radio engineers tell us, for instance, that two stations on the same frequency with five or more kilowatts power cannot operate in this country at night without seriously interfering with each other, while the distance separation necessary in the case of even one-kilowatt stations permits the simultaneous night operation of only three. This is caused by the effect of sound waves carrying the programs we hear many times farther than the distance within which these same programs may be received on our radio sets. This so-called nuisance area is one of the factors limiting the total number of broadcasting stations which can operate in the United States without produc-

ing intolerable conditions of reception. Close students of radio pretty generally agree that a reduction in the number of stations, which now total over six hundred, would be desirable.

CONCERNING RADIO AT LARGE, my experience and observation has furnished me with three propositions that to me seem almost axiomatic.

First, that broadcasting is by its nature inevitably an educational and a cultural agent.

Second, that as long as the present staff of men is in and above the studios any educational or cultural shift must be a downward one.

Third, that, given the weakness of public protest, radio will not be forced to mend its ways or alter its current methods of milking the public cow.—From "I'm Signing Off—A Radio Announcer Betrays His Profession," an anonymous article in *Forum*, February, 1932.

Some percentages—According to records of the Federal Radio Commission less than fifty radio broadcasting stations are in the hands of educational authorities. If these are rated in terms of power and operating hours allotted to them, they occupy about 6 percent of the radio facilities in use in this country. The other 94 percent is largely in the hands of commercial interests and is used mainly for advertising purposes.

While none would object to the commercial use of any tool of this kind, provided there existed a sufficient quantity for all of the other uses to which it might be put, there seems to be a general agreement on the part of educators, and others who have thought deeply on this subject, that sufficient radio facilities should first be set aside for educational needs. If there

is then a surplus, probably no objection would be raised to its use for commercial purposes.

In most European countries, radio has become a cultural and educational tool. There is no advertising problem, for in but few countries is radio advertising permitted. This makes it possible to use the hour best adapted to the program as well as to the group to be reached. Since educational authorities are in charge of educational radio programs, no question of their suitability for educational purposes can be raised. On the other hand, with the exception of a few college and university stations, operating generally on poor frequencies, with low power, and insufficient or undesirable hours, the bulk of the radio facilities in the United States are sacrificed on the altar of commercial gain. It was this fact, and the further fact that the Federal Radio Commission was gradually reducing radio broadcasting assignments to educational authorities, that led to the formation of the National Committee on Education by Radio.

The NCER—This Committee was formed at a meeting of representatives of educational organizations and groups held in Chicago late in 1930. Its nine members represent the following educational bodies:

- The American Council on Education
- The National Education Association
- The Association of Land-Grant Colleges
- The National Association of State Universities
- The Nat'l Council of State Superintendents
- The Nat'l Catholic Educational Association
- The Jesuit Educational Association
- The Nat'l University Extension Association
- The Association of College and University Broadcasting Stations

The Fess Bill—As a first step in conserving radio for the uses of education and culture in this country, the Committee is sponsoring S.4, a bill introduced in the present session of the Senate by Simeon D. Fess of Ohio. If this bill becomes law, 15 percent of the radio facilities will be available for assignment to educational

Delivered at the general session of the Southern Wisconsin Teachers Association, Madison, Wisconsin, February 13, 1932.

I AM INCLINED TO THINK that sooner or later, unless the power gets away from us, we will have to break in on this great, big, high-powered hook-up service in the interest of minor service.—Representative Albert Johnson of Washington, *Congressional Record*, February 10, 1932, p3797.

institutions. Altho insignificant, this percentage would at least be a start in the direction of making better use of our limited radio facilities. It would provide a margin of 9 percent over the present assignment of 6 percent now in the hands of educators.

Financial problems—The second problem facing educators now is the financing of radio broadcasting. Considerable money is required to construct a radio station that will serve an entire state, and the operation of such a station also requires a sizable budget. *These costs are nowhere near the amounts commercial interests would have us believe, however.* In the first place, much of the expense of commercial operation is put into elaborate reception rooms, waiting rooms, studios, hostesses, and so on, for the sole purpose of impressing advertisers and the public. Such expenditures contribute nothing to the actual programs broadcast and would of course be unnecessary in connection with a station operated by educational authorities. Suppose it does cost fifty thousand or even a hundred thousand dollars to set up, and an additional fifty thousand dollars a year to operate, a station powerful enough to cover a state? Could not the expenditure be justified? Do we not sanction the expenditure of several times that amount when one of our universities or colleges must provide for an increase of a few hundred students? When we consider the hundreds of thousands served by radio, the per-person cost amounts to a few cents only.

In these times of restricted budgets, arranging for new services which call for increased expenditures may be hard to justify. This condition is certainly of a temporary nature only. Because business has suffered a little, we must not close our eyes while such a tool as radio slips thru our fingers. As a matter of fact radio might fill in, during times of stress, where other services have broken down. In one of the Canadian provinces, where crop failures and low prices of farm products have deprived many boys and girls of the opportunity to go to high school this winter, lessons are being sent to them by radio so that they will not suffer from lack of educational advantages. No one would argue that these children are getting as much from their broadcast as they would from their school lessons, but the radio is of great educational assistance to them during an enforced absence from school.

Someone has conservatively estimated that the increased efficiency which could

be attained by coordinating radio with the work of the teacher is worth \$100,000,000 a year to the schools of America. This estimate is drawn from a conclusion

YOU CANNOT GRANT NEW LICENSES; there are already too many licenses, already too many radio stations. They ought to be reduced. I have said repeatedly that the Radio Commission ought to have the courage to make the necessary reductions. The reductions should come in the cleared channels and high-powered stations as a general proposition.
—Representative Ewin L. Davis of Tennessee, *Congressional Record*, February 10, 1932, p3800.

that radio can increase a teacher's efficiency 5 percent. When we consider the advantages of radio in the various fields of education, will we not see to it that the problem of adequately financing educational broadcasting is correctly solved?

The problem of control—The third problem, closely related to the problem of *conservation* of facilities, is that of the *control* of facilities. It has been said by representatives of commercial radio interests that all broadcast facilities should be left to them, and educators could then secure time for cultural programs on these commercial stations. On first thought this would appear to be an ideal arrangement since educators would have little investment or operating expense to provide. Some institutions, operating under this arrangement, have been well-satisfied. Usually in these cases the commercial station has furnished free time, and where the institution and the station are located in the same city, no expense has been required to provide studios or rent telephone lines. However, the dangers inherent in this plan have convinced educators that owning their own stations is the only satisfactory plan.

Wisconsin's difficulty—A group of eleven commercial broadcasting stations in your own state of Wisconsin proposed that the State Department of Agriculture and Markets at Stevens Point and the University of Wisconsin at Madison abandon their radio stations and allow this group to donate free time for broadcasting educational and informational material originating at the University and

the Department of Agriculture and Markets. Of course it is evident that this offer is not sincere. It is but another of many attempts to remove all educational stations so as to clear the air for the exclusive use of advertisers.

In the first place this commercial group requests the state to pay the cost of connecting the stations with Madison and Stevens Point by means of telephone lines. A conservative estimate would place this cost at \$100,000 a year. It is strange that after all these years none of the commercial stations involved has ever been interested enough to broadcast the educational programs of these two state stations to their listeners. The way always has been and still is open, if they are really interested in educational broadcasting. What they want is free service—paternalism—state-support of commercial enterprise. In the second place, will all of these stations give all the time the university requires for its programs? Will they accept all speakers and all subject-matter receiving university sanction, regardless of the policy of the station itself? Finally, by using these commercial stations will the state save the large sums claimed by the proponents of this plan? On the contrary, and quite properly too, use of the radio extends the services of the state, and by reaching more people and creating more needs, necessitates the expenditure of more money.

Surely sound principles of education would suggest the desirability of further extending the radio facilities of these state agencies, an extension which means improving the facilities under state control. The people of Wisconsin would not abandon their university in favor of commercial enterprise—why abandon an educational tool like the radio?

Censorship—The first danger in using commercial stations is one of censorship either of material or speakers. Representatives of one of our great land-grant colleges were refused the use of a commercial station because they told the farmers the truth about certain types of feeds and fertilizers which conflicted with statements of advertisers using the same station. Relations between the institution and the station ended right there. Certainly no educational institution worthy of the name could submit to censorship exercised by men of commercial viewpoint owning all radio stations.

Insidious advertising—The second danger is that of getting advertising into our schools. Educators are united in the belief that advertising must be kept out of educational institutions at all costs.

Commercial control of all broadcast facilities would bring the danger of advertising inserted into programs intended for school use. During the past summer the promotion manager of the *Louisville Courier-Journal* evolved a scheme to use Kentucky schools for advertising purposes in connection with radio work. Educators killed the plan after it had been outlined to Joy Elmer Morgan, editor of the *Journal of the National Education Association*. This case and many others show that educators must ever be on the alert to head off any attempt to use the schools for advertising or propaganda purposes.

Costs—The third danger is that if commercial stations ever have entire control of all broadcast facilities they will charge educational institutions such a high price for use of the air that it would be cheaper for the latter to maintain their own stations than to buy time. At present many institutions secure these facilities without cost, but there is no guarantee that this plan will continue indefinitely.

Time-on-the-air—The fourth danger is that of not being able to secure sufficient and suitable hours. Institutions using commercial radio facilities now broadcast anywhere from fifteen minutes a week to a half-hour or an hour a day. When they begin to meet their responsibilities for all classes of persons in need of education by radio, they will require several hours each day. Can any commercial station be found that will yield a large percentage of its radio time to an educational institution? Is not the best time for reaching the adult male population also considered best by manufacturers to advertise their products? Even if institutions pay for this time, will not competition for its use with the advertising groups have a tendency to raise the cost to an exorbitant figure?

Programs—Finally, there remains the problem of programs, resolving itself into many parts. First, there are many groups for whom provisions must be made in any complete program of radio education for an entire state. Each of these groups must be carefully studied to determine how radio can contribute to make their work more effective. For instance, consider the one-teacher rural

school. The possibilities of radio in supplementing the varied demands made on the rural teacher are almost unlimited. Relatively, the rural teacher in most

CONSCIOUS that isolated periods of decency do not make amends for insufferably long stretches of maladroit advertising and pseudo-entertainment, the two national chains have during the last six months made strenuous efforts, in the news columns, to improve conditions. Famous concert names and bureaus have been merged with them, and the air was full of promise. But the results have been negligible so far. The genuine artists have disappeared, overwhelmed by the mass of "artistes," or their programs have been shorn of interest by the advertiser. Perhaps something will arise later from this official union of talent with commerce. Meanwhile, in our great depression, the many questionable hours return handsome profits to the stations.—From "I'm Signing Off—A Radio Announcer Betrays His Profession," an anonymous article in *Forum*, February, 1932.

states is imperfectly trained. She is often paid a niggardly wage. She receives an entirely inadequate supervisory service and accepts the first opportunity to teach in a village, town, or city school. Usually the turn-over among this group of teachers is exceedingly large each year. Frequently required by necessity to teach all subjects in all grades of the elementary school, the rural school teacher finds many subjects in which she is scarcely competent to give instruction.

To this group may be brought instructors highly qualified in the many subjects lending themselves to radio teaching. Probably no single subject has been pre-

pared and presented for school use more than music. Many persons have thought that music is about the only subject which could be presented effectively over the radio. In many quarters a feeling existed that such subjects as arithmetic could never be taught except by the classroom teacher. Superintendent R. G. Jones of Cleveland had a different opinion, however, and for a year he proceeded quietly to experiment with arithmetic lessons thru the use of a public address system in one of his schools. Cleveland children, in buildings now wired for radio, receive part of their arithmetic instruction under the master radio-teacher, Miss Ida M. Baker. They receive music lessons in the same way. Lessons of this kind could be prepared for use in rural as well as in city schools. Many other subjects prepared for use in certain elementary grades could be used by both rural and urban children. There are many subjects, tho not all, which can be prepared on junior and senior high school and college levels. Materials for use in the social sciences, health, physical sciences, literature, drama, debates, speech, and foreign languages are examples. Broadcast instruction in the languages of France, Spain, Germany, and Italy is most valuable when given by natives of those countries. Regardless of size, few high schools employ native teachers in any of their modern language departments. However, a state university can offer language lessons by native teachers so that many schools secure the superior technical knowledge of the language which only a teacher of this kind, speaking the language perfectly, can give.

Practical examples—Already many of you are saying, "This sounds interesting, but is it all theory? Where are there examples of school broadcasting? How successful are they? What connection is there between all this and the teachers of southern Wisconsin?"

I have mentioned radio in connection with teaching arithmetic and music in Cleveland. It has proved its value to such an extent that its sponsors are willing to pay for the six periods a week they are now using. This, of course, is temporary. Gradually as more subjects are prepared for radio use, Cleveland will have to seek

ALLOW ME TO SAY TO YOU, do not take the government too far away from the people, and do not force people, who are not able to do so, to come here to Washington and pay high-priced attorneys to defend their rights. Let them test their rights in the courts of their own jurisdiction.—Representative John N. Sandlin of Louisiana, *Congressional Record*, February 10, 1932, p3806.

other facilities because commercial stations will be unable to give them all the time they will require.

Ohio—Another example is the Ohio School of the Air, sponsored by the Ohio State Department of Education. These programs, which began on January 7, 1929, use an hour each school day broadcasting such subjects as nature study, geography, story plays and rhythmic, current events, our government, general science, history, dramalogs, botany, guidance, physics, health, literature, stories, citizenship, art appreciation, and modern adventure. In addition to classroom broadcasts occasional programs have been provided for teachers, parent-teacher associations, and home listeners.

North Carolina—The North Carolina State Department of Education is now in its second year preparing broadcasts for schools. The station broadcasting this material does not reach the area, nor does it devote as much time to programs as the Ohio station, but splendid work is being done, and it is being well-received by North Carolina teachers.

And others—I haven't time now to tell you about the educational radio programs in Kansas, Iowa, and California, in Chicago and Louisville, or those offered by the New York State Department, the modern language department of Ohio State University, nor the Damosch and American School of the Air programs.

Abroad—I might tell you of school broadcasts in England which are more comprehensive than anything found in this country. Their programs for classroom use total eight hours and twenty-five minutes each week and include such subjects as world history, stories for younger pupils, French readings and dialogs, nature study, music, French, talks and debates for older pupils, biology and hygiene, English literature, history, speech training, German dialogs and

readings, rural science, geography, Friday afternoon stories and talks, concerts, and dramatic readings. Without doubt the success of the English broadcasts is

THE FIELD OF WORK in which you are engaged is undoubtedly a most important one. Your fearlessness in exposing the danger of a broadcast monopoly is admirable. Freedom of speech is indeed to be safeguarded and for this reason air monopoly is to be avoided. Freedom might else develop into license that would endanger the country's welfare. I shall be delighted to cooperate with you to any extent possible in your splendid work.—One of many similar letters received by the National Committee on Education by Radio.

largely due to the fact that British broadcasting is not a tool of high pressure advertisers but is maintained as an educational and cultural agency. Its school broadcasts are directed entirely by responsible educators and are not in any way connected with propaganda. Their programs of adult education occupy the most desirable hours—those hours which in our own country are largely devoted to nauseating sales talks. The English programs enjoy an immense following among individuals and discussion groups under local leaders. Listeners are provided also with a substantial amount of entertainment of high quality which has no advertising connected with it.

At home—But why talk of other countries and states? In Wisconsin, your own state station WHA here in Madison, is providing two fifteen-minute periods each school day for use in schools. Within

reach of radio-equipped schools in this area valuable supplementary material is broadcast in such subjects as geography, occupations, stories for little folks, music, dramatic moments in history, art appreciation, nature study, the girl of today, health and rhythmic, and citizenship and conduct. After fifteen weeks of operation Mr. Harold B. McCarty, program director, has received reports showing that 10,850 pupils are regular listeners and some 8000 are occasional listeners. Probably there are schools using these radio lessons which did not report. It would be impossible to estimate the number of adult listeners outside of school who found an interest in these programs.

Increasing value will be given to, and greater use will be made of these programs by close cooperation between radio authorities of the university, the state department of education, and the state teachers association. Most important, however, is the aid individual teachers can give both in preparing lessons for broadcasting and in suggesting ways of making broadcasts more effective.

Conclusion—Radio in education is a new enterprise. It needs master teachers effective in the presentation of radio subjectmatter which will instruct not thirty or forty but thousands of children.

Radio cannot be expected to provide for individual differences, but by providing certain general materials it will give the individual teacher more time to help those pupils who are either below or above average ability. It will be of great assistance to ear-minded pupils, and will certainly provide poor and mediocre teachers with examples of good teaching.

In conclusion, may I predict that radio will never replace the work of local teachers and thereby create problems of unemployment. Rather it will serve as a supplementary agency which will materially increase the effectiveness of classroom teachers.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
R. C. Higgy, director, radio station WEAO of Ohio State Univ., Columbus O., Association of College and Univ. Broadcasting Stations.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Free Air

A Strictly Imaginary Educational Broadcast

JAMES RORTY

GOOD EVENING, ladies and gentlemen of the great radio audience: I am speaking to you tonight thru the courtesy of the Universal Food, Candy, Cigarette, and Gadget Company, makers of Cheeryoats, Wet Smack Bars, Old Mold Cigarettes, and Sweetie Washing Machines. My subject is education by radio. I shall try to explain to you why the National Committee on Education by Radio, representing nine educational associations, including the National Education Association, is sponsoring the Fess Bill, which is now pending in Congress. The officials of the Planetary Broadcasting Company are opposed to the Fess Bill. Its passage would, they think, affect adversely both their own commercial interests and the interests of other companies with which they are closely affiliated. They are, nevertheless, devoted to the principle of free speech, and loyal to their stewardship of the great national resource of the air. Accordingly they have offered the use of their facilities to me without charge in order that I may place before you the issues which you, representing public opinion, the ultimate authority in a free democratic country like ours, must some day decide.

The Fess Bill—If you will have patience, I shall read the Fess Bill.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled that . . . not less than 15 percent, reckoned with due weight to all factors determining effective service, of the radio broadcasting facilities which are or may become subject to the control of and allocation by the Federal Radio Commission, shall be reserved for educational broadcasting exclusively and allocated, when and if applications are made therefor, to educational agencies of the federal or state governments and educational institutions chartered by the United States or by the respective states or territories.

Who and what are these educational broadcasting stations that are claiming 15 percent of the air? Most of you, probably, have never heard them or even heard of them, and I don't blame you. You see, ever since the passage of the Radio Act of 1927, and even before that, the educational broadcasting stations, operated chiefly by the state universities, have been running on flat tires. The air is free, all right, but try and get some of it.

Mr. Lafount and his figures—The records of the Federal Radio Commission show that in May 1927, when the present radio law went into effect, there was a total of ninety-four educational institutions licensed to broadcast. On March 9, 1931, the number had been reduced to forty-nine. At present, out of a total of 440 units available to the United States, educational stations occupy only 23.16 units, or one-sixteenth of the available frequencies. During the same period, however, educational broadcasts, largely over commercial stations, have increased from almost nothing to almost a tenth of the total time used by all broadcasting stations now on the air. Harold A. Lafount, federal radio commissioner, is authority for these figures. Commissioner Lafount also points out that altho the forty-nine educational institutions now licensed to broadcast have been assigned a total of 3669.2 hours per week, they have actually used only 1229.28 hours, or one-third of the time which has been made available to them, and that of this time only 283.85 hours per week have been devoted to education. He further declares that the reduction in the number of educational stations since 1927 has occurred by virtue of the voluntary assignment or surrender by educational stations of their licenses, because they were unable financially to maintain them, or because they did not have sufficient program material to continue operation.

Commissioner Lafount believes, with the majority of his colleagues on the Federal Radio Commission, that the status of education on the air is healthy, and that the educators ought to be happy. I am here to tell you that the status of education on the air is not healthy and that the educators—their militant wing, at least—are not happy. On the contrary, they are bitter, rebellious, and determined. Let us get back of Commissioner Lafount's figures and see what actually has been happening.

Commercial prejudice of the Radio Commission—To begin with, the Radio Act of 1927 reserves our national quota of broadcasting channels as public property and licenses their use, subject to revocation practically at will by the Federal Radio Commission. This body has discretionary power, subject to court

review, to interpret and apply the principle of "public interest, convenience, and necessity" which the law embodies. But as at present constituted, the members of the Federal Radio Commission are not educators. They are business men, and they regard the interests of business as paramount in our civilization. From this point of view the right and proper disposition of every genie, such as radio, that pops out of the laboratory bottle of modern science is to put him to work making money for whoever happens to hold the neck of the bottle. If he makes enough money for somebody, then, in some mysterious way, "progress" and "civilization" will be served. This, I say, is the point of view of the business man, and it is the application of this point of view, more or less sympathetically aided by the Federal Radio Commission, which is responsible for the present preposterous and imbecile condition of radio broadcasting in this country. Does this seem strong language? Forgive me, ladies and gentlemen of the great radio audience. Admittedly, I am neither a business man nor an inventor. From where I sit, as a simple naive professor, the radio looks to me like the most revolutionary instrument of communication ever placed in human hands; it seems to me that its free and creative use, not to make money, but to further education and culture and to inform public opinion, is perhaps the most crucial problem with which our civilization is confronted. But, of course, I didn't invent the confounded gadget, and I may be wrong. Let us listen to the man who did—Dr. Lee DeForest, who, more than any other American, has been associated with radio science from its beginning.

Broadcaster's greediness—A while back Dr. De Forest spent some time listening to what the business men have been doing to his child. Here is what he said:

Why should anyone want to buy a radio, or new tubes for an old set? Nine-tenths of what one can hear is the continual drivell of second-rate jazz, sickening crooning by degenerate sax players [original or transcribed], interrupted by blatant sales talk, meaningless but maddening station announcements, impudent commands to buy or try, actually superposed over a background of what might alone have been good music.

Get out into the sticks, away from your fine symphony-orchestra pick-ups, and listen for

twenty-four hours to what 80 percent of American listeners have to endure. Then you'll learn what is wrong with the radio industry. It isn't hard times. It is broadcasters' greed—which is worse, much worse—and like T. B. grows continually worse, until patient radio public dies. That's all the trouble. Simple, isn't it?

You know, it's strange, but Dr. De Forest talks almost like a professor. He reminds me of the late Professor Vernon L. Parrington, who, in the last volume of his *Main Currents in American Thought*, said that science in this country had become "the drab and slut of industrialism."

The truth about Mr. Lafount's figures—Take, for example, this "voluntary" surrender of the air which Commissioner Lafount is so cheerful about. What has actually happened is that the educational stations have steadily been given less desirable frequencies; they have then been asked to divide their time with some commercial broadcaster; they have been obliged to meet some new regulation involving costly equipment—often, as the educators themselves admit, a regulation essentially right in itself, but applied with such suddenness as not to allow time for adjustment in the educational budget; finally, by the time they had got together the money for technical and program improvements, they have been obliged to spend it on lawyers' fees and on trips to Washington to defend their right to broadcast at all.

The voice of education—While, for these and other reasons, the voice of independent education on the air has been fading, the voice of education sponsored by such companies as my host tonight and by the commercial broadcasting companies themselves in sustaining programs has been rapidly swelling in volume. Many of our most eminent educators have, tentatively at least, accepted this substitution. Some of them serve on the Advisory Council of the National Broadcasting Company; others are on the National Advisory Council on Radio in Education, which includes in its membership not only educators and publicists but also representatives of the two great broadcasting chains—National Broadcasting Company and Columbia Broadcasting System. This organization is financed jointly by John D. Rockefeller, Jr., and the Carnegie Corporation. Its announced objectives are primarily fact-finding and fact-dissemination, and it has made and published valuable studies of both the technical and social problems of broadcasting. More recently it has sponsored educational broadcasts given over com-

mercial stations, the first of the series being by Dr. Robert A. Millikan, who is president of this National Council. The commercial broadcasters greeted the formation of the National Council with enthusiasm; they have, in fact, repeatedly declared their willingness to give the educators all the free time on the air they can use, when and if the educators come prepared with educational programs which "do not bore too great a proportion of *their* audiences too much."

Whose audiences?!!—What do they mean—"their audiences"? Our national quota of radio frequencies is public property under the law, and these broadcasters are licensed to use assigned frequencies, subject to revocation practically at will by the Federal Radio Commission. I assert that they are using this public property, not in the "public interest, convenience, and necessity," but in their own private commercial interest and that of the commercial advertisers whom they serve. For example, what public interest, convenience, or necessity is served by the disingenuous superlatives which are lavished night after night by my host, the Universal Food, Candy, Cigarette, and Gadget Corporation, on Cheeryoats, Wet Smack Bars, Old Mold Cigarettes, and Sweetie Washing Machines? If you really wanted to know the truth about these things you would demand that disinterested government experts from such departments as Public Health and the Bureau of Standards broadcast a genuine educational program which would, incidentally, debunk nine-tenths of the radio advertising now on the air. If, in addition, you want entertainment, including jazz, I suggest that you pay for it straight by means of a tax on receiving sets, as is done in England and in Europe, and will shortly be done in Canada if the recommendations of the government radio commission are followed.

Don't fool yourself—Do not imagine that you are not now paying for what you get and paying high. As taxpayers, you are paying directly the \$444,179.94 annual budget of the Federal Radio Commission, most of which is spent in futile attempts to "regulate" the existing commercial chaos. As cigarette smokers, gum chewers, gadget users, and antiseptic garglers, you are paying indirectly the total budget of all the broadcasting stations, which is estimated to be over \$75,000,000 a year. This total is more, far more, than is paid by the radio listeners in all the countries of Europe combined.

All you really get free is the efforts of philanthropic organizations like the National Committee and the National Council to inject some sort of civilized decency into the absurd situation which resulted from failure to make representative government represent true interests.

Do you realize, ladies and gentlemen of the great radio audience, that your ears and minds are offered for sale to the highest bidder by profit-motivated corporations which have no title to what they sell and no title to the medium they use except squatters' rights which, if contested, they will defend in the courts? Do you imagine for a moment that education can permanently function as an appendage of toothpaste- and cigarette-sponsored jazz and vaudeville? Do you suppose that your views, your preferences, your rights, can make any headway at all against the economic determinism which obliges the commercial broadcaster to sell his most valuable time to advertisers, to permit the advertiser to cajole, bore, deceive, and insult the intelligence of his hearers to the limit? Do you imagine that even if educational institutions were able to *pay* for the facilities of commercial stations, instead of accepting their compromised and qualified gifts of free air, educational programs would thereby obtain a complete right of way? Even so conservative an expert as Mr. H. V. Kaltenborn, editor of the *Newspaper of the Air*, does not think so. As he points out, commercial stations would insist that the programs must interest most of their listeners, lest competing stations win them away; they would also refuse to offend important advertisers by denying them the right to purchase popular periods on particular days. Finally, altho Mr. Kaltenborn does not make this point, they would ultimately be obliged to censor any educational broadcast which affected adversely the interests of their advertising clients.

The wedge—Admittedly, ladies and gentlemen, the Fess Bill, even if passed, would not represent a complete or permanently satisfactory solution of the problem of converting broadcasting to intelligent social uses. It would, however, drive a wide breach into the existing system of commercial exploitation, and prepare the ground for the recapture by the people of the free air which they have never legally surrendered.

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U. S. A. versus R. C. A.

BROADCASTING ITS CHARGES against the Radio Corporation of America and associates, and adding four new companies to the list of defendants, the Department of Justice on March 7 filed at Wilmington, Delaware, an amended petition in its anti-trust case against the Radio Corporation of America, and associates.

The National Broadcasting Company is one of the four new defendants, and is said to have been organized for the purpose of restraining competition in the business of nationwide broadcasting, according to the announcement of the Attorney General.

New charges allege that the companies restrain trade between the United States and foreign companies as well as domestic commerce.

These new charges brought the International General Electric Company, Westinghouse Electric International Company, and RCA Communications, Inc., into the list of defendant companies which already included the Radio Corporation of America, General Electric Company, American Telephone and Telegraph Company, Westinghouse Electric Company, General Motors Radio Corporation, and many subsidiaries.

The combined capitalization of the companies "would run into many hundreds of millions of dollars," according to J. L. O'Brian, assistant attorney general in charge of anti-trust cases.

The filing of the amended petition is merely a part of the Department of Justice program in bringing the case to trial, the announcement says, and it does not signify that negotiations between the department and the defendants looking toward an open patent pool have ended.

These negotiations have been going on for some time; if they culminate in a

satisfactory arrangement concerning the corporations' patent holdings, they would eliminate an expensive feature of the trial, Mr. O'Brian said, but they would

IT IS EXTREMELY IMPORTANT that Congress shall enact such legislation as will recover this priceless treasure—radio—from monopolistic control by a few corporations which are using it for a private profit and gain. Sixty million radio listeners in the United States are keenly interested in all efforts to prevent the air from being monopolized by a few gigantic corporations serving their own selfish ends.

The aim and purpose of the Radio Trust is to secure vested rights in the air, and when it has been successful in its attempts, goodbye to freedom of the air. It will never be possible, then, to loosen the grip of the monopoly on the radio facilities. . . .

Never in the history of the nation has there been such a bold and brazen attempt to seize control of the means of communication and to dominate public opinion as is now going on in the field of radio broadcasting.—Hon. Frank R. Reid, U. S. Representative from Illinois.

not do away with the necessity of trying the other charges.

The announcement issued by Attorney General William D. Mitchell follows:

Additional allegations—The Attorney General filed today with the District Court at Wilmington, Delaware, an amended and supplemental petition in the case brought by the United States against the Radio Corporation of America and its associates.

The new pleading amplifies the petition originally filed and alleges additional facts relating to certain activities of the defendants in foreign trade and international communications, charging them with attempts to restrain commerce between the United States and foreign countries as well as domestic commerce. Three new defendants are added because of these allegations, viz: International General Electric Company, Westinghouse Electric International Company, and RCA Communications, Inc.

The National Broadcasting Company is also added as a party defendant. The petition alleges that this corporation is owned jointly by Radio Corporation, General Electric Company, and Westinghouse Electric Company, and that it was organized for the purpose of restraining competition in the business of nationwide broadcasting.

Negotiations have been conducted for some time between the defendants and the government and between the defendants themselves with respect to the possibility of creating an open patent pool which would obviate the trial of some of the important issues of the case. The filing of the amended bill does not mean that these negotiations have been broken off, but the government has been going on with its preparations for trial pending the outcome of these negotiations, with the purpose of having the case heard this spring. The filing of the amended bill is in line with these preparations.—*The United States Daily*, March 8, 1932.

EDUICATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

- Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
- R. C. Higgy, director, radio station WEOA of Ohio State Univ., Columbus, O., Association of College and Univ. Broadcasting Stations.
- J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
- Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
- Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
- H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

The Ideals of a Great Citizen

WILLIAM HOWARD TAFT, according to an article by Mark Sullivan, had accumulated no private means when he left the Presidency. "It was open to him and he was solicited to unite with some of the greatest law firms in New York. Taft declined. He said that as President it had happened to fall to him to appoint about 60 percent of all the district, circuit, and Supreme Court justices on the United States bench. He could not, he said, appear before his own appointees as an advocate in private litigation. And he accepted the small remuneration of a teacher at Yale University.

This action is in striking contrast to the former members and employees of the Federal Radio Commission who have taken positions with the radio monopolies which they had previously been obliged to deal with as members of the Commission, thus placing themselves in a situation where the information they gained as public servants may be used for private advantage contrary to the public interest.

Labor Seeks a Clear Channel

THE SPOKESMAN for commercial broadcasters in the United States has gone on record as saying that he believes his group should have vested rights in the air. On the same occasion, he opposed granting "a special privilege"—as he called it—to Labor, seeking a cleared broadcasting channel. Furthermore, he clearly revealed that the commercial interests consider education—all the people working together in the guidance of their children—as a special interest.

These opinions, and others equally revealing, were advanced by Harry Shaw, president of the National Association of Broadcasters, at a hearing before the subcommittee of the Senate Committee on Interstate Commerce, March 16, 1932. The hearing was held in connection with a Senate bill to assign a cleared channel to Labor. Shaw is also president of the Waterloo Broadcasting Company, Waterloo, Iowa, and president of *Broadcasting*, semimonthly house-organ of commercial radio.

The following stenographic report¹ of the hearing is published to give the reader a complete understanding of the situation.

The subcommittee met at 10:30 AM in Room 408, Senate Office Building, following adjournment yesterday, March 15, Senator Henry D. Hatfield presiding.

PRESENT: Senators Henry D. Hatfield [Chairman of the Subcommittee] and Smith W. Brookhart.

Senator Hatfield . . . Mr. Shaw, will you give your name, address, and business please? . . . You have a statement you wish to make to the subcommittee, do you?

Mr. Shaw. Yes. I have a verbal statement to make, because up until eight o'clock this morning I figured I was going to be heard later on.

Senator Hatfield. All right. You may go right along and make your statement.

STATEMENT OF HARRY SHAW, PRESIDENT, NATIONAL ASSOCIATION OF BROADCASTERS, AND PRESIDENT, WATERLOO BROADCASTING COMPANY, OWNERS AND OPERATORS OF STATION WMT, WATERLOO, IOWA. . .

¹The original stenographic report contained neither italics nor bold face type, used here to indicate significant statements.

Mr. Shaw. The thing that I first want to say is that the National Association of Broadcasters has no quarrel with Labor. We asked to be heard because we felt that there was a principle involved in this bill that we should discuss and that should be understood by this subcommittee, or at least as to our viewpoint on this bill. . . . Now, under the bill that is presented here for consideration there is proposed to be given to Labor a vested right forever in any frequency under the radio law, and it would be a recognition of the fact that such right can exist.

Now, another thing to be considered is that the allocation under the radio law would not be subject to the policing of the Department of Commerce or the regulations of the Federal Radio Commission. . . . Another thing involved in this bill, and in which broadcasters are also greatly interested, is that the cleared channel once granted would probably freeze the present allocation. In other words, a cleared channel right along thru the allocation would make it impossible to shift channels.

There is also the possibility of a North American conference to work out a new distribution of air channels. At the present time Senator Dill has a resolution looking forward to a settlement of this question. That would be a conference between Mexico and Canada.

Senator Hatfield. And the United States.

Mr. Shaw. A conference involving Canada, Mexico, and the United States, yes. Now, the thing that concerns us in this connection is: What would be the status of this channel when a new treaty is made—or rather when a treaty is made, because at the present time we have no treaty with either country; what will be the status of such a channel when a treaty is made?

Another thing I wish to call to the attention of the subcommittee is, that this bill in effect delegates the legislative power of Congress as it affects the right of radio broadcasting with respect to a group of individuals.

Now, briefly stated these are the things that affect the industry as a whole, particularly our Mexican situation, which apparently will not come to a head until after the International

IT BECOMES OF PRIMARY PUBLIC INTEREST to say who is to do the broadcasting, under what circumstances, and with what type of material. It is inconceivable that we should allow so great a possibility for service, for news, for entertainment, for education, and for vital commercial purposes, to be drowned in advertising chatter, or for commercial purposes that can be quite well served by our other means of communication. . . .

I believe that we ought to allow anyone to put in receiving stations who wishes to do so. . . . It is at once obvious that our universities, our technical schools, our government bureaus, are all of them willing and anxious to distribute material of extremely valuable order without remuneration. . . .

It is my belief that, with the variations that can be given thru different wavelengths, thru different times of day, and thru the staggering of stations of different wavelengths in different parts of the country, it will be possible to accommodate the most proper demands. . . . There is involved . . . the necessity to so establish public right over the ether roads that there may be no national regret that we have parted with a great national asset into uncontrolled hands.—Herbert Hoover, as Secretary of Commerce, opening the Conference on Radio Telephony, Washington, D. C., February 27 and 28, 1922.

Conference in Madrid in September. But we must have a new treaty, or rather a treaty with Mexico, and at the same time we must have a treaty with Canada, because Mexico is building radio broadcasting stations quite rapidly, and we will have to arrange with them in some way to the end that we will not be using the same air channels.

Senator Hatfield. Have you such a treaty at the present time?

Mr. Shaw. No, unfortunately there is no such treaty now. At the present time they are allowed to do as they see fit in Mexico, taking such frequencies as they desire. . . .

Senator Brookhart. *On this question of a treaty let me tell you: A treaty becomes the supreme law of the land when once ratified, and will thus set aside any act of the Congress or any regulation made by the Federal Radio Commission, or anything else. A treaty is over any law once it is ratified.*

Senator Hatfield. Do you understand that this bill would give to Labor a vested right?

Mr. Shaw. That is true as it is now drafted.

Senator Brookhart. Well, that question has not been considered. It is easy to amend it and then their rules would apply the same as in the case of any other cleared channel.

Mr. Shaw. It would be giving to them a full channel, which under present conditions must be taken away from somebody else.

Mr. Flynn. Mr. Chairman, might I ask a question or two right there?

Senator Hatfield. Yes, and just give your name and whom you represent for the benefit of the record.

Mr. Flynn. My name is M. J. Flynn. I represent the American Federation of Labor, and in this case the Chicago Federation of Labor in the absence of Mr. Nockels. . . . Mr. Shaw, would it give to WCFL any greater right than other broadcasters have under General Order No. 40?

Mr. Shaw. Yes, because at the present time we are not given anything. *We are allowed to believe that we have no vested right on the air, for each six months we must apply for a new license.*

Mr. Flynn. Isn't that a matter of words more than of fact? If we get down to a concrete fact haven't you got under General Order No. 40 what really amounts to a perpetual franchise or, if you like, vested interest?

Mr. Shaw. I am sorry to say that we have not. . . .

Mr. Flynn. . . . *As an absolute fact isn't it true that under General Order 40 it is next to impossible for one who has not already got a cleared channel to get one?*

Mr. Shaw. *Anyone who does not now have a cleared channel has a very poor chance, yes.*

Mr. Flynn. Yes, that is my contention.

Mr. Shaw. There are only forty cleared channels and they have been assigned. And under the laws of the United States as they now exist a person would have to apply for one of these frequencies. . . .

Mr. Flynn. . . . *Under General Order 40 those who now have cleared channels have been given by the Federal Radio Commission something which the law specifically prohibits, namely, a vested interest in the air.* . . . I am discussing this bill, that the American Federation of Labor has asked for

something, and says it is entitled to it by reason of past performance in this particular case, and as one of the early pioneers in broadcasting, and for the further reason that it was allowed to believe by the Commissioner having charge of that zone, Commissioner Pickard, that WCFL would be given a cleared channel.

Mr. Shaw. And does not the record show that you were invited to make application for a cleared channel and that you, or I mean Labor, failed to do so?

Mr. Flynn. The record shows that a construction permit for a 50,000-watt station was granted. The letter from Mr. Butman, who was then Secretary of the Commission and acting for the Commission, is in evidence, and has been placed in the record here, showing that it was the intention of the Federal Radio Commission to follow up the construction permit with the issuance of a regular broadcasting station permit. Now, the excuse is given that because they asked for a 50,000-watt unlimited time station, and the Commission indicated it would grant them a license for 50,000-watts limited time, that the Commission could not issue a license simply because they did not ask for limited time. In other words, *the action of the Federal Radio Commission has been prejudicial to Labor thruout.* . . . You are conversant with the fact that the American Federation of Labor, thru Vicepresident Woll, appeared before the Federal Radio Commission on one day and applied for a reopening of the case of WCFL, and that it was granted, and then the next day, without any notice whatever to WCFL or the Chicago Federation of Labor or the American Federation of Labor or Mr. Woll, they vacated that decision. That is true, is it not? . . .

Senator Brookhart. But Mr. Shaw says that he has no fight with Labor in this matter. Of course that is a matter for the Federal Radio Commission to consider, or for you to present to this subcommittee if you like. But it has already been presented, as I understand it, at our hearing on yesterday.

Mr. Flynn. I appreciate that. *And I am trying to bring out now that while Mr. Shaw has no fight with the American Federation of Labor, or WCFL, yet he opposes the request made by them of the Congress.*

Senator Brookhart. Yes. But in the matter of the points of opposition to the bill made here, I will say I think they are well founded but they may be easily corrected.

Senator Hatfield. Yes, as to the matter of any vested right. Senator Brookhart. Yes.

Mr. Flynn. But I want to bring out that this criticism of the so-called vested right is a matter of words; that the broadcasters now having cleared channels have in fact a vested right despite any contention to the contrary. Don't you believe so, Mr. Shaw?

Mr. Shaw. Well if you are asking me I will say that **I believe we should have a vested right, but that in point of fact we have not got it.**

Mr. Flynn. The only thing is that you have to come up before the Federal Radio Commission every six months with an application for renewal of license. But the renewals are being granted right along, so that it is more a matter of words than of fact. . . .

Senator Hatfield. You base your statement upon General Order No. 40 of the Federal Radio Commission?

Mr. Flynn. Yes, and upon the actual working out of the allocation and the way the stations remain on the air.

Senator Brookhart. But that does not mean a vested right. It merely means that it is a difficult rule to get by.

Mr. Flynn. Well, that is the situation as it exists today, and as it doubtless will continue to exist unless the Congress shall see fit to grant Labor some remedy.

Senator Hatfield. Mr. Shaw, you may continue your statement.

Mr. Shaw. Now, gentlemen of the subcommittee, another thing that is uppermost in the minds of broadcasters and people interested in the broadcasting industry is: *The passage of this bill would, in effect at least, mean that farm organizations should and will receive the same treatment at the hands of Congress that Labor receives. Because if Labor is granted a special privilege the Farm Bureau and other farm organizations will doubtless request and should be granted a like privilege. That would also be true of the American Legion. That would also be true of educational institutions. And heaven only knows where the thing would eventually stop.* . . .

Senator Brookhart. **The way things are now most of the cleared channels are in the hands of the big trusts.**

Mr. Shaw. Well, the Congress of the United States created the Federal Radio Commission, and if Congress has made a mistake in the matter the remedy is in its hands. Of course you will understand that I am not suggesting that the Congress has made any mistake.

Senator Brookhart. Yes, there is the remedy to abolish the Federal Radio Commission entirely, or to change the law. . . .

Mr. Shaw. Well, Senator Brookhart, I am not here questioning your right. I am here questioning another thing, and attempting to give you our viewpoint of what will likely happen.

Senator Hatfield. You are questioning the matter of the policy of the thing.

Mr. Shaw. Yes, sir.

Mr. Flynn. Might I ask a question right there?

Senator Hatfield. Yes.

Mr. Flynn. **Is there anybody more entitled to a cleared channel on the air than the organizations Mr. Shaw referred to just now, all of which are non-profit organizations and created for the common welfare? And by that statement I refer to Labor, the farmer, the American Legion, and educational associations.** . . . From the standpoint of the American people let me ask you: Are there any groups more entitled to special action on the part

of Congress than the groups you referred to, which are non-profit making groups and which are working for the common welfare of the people of the country?

Mr. Shaw. *That question I cannot answer, and for this reason: Broadcasting is to my mind a combination—and I am just expressing my own personal opinion now, you will understand. . . . It is a combination of the newspaper and the show business.* That is the way I express it. Now, it depends on what these organizations can do to hold their audience, because radio broadcasting is a competitive proposition. Our great trouble in Waterloo has been with the matter of educational programs. We have made an extensive study of the matter, and have worked with our educators in an endeavor to build up proper educational programs, programs that would be of value to listeners generally. We find in the home the child, the father, the mother, and the grandmother. Now, we have to appeal to the entire group in some way. And we doubt whether we have been able successfully, and whether any educator has been able to build successfully such a program, except in the case of where the Columbia Broadcasting System is putting on the American School of the Air, where they can dramatize bits of history and other things and have done so in an attempt to hold the audience. So when you ask me if those organizations could accomplish the work over the air that they are doing, I would have to know more about the type of programs they propose and that they could in fact put on, and the probable reaction of the public thereto.

Mr. Flynn. . . . *I certainly do criticize the action which in effect does give to others what constitutes a vested right and denying that right to us, to groups of people who without profit to themselves are working for the common welfare of this country. And they constitute 90 percent of the people of this country.* . . .

Mr. Shaw. Now, I wish to say that we in broadcasting were given our license and as a result we made a large investment. We were not granted any rights. In fact, we had to sign away, when we were granted a license, all rights, and we have spent millions of dollars, and yet every six months we must come up before the Federal Radio Commission with an application for renewal of license.

When the applications came in some were granted and one hundred-odd were turned down, I mean when they came up for renewal.

Now, you may easily see that if we once start this thing that is proposed in this bill the stage will then be set for every organization to come in here and apply. And I believe that no Congress could very well say to Labor: You can have this special legislation, and then turn around and say to the farm-

OHIO STATE UNIVERSITY has announced that the Third Annual Institute for Education by Radio will meet in Columbus, Ohio, June sixth to ninth inclusive. Leaders in the field of radio education will gather to discuss work that is being accomplished. Papers will be read, round tables held, demonstrations staged, and various kinds of material exhibited. Proceedings of the meeting will be published in book form under the title *Education on the Air*.

ers: But you cannot have it. Or turn around and say to the American Legion: You cannot have it.

Now, it comes back to the Federal Radio Commission. If the Congress of the United States has made a mistake in creating that body—and I wish distinctly at this point to say that personally I do not think you have made a mistake in doing so; but I say if you think you have made a mistake, then approach it from some other way.

This is no quarrel with Labor. . . . If Labor wants a cleared channel, and if they should have one, then there are other ways of doing it besides the Congress of the United States taking over the work of the Federal Radio Commission. . . .

Senator Brookhart. *Suppose we look at the situation from this standpoint: That Labor for years has been trying to get justice from the Federal Radio Commission, a body that the Congress of the United States created, but has failed to do it. May we not decide now that we have to step in and give it to them ourselves, because the Federal Radio Commission has not done it?* . . .

Mr. Shaw. Why not bring them up here and question them, or a representative at least of the Federal Radio Commission?

Senator Hatfield. *We invited them to appear.*

Senator Brookhart. *Yes, and they did not want to come.*

Senator Hatfield. So then we submitted a questionnaire to them, which they have answered and which has been made a part of the record of our proceedings.

Mr. Shaw. Well, at this point I should like to say one word in defense of the Federal Radio Commission, if for no other reason that I used to "cuss them out" because they did not do everything I wanted them to do, and then after I got to know some of the problems they were up against I had a more kindly feeling, or at least a different feeling for them because of their problems. . . . The fault is not to be laid at the door of the Federal Radio Commission, because under the circumstances as they existed they did the job as well as any five men you have got in the United States. . . .

Mr. Flynn. Might I ask a question, Mr. Chairman?

Senator Hatfield. Yes.

Mr. Flynn. *Mr. Shaw, you suggested a few moments ago that there was a way for Labor to turn in order to seek what it has asked, without the passage of this bill by Congress. Don't you know the experience that Labor has had at the hands of the Federal Radio Commission? And assuming that you do*

know of that experience, do you mind saying how this might be done without Congressional action?

Mr. Shaw. Do you mean without assuming that the Congress has made a mistake in creating the Federal Radio Commission?

Mr. Flynn. Yes.

Mr. Shaw. *Well, Labor can proceed just as all the rest of us broadcasters have proceeded, in an attempt to show that WCFL is conducted in the interest, convenience, and necessity, with an endeavor to prove that you can give superior service, and if you can do that I am quite confident that the Federal Radio Commission will grant your application.*

Senator Brookhart. Well, I will say that they have done that over and over again, and have had a favorable report at the hands of the chief examiner of the Federal Radio Commission, but even after all that WCFL failed. . . .

Senator Hatfield. Have you anything further, Mr. Flynn?

Mr. Flynn. I believe not.

Senator Hatfield. Mr. Patrick, have you anything to suggest?

Mr. Duke M. Patrick. Assistant General Counsel, Federal Radio Commission. Mr. Chairman, I did not know about this hearing, and have only been in the room a short time. Consequently I only heard a part of the statements made.

Senator Hatfield. Would you like an opportunity to read over the statements that have been made here this morning, and then possibly consult with the Radio Commissioners as to whether you want to present some evidence or a brief?

Mr. Patrick. That is my desire. At the time the hearing was adjourned on yesterday I was under the impression the hearings would not be resumed for a week.

Senator Brookhart. We adjourned subject to the call of the Chair, and it is true that it was not thought we would meet again right away, but the plans were changed.

Senator Hatfield. I think, Mr. Patrick, you had better get a copy of the transcript of today's hearing and then let us know whether or not the Radio Commission would like to be heard.

Mr. Patrick. All right.

Senator Hatfield. How soon can you let us know?

Mr. Patrick. Doubtless I could let you know in time for a hearing on Friday morning if the Commission would like to be heard.

Senator Hatfield. All right. Please do that. In the meantime the subcommittee will adjourn subject to meeting again at the call of the Chair.

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Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

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Public Interest, Convenience, and Necessity in a Nutshell

OHIO IS THE FIRST STATE to maintain from public funds a state school of the air. Our children's children will honor Ohio for her pioneering vision.

What goes into the mind comes out in the life. Whoever has the most powerful access to the mind of the people will control their home life, their community activities, and their national destiny.

A radio broadcasting station to serve the homes and schools of an entire state can be erected and operated for what it would cost to build and maintain a moderate sized school.

By means of radio it is possible for each state at relatively small cost to place at the disposal of every teacher in either country or city a corps of master teachers who have made more careful preparation than the lone teacher with many classes could ever hope to do.

Each state already has in its employ in universities, colleges, high schools, and elementary schools a remarkable body of talent from which to choose master-teachers for educational broadcasting.

Radio is worth at least \$100,000,000 to the schools of the United States. This is based on the conservative estimate that it can be made to add 5 percent to the efficiency of instruction. How much is it worth to your state?

The common school is the greatest cooperative enterprise in modern society. It occupies the full working time of approximately one person in four in the United States. The integrity of the school requires that it be noncommercial. The school has no more use for advertising by radio than for advertising in textbooks.

Between 1926 and 1932 more than half the educational stations were forced off the air entirely, from 105 stations in 1926 to 49 stations in 1932.

All the broadcasting stations in the United States could be rebuilt for thirty million dollars whereas the radio listeners have invested a billion dollars in sets. Clearly the interests of the listener come first.

The magna charta of American radio as given in the Radio Act of 1927—"the public interest, convenience, and necessity"—has been more violated than honored.

The personnel of the Radio Commission is recruited largely from military, legalistic, and commercial interests. In seeking

to promote the commercial and technical aspects of radio the Commission has subordinated educational broadcasting almost entirely to commercial and monopolistic interests.

A *commercial* radio station within a state may at any time be bought by outsiders who care little for local needs, interests, or ideals.

The Federal Radio Commission has assigned approximately half the radio broadcasting units to stations owned, operated by, or affiliated with the National Broadcasting Company, a fourth to stations owned, operated by, or affiliated with the Columbia Broadcasting System, and the remainder to all other broadcasting including educational stations which have been assigned *only 26.10 units, or approximately one-sixteenth of the 434.62 units in use in the United States*. Of forty cleared channels in use in the United States fifteen are controlled by stations owned and operated by the NBC and the CBS. Six of the fifteen are licensed to use the maximum high-power, fifty kilowatts.

There is no reason why the federal government should not assign to each state a channel which would reach every home and school in that state. There would still be an abundance of channels to serve every legitimate national purpose. Such a plan would conserve not only the educational freedom of the states, but would encourage that variety and experiment which are the basis of our American progress.

Radio affects home life profoundly. It exposes the very soul and fibre of the home to the disintegrating influence of outside forces more than any other invention. Advertising on the air means that commercial interests go over the heads of parents to determine the lives of their children.

Freedom of speech is the very foundation of democracy. To allow private interests to monopolize the most powerful means of reaching the human mind is to destroy democracy. Without freedom of speech, without the honest presentation of facts by people whose primary interest is *not* profits, there can be no intelligent basis for the determination of public policy.

Now is the time for each governor to make himself a student of this problem, to encourage Congress to safeguard the rights of the states, and to support educational interests in their effort to secure a place on the air under the auspices of the regularly constituted educational authorities of each state.

IT IS OURS TO REMEMBER that if we choose we can be torch-bearers, as our fathers were before us. The torch has been handed on from nation to nation, from civilization to civilization, thruout all recorded time, from the dim years before history dawned, down to the blazing splendor of this teeming century of ours. It dropped from the hand of the coward and the sluggard, of the man wrapped in luxury or love of ease, the man whose soul was eaten away by self-indulgence; it has been kept alight only by those who were mighty of heart.—
 From *The Americanism of Theodore Roosevelt*.

The Governors of the Forty-eight Sovereign States



Benjamin M. Miller
Alabama



George W. P. Hunt
Arizona



Harvey Parnell
Arkansas



James Rolph, Jr.
California



William H. Adams
Colorado



Louis I. Emmerson
Illinois



Harry G. Leslie
Indiana



Dan W. Turner
Iowa



Harry H. Woodring
Kansas



Ruby Laffoon
Kentucky



Floyd B. Olson
Minnesota



Martin S. Conner
Mississippi



Harry S. Caulfield
Missouri



John E. Erickson
Montana



Charles W. Bryan
Nebraska



O. Max Gardner
North Carolina



George F. Shafer
North Dakota



George White
Ohio



William H. Murray
Oklahoma



Julius L. Meier
Oregon



Ross D. Sterling
Texas



George H. Dern
Utah



Roland H. Hartley
Washington



William G. Conley
West Virginia

THE GOVERNOR OF A SOVEREIGN STATE holds
 All rights and prerogatives not specifically assign
 served to the states. This system of state individuality
 has brought our country to a high position of world le
 at the head. He holds a mandate from the people. He i
 and aspirations. He has a just and natural pride in the
 processes of education, sacrifice, and hard work, a po
 opportunity of the state government is more important
 For this education, radio is now an indispensable too
 strengthening the hand of the teacher and enrichi
 use this new instrument under its own ownership an
 of its own citizens, whose rights

States of the United States of America



Wilbur L. Cross
Connecticut



C. Douglas Buck
Delaware



Doyle E. Carlton
Florida



Richard B. Russell, Jr.
Georgia



C. Ben Ross
Idaho



Alvin O. King
Louisiana



William T. Gardiner
Maine



Albert C. Ritchie
Maryland



Joseph B. Ely
Massachusetts



Wilber M. Brucker
Michigan



Fred B. Balzar
Nevada



John G. Winant
New Hampshire



A. Harry Moore
New Jersey



Arthur Seligman
New Mexico



Franklin D. Roosevelt
New York



Gifford Pinchot
Pennsylvania



Norman S. Case
Rhode Island



Ibra C. Blackwood
South Carolina



Warren Green
South Dakota



Henry H. Horton
Tennessee



Stanley C. Wilson
Vermont



John G. Pollard
Virginia



Philip F. LaFollette
Wisconsin



Alonzo M. Clark (Acting)
Wyoming

...ique and mighty place under the American system.
...the federal government in the Constitution are re-
...lom, and leadership has been a fruitful practise that
...hip in an amazingly short period. The governor stands
...to the homes and the schools. He understands needs
...evements of his state. He knows that thru the patient
...must rise to stability, to greatness, and to culture. No
...a its responsibility for the education of all the people.
...s the most economical instrument so far devised for
...life of the student. Not to give the state its right to
...management is to destroy its control over the education
...y governor is sworn to protect.

Education Demands Freedom on the Air

INESCAPABLE EVIDENCE of dissatisfaction with present efforts to subordinate education to commercial radio interests is found in the resolutions adopted by educational and civic organizations representing the homes and schools of America. A few of these resolutions are given on this page. Similar resolutions have been adopted in the various states.

The Department of Superintendence of the National Education Association—The radio broadcasting channels belong to the public and should never be alienated into private hands. We believe that there should be assigned permanently and exclusively to educational institutions and departments a sufficient number of these channels to serve the educational and civic interests of the locality, the state, and the nation; and that these channels should be safeguarded by the federal government. The Department of Superintendence indorses the work of the National Committee on Education by Radio in its efforts to protect the rights of educational broadcasting.—Adopted February 26, 1931.

The National Congress of Parents and Teachers—We believe that radio broadcasting is an extension of the home; that it is a form of education; that the broadcasting channels should forever remain in the hands of the public; that the facilities should be fairly divided between national, state, and county governments; that they should be owned and operated at public expense and freed from commercial advertising.—Adopted May 7, 1931. This organization has a membership of more than a million and a half representatives of the best homes and schools.

The National University Extension Association.—WHEREAS, It is the opinion of the National University Extension Association that one of the most important questions of the day is the development of education by radio, and

WHEREAS, The present situation of radio education is unsatisfactory because of the persistent efforts of commercial interests to dominate and control the entire field of radio educational broadcasting; now therefore be it

Resolved, That the National University Extension Association believes that it is vitally important that the rights and liberty of action of all educational broadcasting stations should be adequately defended, preserved, and extended; and be it

Further Resolved, That this Association thru its Committee on Radio Education and its Executive Committee take all necessary action so far as it is able to do so to assist the efforts of its member institutions, to protect their rights in the educational broadcasting field.—Adopted May 15, 1931.

The National Catholic Educational Association—We favor legislation reserving to education a reasonable share of radio channels. The Association commends the efforts of the National Committee on Education by Radio in behalf of the freedom of the air.—Adopted June 25, 1931.

The Department of Elementary School Principals of the National Education Association—The Depart-

ment of Elementary School Principals of the National Education Association urges that education by radio be given immediate attention by teachers, school officers, and citizens to the end that a fair share of radio broadcasting channels may be reserved exclusively for educational purposes; that the quality of educational broadcasting be improved; that broadcasting facilities be extended to schools and to programs for the education of adults; and that the introduction into the schoolroom of any radio program, however fine its quality, which is announced or titled so as to gain "goodwill" or publicity for its sponsor, or which advertises a sponsor's wares, be forbidden by statute. Radio is an extension of the home. Let us keep it clean and free.—Adopted July 1, 1931.

The National Education Association—The National Education Association believes that legislation should be enacted which will safeguard for the uses of education and government a reasonable share of the radio broadcasting channels of the United States.—Adopted July 3, 1931.

The Association of Land-Grant Colleges and Universities—The Association of Land-Grant Colleges and Universities declares itself in favor of the principle of reserving, by legislation or regulation, adequate radio channels for our land-grant institutions and state-owned universities, for educational purposes.—Adopted November 16, 1931.

The National Association of State Universities—The National Association of State Universities declares itself in favor of the principle of reserving, by legislation or regulation, adequate radio channels for our land-grant institutions and state-owned universities, for educational purposes.—Adopted November 19, 1931.

The Jesuit Educational Association—WHEREAS, The Jesuit Educational Association is an organization representing twenty-seven universities and colleges and thirty-seven secondary schools with a total student registration of approximately sixty thousand students, and

WHEREAS, The use and development of radio as a medium for education is one of the important problems confronting educational agencies and institutions; now therefore be it

Resolved, That the Jesuit Educational Association believes that the radio broadcasting channels of the United States should not be subordinated to the interests of particular commercial groups but that a reasonable share of these channels should be reserved and safeguarded to serve the educational and civic interests of the locality, the state, and the nation; and be it

Further Resolved, That this association commends the efforts of the National Committee on Education by Radio to further legislation securing to the people of the United States the use of radio for educational purposes.—Adopted January 15, 1932.

Radio City: Cultural Center?

FREDERICK LEWIS ALLEN

[Abridged from the April issue of *Harpers* by courteous permission of the author and publishers]

ON LAND largely owned by Columbia University and leased by John D. Rockefeller, Jr., is rising what we have been told is to be a cultural center for New York, if not for the whole United States. Out of this stony pit, according to sonorous announcements in the press, is to emerge a "new and shimmering city of soaring walls and challenging towers," "a great cultural and architectural monument" which will contribute in a variety of ways, all of them impressive, to our wellbeing. In its design the group of buildings will "typify American progress in city-planning." The enterprise will bring economic advantages: being "the greatest building project in the history of the world," it will "involve a great building program to be reflected in employment conditions here." And as for its contribution to our intellectual and spiritual life, it will "provide a center for the radiation of the best type of entertainment and of musical culture" and thereby will advance "the entertainment and educational arts," together with what the proponents of the enterprise somewhat curiously call "the new electrical art." For this is Radio City—or, as we are now told we should call it, Rockefeller City.

Now Radio City, even if it is to include one sixty-six story tower and two others of forty-five stories apiece, to say nothing of theaters, minor office buildings, plazas, gardens, and subterranean parking-spaces, is a small item in a huge city like New York; and New York, as Mr. Ford Madox Ford would put it, is not America. Yet what is happening here would seem to be of more than merely local interest and concern. For the influence of Radio City will go out over the ether waves into homes all over the country. The project furnishes, furthermore, a characteristic object-lesson in American daring, extravagance, and economic and emotional inflation. In its brilliance and in its absurdity alike, Radio City promises to stand as a gigantic symbol of some of the engaging ways of the American mind.

II

The history of this enterprise illustrates the fact that even the worthiest civic plans may sometimes suffer a sea change into something rich and strange. It began, oddly enough, with the search of the Metropolitan Opera for a new home. . . . Mr. Otto Kahn, who is as adept at promoting the arts as at floating a bond issue, assembled some property in West Fifty-Seventh Street between Eighth and Ninth Avenues, which he obligingly offered to the directors of the Metropolitan Opera & Real Estate Company at the price which he had paid for it. . . . He engaged Mr. Benjamin Wistar Morris [with whom at the outset Mr. Joseph Urban was associated] to draw plans for the proposed Opera House. . . . The directors of the Metropolitan Opera & Real Estate Company considered the suggestion, voted no, and began a new search.

But in the spring of 1928 Mr. Tonnele of the real estate firm of William A. White & Sons had an idea. Mr. Tonnele

went to Mr. Cutting of the Opera Company and showed him a map. Columbia University, it seemed, held a large parcel of land west of Fifth Avenue. . . . Why not lease a modest piece of this land between Forty-Eighth and Forty-Ninth Streets and Fifth and Sixth Avenues, connect Forty-Eighth Street with Forty-Ninth by a sixty-foot street cut thru the block, and build the new Opera House facing this new street?

The scheme had some merit. But Mr. Tonnele must gasp with wonder, these days, whenever he thinks of what it grew into. When Mr. Cutting referred him to Mr. Morris, as the architect for the Metropolitan Opera, Mr. Tonnele's plan became transformed into a project far more ambitious. The Columbia holdings reached northward for three blocks. Mr. Morris suggested a mighty undertaking: to develop these three blocks as a unit; to set the Opera House a block to the north of where Mr. Tonnele would have set it—in other words, between Forty-Ninth and Fiftieth Streets—and let it face not upon a mere sixty-foot street but upon a broad open plaza midway between Fifth and Sixth Avenues; to provide a monumental arcaded approach to this plaza from Fifth Avenue, so that the stroller on the Avenue might look thru the arcade across the plaza to the splendid façade of the Opera House; and, finally, to flank the Opera House and the square, on the north and south, with low buildings backed by taller buildings and occasional high towers which would bring in an adequate revenue. [Mr. Morris's suggested scheme was later modified so as to substitute for the arcaded approach from Fifth Avenue two small buildings facing the Avenue with a vista toward the Opera House between them.] This would not only give the Opera House a setting of irreproachable dignity and possibly of great beauty, but would also develop a large tract of urban land as enlightened city-planners like to see it developed—not higgledy-piggledy, but as a symmetrical and harmonious whole, with plenty of light and air and space guaranteed to all by the intelligent placing of the buildings, and with an opportunity for the architects to do what they are seldom permitted to do—to design metropolitan buildings which can be seen without leaning backward.

The idea was shortly thereafter communicated to Mr. John D. Rockefeller, Jr. Mr. Rockefeller not only liked it; he became so enthusiastic that he presently decided to lease the whole three blocks from Columbia and finance the whole tremendous enterprise himself [except, of course, that he would turn over to the Metropolitan Opera & Real Estate Company that portion of the tract on which the Opera House was to stand]. It might prove a profitable enterprise, but on the other hand it might not; anyhow, Mr. Rockefeller would take the risk for the sake of the Opera and New York. The daring decision, whether or not it was farsighted, did credit to the public spirit of a citizen who works as conscientiously as any man ever worked to apply his millions where they will do as little harm as possible, and with luck may do some good.

Mr. Rockefeller forthwith formed the Metropolitan Square Corporation to manage the undertaking and engaged a number of architects to submit plans for the treatment of the tract as a whole, in the hope that a canvass of their various ideas might result in a better plan than any individual firm could evolve alone. His Metropolitan Square Corporation leased the land from Columbia. All was apparently serene. . . . Yet weeks lengthened into months and still the representatives of the Opera hesitated to put their names on the dotted line. Their reasons for this hesitation have never been publicly stated in full; the ostensible reason, however, was enough. It was the difficulty about prior leases. . . . A good many of the Columbia tenants exhibited a strange reluctance to vacate without suitable reimbursement, and their ideas of what would be suitable reimbursement became exalted. . . . And then, in the autumn of 1929, the stock market went to smash, and the business world began to regard with a somewhat more skeptical eye, vast, ambitious real-estate projects based on the fancy values of boom times. By December it became clear that the Opera Company would not come in—at least for the present. . . .

Holding undeveloped real estate can be nearly as uncomfortable as holding a red-hot poker. Mr. Rockefeller . . . had to do something, and quickly, even if it were to undertake a purely commercial development of the property. He was under a sort of economic pressure which has often prevented public-spirited citizens from carrying thru fine plans for the public benefit. An opportunity came, and he seized it. The following June it was announced that the Radio Corporation of America and its affiliates would utilize the Rockefeller land for a "radio metropolis" which would include business offices, broadcasting studios, television studios, a huge variety theater, and other minor theaters.

It was essentially a commercial use for the property which had been forced upon Mr. Rockefeller by the relentless force of circumstances. But the press agents—abetted by the press itself—did not allow it to appear as such. The idea having been firmly implanted in the public mind that these three blocks were to be dedicated to the arts, they did their best—as is the way of press agents—to make it appear that they were still to be dedicated to the arts. Mr. Rockefeller was represented as having been persuaded that an opera was an aristocratic enterprise and that the real democratic benevolence was to arrange for the modern popular forms of entertainment "on the highest plane." The words "culture" and "education" were so lavishly sprinkled thru the news accounts of Radio City that one would almost have supposed that the directors of the Radio Corporation were starry-eyed dreamers indifferent to profit. Mr. Owen D. Young was described as having been "preoccupied with the release of radio as an art," and Mr. Merlin Aylesworth, president of the National Broadcasting Company, as having been interested in "the cultural opportunity" which awaited the broadcasters. How successful were the entrepreneurs of publicity in conveying the idea that the central idea in the mind of the custodians of Radio City was to be the dissemination of sweetness and light among the populace may be gauged by the fact that, despite the inclusion in the plans of a large variety theater and the promised connection with the scheme of Mr. S. L. Rothafel, better known as Roxy, the

headline writer for the *New York Times* topped the front-page announcement of the plans with the glowing words, ROCKEFELLER PLANS HUGE CULTURE CENTER.

III

. . . There was some surprise when it was announced that the architects in charge of Radio City were to be the young and little-known firm of Reinhard & Hofmeister, assisted—for sage advice and possibly for window-dressing purposes—by a battery of associated architects which included those two able publicists of modern architecture, Harvey Wiley Corbett and Raymond Hood. The draughtsmen duly labored [in some confusion at first, if early rumors were to be believed] and by April, a year ago, produced for the edification of a small army of reporters a rough plaster model of the proposed development. And immediately from the public at large, as well as from the architectural profession and the critics of architecture, there arose a howl of consternation and dismay.

Almost exactly where the sedate Opera House was to have stood, the plaster model now showed a colossal sixty-six-story skyscraper. Northeast and southeast of it were to stand two other huge forty-five-story buildings. Instead of an oasis of ordered dignity and quiet in the midst of New York's crazy jumble of towers, Radio City, it appeared, was to furnish what Mr. Lewis Mumford called a "masterful clot of congestion." On the Fifth Avenue frontage, where it had been proposed to place two small buildings with a vista between them, the model now showed a single building, oval in shape. The reporter for the *Times*, possibly inspired by a handout from the publicity staff, called the oval building "as delicate and graceful in comparison with the sharp angles and sheer walls of the buildings surrounding it as a jeweled powder box on a dressing table," but most architects were less lyrical: Ralph Adams Cram, for instance, likened it to a "band-box of the early Victorian period." Describing the group of buildings as a whole, the press copy chanted of "soaring walls and shimmering towers." Not so Mr. Cram. Writing in the *American Mercury*, he drew liberally upon a vocabulary of contempt. He described the model as consisting of "sprouting amorphous and cubicular mushrooms," and called Radio City "the apotheosis of megalomania." Was Mr. Cram unrepresentative of his profession, was he merely expressing the distaste for modern design of a confirmed lover of the traditional Gothic? As one read in the very same article his extravagant praise of the Empire State Building, one doubted if this were the case; as one heard the spoken comments of other architects, one doubted it still more; but it was left to Mr. Mumford to complete the work of critical annihilation. In the usually light-hearted columns of the *New Yorker* this able lay critic of architecture and city-planning, a professed admirer of the best modern work, laid down a barrage of invective.

There was something in those three free blocks, said Mr. Mumford, which had stirred the imagination; everybody had hoped that with the aid of Mr. Rockefeller's wealth a design might be produced which would show the way to orderly treatment of urban areas; yet the architects, working "by the canons of Cloude-cuckooland," had "piled more buildings on this site than could be accommodated by a dozen streets of the normal width," and then had "eased the congestion by

widening two of the streets—fifteen feet!” One of the greatest opportunities ever offered to the profession had been lost. “If Radio City, as now forecast, is the best that could be done, there is not the faintest reason for anyone to attempt to assemble a big site,” concluded Mr. Mumford. “Chaos does not have to be planned.”

Since those searing words were written many months have passed, and the numerous architectural cooks have much modified the broth. In the present model of Radio City, the band-box has been replaced by two small buildings with a vista between, as in the plans recommended by Mr. Morris. By way of recompense for the shrunken size of the central plaza, which distressed Mr. Mumford, the architects have decided to put spacious gardens on top of the theater building and the lower office buildings [where they will not monopolize rentable space], so that New Yorkers may enjoy the spectacle—if they can get up high enough to enjoy it—of several acres of greenery and flowers and garden pools some eight or ten stories above the street. The skyscrapers are favorably placed to insure one another light and air. . . .

The plans, then, have been improved. But the real answer to Mr. Mumford and the other architectural critics who cried aloud with rage last year is that they hoped for too much. . . . One may reply that any scale of land values was crazy which made it necessary for the owner of property in the most desirable areas to put up seven-hundred-foot buildings in order to earn the interest on his money and pay his taxes, even though it was generally agreed that every story added above the thirty-fifth or fortieth was a doubtful investment owing to the amount of elevator space required, and that the lower stories could command only moderate rentals in view of the lack of light and the noise. But the fact that the land values were crazy did not help Mr. Rockefeller. He held the bag. He did not want to lose his fortune. He had paid for his land at 1928 prices. And the logic of those inflated values forced upon him skyscraping wedges and congestion and the commercial utilization of every available inch of property. An embodiment of American progress in city-planning? That would be very nice, if attainable. But the first essential was to save his investment from disaster.

IV

Economics was never more dismal science than today; let us turn to more engaging topics. . . . Just what is the cultural contribution of Radio City likely to be?

“The maestro of the big show,” we have been assured, will be Roxy, who is responsible for Roxy’s Theater, which he has been quoted as calling “the largest similar theater in the world.” Now Mr. Rothafel is an extraordinary man. He was born of foreign parents [his father was a German shoemaker, his mother was Polish] in a Minnesota village. He had only a common school education. As a boy he landed, and lost, one job after another. To use his own words, “Yes, I was shiftless and a dreamer, but in all my shiftlessness I was building up, entirely unknown to myself, a symposium of impressions which has followed me thru the years and left me a keener, deeper, and more appreciative picture of human frailties and kindnesses.” Followed by this symposium of impressions young Rothafel went to New York, started work as a cash boy at

two dollars a week, drifted from job to job, served seven years with the Marines and saw the world [“ . . . nights and days at sea, glimpses of strange lands, adventure—movement, color, strange sounds, exotic perfumes! I drank it all in with an insatiable thirst”]. He sold travel books in the mining towns of Pennsylvania, married a saloon-keeper’s daughter, and finally turned the dancehall back of the saloon into a little moving picture theater. With this venture his fortunes suddenly turned. He made the theater go. [“I can say now, without affectation, that I began then to create something beautiful for people who have an unsatisfied longing for beauty.”] From this modest beginning he went ahead by leaps and bounds. He got a job with B. F. Keith, then managed successfully a movie house in Milwaukee, and then went in turn to the Regent Theater in New York, the Strand, the Rialto, the Capitol [where he made a sudden national reputation by presenting “Roxy and His Gang” on the air], Roxy’s Theater, and—a position of high authority in Radio City. A remarkable career, in the best rail-splitter-to-President tradition; the sort of career that shows the incredible possibilities of democracy.

This man who has risen so high is a magnificent showman—make no mistake about that. He has, too, a real love of good music, and his big orchestras play it well, albeit in fragments. [“A little snatch of grand opera,” to quote Roxy himself; “a quick little silhouette scene; a few bars of a symphony; done in a normal tempo, but in such a small dose that the audience wishes there were more.”] Despite the high sugar-content of his prose style, there is no reason to question his sincerity when he talks about satisfying people’s unsatisfied longing for beauty. [“More beauty, for more and more people! That’s what I want.”] Nor would it be quite fair to charge against Roxy the flatulence of some of the things which have been written about him, such as Mary B. Mullett’s tribute in the *American Magazine*: “He has two visions always before him. One is of more and more perfect work to be done. The other is of human service.” Yet it would seem quite fair to judge him and his possible cultural contribution to Radio City by the theater over which he now presides; and a visit to that theater suggests that the beauty of which he talks so fulsomely is perhaps a little overripe.

One enters Roxy’s Theater thru a vast and sumptuous foyer, the embodiment, one supposes, of the romantic dreams of a boy who once worked for B. F. Keith and longed to have some day a super-gorgeous, super-gilded Keith’s Theater of his own. The great oval hall contains not only “the largest Oriental rug in the world,” but a huge and glittering chandelier, a colossal bust of Victor Herbert, and a bewildering display of marble columns, palms, plush-carpeted stairways, urns, and fancy bronze statuettes of nymphs. As one quails before the opulence of this scene, one has to scuttle out of the way of a company of two dozen smartly uniformed Roxy ushers marching in to relieve the outgoing shift; in strict military order they quick-step in thru the lobby to the doors of the auditorium, wheel, stand at attention, click their heels in precise unison, and separate to their tasks. Still quailing, one glances at one’s program to learn more of these superb young cadets, and discovers that “they are young men who have embarked seriously on careers which will, in time, lead many of them to

executive positions." Finally, after this impressive preparation, one enters the vast, darkened auditorium itself. One's eye is immediately drawn to the distant stage. And there, in the glare of a spotlight from on high, is the beautiful spectacle for which marble foyer and splendid chandelier and marching ushers have been but the appetizers. I do not wish to be unfair to Mr. Rothafel: undoubtedly that spectacle often brings "more beauty for more and more people." But the last time I visited Roxy's the spotlight was focused, as I entered, on a cheap hooper doing a rather dull drunk act.

Among the cultural items at Radio City under Roxy's beneficent administration, we have been told, are to be a school for musicians and vaudeville entertainers, where the latter will possibly learn to do bigger and better drunk acts; a ballet of forty-eight girls and sixteen boys, who will presumably emulate the contributions made to the art of the dance by the thirty-two Roxyettes of present fame, whose simpering pictures [bare-legged and bare-middled, with tinsel-bright skirtlets and scarlet-and-tinsel brassiere-harnesses and plumed helmets] ornament the entrance to Roxy's Theater; and as the last touch of splendor, a daily guard-mount of ushers after the pattern of that at Buckingham Palace [only probably more impressive, if only because the spectators will realize that the performers are on the march to executive positions].

Mr. Rothafel, of course, will be very far from the whole show at Radio City. Under the auspices of the National Broadcasting Company it will be a broadcasting center. With the Radio-Keith-Orpheum Company there, it will be a motion-picture headquarters as well as a vaudeville center. It will be a center for television, too, when, as, and if made available for general public delectation. Incidentally, at this writing there is still talk of the Metropolitan Opera's coming in, and the site between Forty-Eighth and Forty-Ninth Streets which Mr. Tonnele originally suggested with such momentous consequences is being held open for a possible opera house, or for an auditorium suitable both for the opera and for concerts and other uses; if the Metropolitan remains coy, the Philadelphia Opera Company may take its place. [The managers of Radio City appear to have been wooing the Metropolitan with a gentle threat.] But if either of the opera companies moves into Radio City it will not have a central position in the enterprise. The central activity will be broadcasting.

Now it goes without saying that there will emanate from Radio City, as from our present broadcasting stations, much that will appeal to the most fastidious taste: fine concerts, for example, and important addresses. We may also expect, of course, much good entertainment on a less ambitious yet quite satisfactory level. We may expect the transmission of music and of speech to improve with the inevitable gain in technical equipment and technical skill. Yet it is equally obvious that the general level of production, like the present general level of broadcasting, must of necessity approximate the level of Roxydom. Once in a while the music lover may be able to hear a symphony concert or a fine performance of a grand opera; but usually as he twirls

the dials he will be lucky if, after turning on and off two or three jazz orchestras and a crooning tenor and a dulcet tribute to somebody's tires or somebody's coffee, he is able to hear, as Radio City's contribution to musical culture, the "Dance of the Hours" from "La Gioconda," Nevin's "The Rosary," Rubinstein's "Melody in F," or Tosti's "Good-Bye." Likewise the motion-picture addict, if he drops in at his local theater to discover what the influence of Radio City is doing to bring beauty into his life, will be doubly lucky if he is not treated to a picture in which a tawdry sex theme is revamped for the thousandth time to the accompaniment [lest the censors object] of the unctuous preaching of copy-book virtues.

For this enterprise will be conducted for the millions for profit; and earnestly as Roxy and his colleagues may desire to raise the intellectual and artistic level of their performances, we must credit them with sense enough to realize that it will be risky to raise it far. The millions often enjoy fine things, sometimes they enjoy things which the custodians of their entertainment would consider over their heads; but they cannot be counted upon to do so, and much that is fine is inevitably too difficult, or requires too much knowledge or sustained concentration, to appeal to them. Anybody who caters to the great democratic public soon learns that the royal road to profit is thru crude display, rubber-stamp sensationalism, the easy sure-fire effect, the manufacture of lush sentiment—in short, by the vulgar, the syrupy, and the trite.

Cultural center? Let us not deceive ourselves. The same logic which forced Mr. Rockefeller to build a commercial development, which dictated to him the erection of skyscrapers instead of the planning of a charming urban retreat, which compelled him to go on with his project even tho Manhattan was overbuilt, will compel the managers of Radio City to make the best of Roxyism. They will be operating on a huge scale, in an expensive location, and will want to earn their dividends. They may—and undoubtedly will—call their entertainment what they please, but it will have the limitations of mass-entertainment, and there is no use hoping for anything better.

Indeed the argument may be carried a step farther. It is doubtful whether anybody could deliberately organize a "cultural center" anywhere—whether on a hundred-million-dollar site or a ten-dollar site—which would not ultimately caricature the idea behind the phrase. Culture cannot be put into quantity production. The finer creative energies of man and the minds which are attuned to them flower where they will; and their growth, tho it may be encouraged, cannot be forced. You cannot wave a wand and say, "Let us produce culture," and succeed in doing so; there are in this country plenty of monuments of brick and stone called universities and plenty of ambitious projects for the rapid manufacture of education and artistic appreciation which in their sterility testify to this hard truth. Anybody who tells the public that he is going to build a cultural center is uncommonly naive—or has a smart press agent.

A Proposal for Public Ownership of Radio

Report of the Canadian Royal Commission on Radio Broadcasting

OBJECT OF COMMISSION—The Royal Commission on Radio Broadcasting was appointed by the government to inquire into the existing situation in Canada and to examine methods adopted in other countries.

The purpose of the inquiry was to determine how radio broadcasting in Canada could be most effectively carried on in the interests of our listeners and in the national interests of Canada.

According to the terms of reference of the Order in Council appointing the Commission, it was required: "to examine into the broadcasting situation in the Dominion of Canada and to make recommendations to the government as to the future administration, management, control, and financing thereof."

Methods in other countries—Before holding meetings in Canada, we considered it wise to visit some of the countries abroad where broadcasting is well organized or is in process of organization, so that we would be in a position, if necessary, to discuss with Canadian provincial authorities and others, the relative merits of the different methods employed. We found broadcasting especially well organized in Great Britain under the British Broadcasting Corporation, and in Germany where the radio service is also under a form of public ownership, control, and operation. In France the situation has been studied by a government commission. No definite statement, however, can be made at the present time as to the recommendations of the commission. Everywhere in Europe we found inquiries being conducted under government auspices for the purpose of organizing broadcasting on a nationwide basis in the public interest. In addition to London, Berlin, Paris, and Lille, we visited The Hague, Brussels, Geneva, Dublin, and Belfast. A visit was also made to New York, where methods followed by the National Broadcasting Company were observed. We have also received information from *Union Internationale de Radiophonie* at Geneva, and other sources concerning broadcasting in countries which were not visited.

Situation in Canada. . . . In our survey of conditions in Canada, we have heard the present radio situation discussed from many angles with considerable diversity of opinion. There has, however, been unanimity on one fundamental question—Canadian radio listeners want Canadian broadcasting. This service is at present provided by stations owned by private enterprise and with the exception of two, owned by the government of the province of Manitoba, are operated by the licensees for purposes of gain or for publicity in connection with the licensees' business. We believe that private enterprise is to be commended for its effort to provide entertainment for the benefit of the public with no direct return of revenue. This lack of revenue has, however, tended more and more to force too much advertising upon the listener. It also would appear to result in the crowding of stations into urban centers and the consequent duplication of services in such places, leaving other large populated areas ineffectively served.

The potentialities of broadcasting as an instrument of education have been impressed upon us; education in the broad sense, not only as it is conducted in the schools and colleges, but in providing entertainment and informing the public on questions of national interest. Many persons appearing before us have expressed the view that they would like to have an exchange of programs with the different parts of the country.

At present the majority of programs heard are from sources outside of Canada. It has been emphasized to us that the continued reception of these has a tendency to mould the minds of the young people in the home to ideals and opinions that are not Canadian. In a country of the vast geographical dimensions of Canada, broadcasting will undoubtedly become a great force in fostering a national spirit and interpreting national citizenship.

At the conclusion of our inquiries, it is our task, the importance of which we are deeply conscious, to suggest the means as to how broadcasting can be carried on in the interests of Canadian listeners and in the national interests of Canada. The Order in Council appointing us to undertake this work contains the suggestion that the desired end might be achieved in several ways provided funds are available, as:

[a] The establishment of one or more groups of stations operated by private enterprise in receipt of a subsidy from the government;

[b] The establishment and operation of stations by a government-owned and financed company;

[c] The establishment and operation of stations by provincial governments.

We have examined and considered the facts and circumstances as they have come before us. As our foremost duty, we have concentrated our attention on the broader consideration of the interests of the listening public and of the nation. From what we have learned in our investigations and studies, we are impelled to the conclusion that these interests can be adequately served only by some form of public ownership, operation, and control behind which is the national power and prestige of the whole public of the Dominion of Canada.

Proposed organization—The system which we propose does not fall within the exact category of any of those suggested in the Order in Council, but is one which might be regarded as a modification of [b], *i.e.*, "the establishment and operation of stations by a government-owned and financed company." As a fundamental principle, we believe that any broadcasting organization must be operated on a basis of public service. The stations providing a service of this kind should be owned and operated by one national company. Such a company should be vested with the full powers and authority of any private enterprise, its status and duties corresponding to those of a public utility. It is desirable, however, that provincial authorities should be in a position to exercise full control over the programs of the station or stations in their respective areas. Any recommendation which we offer is primarily made with this object in

Shall special interests control and censor all radio channels or shall officials elected by the people to administer civic affairs have the right to use some of them?

view. As to what extent the provinces should participate in effecting this control, of course, is a matter which could be decided between themselves and the Dominion government authorities.

In order satisfactorily to meet these requirements which we have outlined, we recommend the following organization:

[1] A national company which will own and operate all radio broadcasting stations located in the Dominion of Canada, the company to be called the Canadian Radio Broadcasting Company [C.R.B.C.];

[2] A provincial radio broadcasting director for each province, who will have full control of the programs broadcast by the station or stations located within the boundaries of the province for which he is responsible. Some provinces might consider it desirable to place the control of broadcasting under a provincial commission. This is a matter to be determined by the provinces concerned;

[3] A provincial advisory council on radio broadcasting for each province to act in an advisory capacity thru the provincial authority.

Personnel—The Company— . . . We would recommend that the governing body or board of the company should be composed of twelve members: three, more particularly representing the Dominion, and one, representing each of the provinces; the mode of appointment of the provincial directors to be decided upon by agreement between the Dominion and provincial authorities.

Provincial control—The representative of the province on the board of the national company would be the provincial director. In the event of any province appointing a provincial commission, the provincial director should be the chairman of such commission.

Provincial Advisory Councils—We would suggest that each council should be composed of members representative of the responsible bodies interested in radio broadcasting.

Broadcasting stations—Stations under proposed organization. . . . From our own observations and from information we have received, we believe it has been fairly well established in practise that high-power stations are needed to reach consistently with good results the maximum number of people. We would like, therefore, to recommend as a matter for consideration, the establishment of seven stations, each having an aerial input of say 50,000 watts; one station to be suitably located in each province, except in New Brunswick, Nova Scotia, and Prince Edward Island, where one station could be centrally located to serve these three provinces. The proposed high-power stations could form the nucleus of the system and as each unit was brought into operation it could be ascertained what local areas, if any, were ineffectively served and stations of smaller power could accordingly be established to serve these places.

We would also suggest that the high-power stations might be so designed as to permit, in time, an increase of power to an economic maximum and of being so modelled as ultimately to provide for two programs being broadcast simultaneously on different wavelengths.

It is well, perhaps, to point out here the necessity of locating broadcasting stations at suitable distances from centers of population to obviate blanketing of reception from outside points. The need for this has been amply demonstrated to us.

We think it is important that, to provide the fullest scope for the proposed system and in the interests of the whole country, all facilities necessary for chain broadcasting be made available in order to permit simultaneous broadcasting by the entire

group of stations from coast to coast or by such grouping in different regions as may be considered desirable from time to time. . . .

Provisional broadcasting service— . . . It seems necessary that provisional service be furnished. To do this, we recommend that one existing station in each area be taken over from private enterprise and continued in operation by the Canadian Radio Broadcasting Company until such time as the larger stations in the proposed scheme are placed in operation. The existing stations carrying on the provisional service could then be closed. . . .

We understand that under the provisions of the Radiotelegraph Act, the licenses now in effect may be allowed to expire at the end of the fiscal year or they may be terminated at any time at the pleasure of the licensing authority without legal obligation to pay compensation. We would recommend, nevertheless, that reasonable compensation be allowed such of the broadcasting stations at present in active operation for apparatus as may be decided by the Minister of Marine and Fisheries, the licensing authority.

The apparatus for which compensation is paid should, we think, become the property of the Canadian Radio Broadcasting Company. The more modern and efficient sets of such apparatus could then become available for re-erection as might be deemed necessary by the company.

Finance—Cost of establishing stations in proposed organization—The stations forming the system in the proposed organization should be well and fully equipped. The cost of installing the seven high-power units would probably approximate \$3,000,000. There would, however, be considerable salvage value in the plants taken over. Assuming that four smaller stations, three 5000-watt and one 500-watt, would be needed to furnish a supplementary service in local areas not effectively reached by the high-power units, an additional amount of possibly \$225,000 would have to be spent in re-erecting apparatus taken over from present station owners. These expenses would represent a capital expenditure of \$3,225,000.

In addition to this, compensation would have to be paid to owners of existing stations which we think should be met out of an appropriation made by Parliament.

Cost of operating—The service provided would necessarily have to be of a high order. A total annual expenditure for operation of the entire organization proposed, including supplementary stations, would seem to require a minimum of approximately \$2,500,000. In addition, the question of interest on capital and sinking fund would have to be considered.

Revenue—Various methods have been suggested to us as to how revenue might be raised fully to meet the cost of a broadcasting system. If the general public as a whole were listeners, there might be no just reason why the full cost of carrying on a broadcasting service could not be met out of an appropriation made by Parliament from public funds. It is conceivable that that time will come, but under existing conditions, we would not feel justified in suggesting that the general public should be required to pay for the whole of the service which only those possessing radio receivingsets can enjoy. On the other hand, however, radio broadcasting is becoming more and more a public service and in view of its educative value on broad lines, and its importance as a medium for promoting national unity, it appears to us reasonable that a proportion of the expenses of the system should be met out of public funds.

Three sources from which revenue could be derived are suggested, as:

- [1] License fees;
- [2] Rental of time on broadcasting stations for programs employing indirect advertising;
- [3] Subsidy from the Dominion Government.

License fees.—A fee of one dollar is at present charged for a receiving license. Fifty percent of all license fees collected in Manitoba is paid over to the government of that province towards the maintenance of the provincial-owned broadcasting stations at Winnipeg and Brandon. With this exception, no contribution to the cost of broadcast programs in Canada is made from fees collected, which revert to the revenue fund of the Dominion Government.

It should be pointed out, however, that the Marine Department, thru its radio branch, maintains a service to broadcast listeners in suppressing extraneous noises interfering with radio reception, at an expenditure in proportion to the amount of revenue received from license fees. . . .

A fee of three dollars per year would seem reasonable and would at the same time yield a fair amount of revenue. We recommend that the fee be fixed at this amount.

On the basis of the number of licenses now in effect, approximately 300,000, a gross revenue of \$900,000 per annum would be available from this source. The number of licenses may be expected to increase from year to year. We think that radio dealers should be required to collect the license fee whenever a receiving set is sold.

Rental of time for programs employing indirect advertising—The ideal program should probably have advertising, both direct and indirect, entirely eliminated. Direct advertising is used to considerable extent by broadcasting stations at the present time as a means of raising revenue to meet the expense of operation. In our survey of the situation in Canada, we have heard much criticism of this class of advertising. We think it should be entirely eliminated in any national scheme. Direct advertising is defined as extolling the merits of some particular article of merchandise or commercial service. Manufacturers and others interested in advertising have expressed the opinion that they should be allowed to continue advertising thru the medium of broadcasting to meet the competition coming from the United States. We think that this can be met satisfactorily by allowing indirect advertising which properly handled has no very objectionable features, at the same time resulting in the collection of much revenue. An example of indirect advertising would be an announcement before and after a program that it was being given by a specified firm. Programs of this kind are often referred to as sponsored programs. Until such time as broadcasting can be put on a self-supporting basis, we would recommend that the stations' time be made available for programs employing a limited amount of indirect advertising at so much per hour per station.

It is rather difficult to estimate what revenue would be collected for rental of time, but we think that an amount of approximately \$700,000 annually could be expected at the beginning.

Subsidy from the Dominion Government. . . . We would recommend that the proposed company be subsidized to the amount of one million dollars a year for a period of say five years renewable, subject to review, for a further period of five years after expiry of the first.

We believe that broadcasting should be considered of such importance in promoting the unity of the nation that a subsidy by the Dominion Government should be regarded as an essential aid to the general advantage of Canada rather than as an

expedient to meet any deficit in the cost of maintenance of the service.

Programs—General—The question of programs, we have no doubt, will be in capable hands if and when they come within the control of the representative bodies which we have suggested. The general composition of programs will need careful study.

Chain broadcasting—Chain broadcasting has been stressed as an important feature. We think that an interchange of programs among different parts of the country should be provided as often as may seem desirable, with coast to coast broadcasts of events or features of national interest from time to time.

Programs from other countries—The possibility of taking programs from Great Britain has already been demonstrated. While the primary purpose of the service would be to give Canadian programs thru Canadian stations, we think that every avenue should be vigorously explored to give Canadian listeners the best programs available from sources at home and abroad.

Programs employing indirect advertising—Time should be made available on the various stations singly or for chain broadcasting for firms desiring to put on programs employing indirect advertising. We think that it is important that all such programs should be carefully checked to see that no direct advertising or any objectionable feature would be put on the air. We are strongly against any form of broadcasting employing direct advertising.

Education—Certain specified hours should be made available for educational work both in connection with the schools and the general public as well as the so-called "adult education," under provincial auspices.

Religion—The representative bodies which we have suggested to advise upon the question of programs would be called upon to deal with the matter of religious services, and it would be for them to decide whatever course might be deemed expedient in this respect. We would emphasize, however, the importance of applying some regulation which would prohibit statements of a controversial nature and debar a speaker making an attack upon the leaders or doctrine of another religion.

Politics—While we are of opinion that broadcasting of political matters should not be altogether banned, nevertheless, we consider that it should be very carefully restricted under arrangements mutually agreed upon by all political parties concerned.

Wavelengths—We are aware that the question of wavelengths is not one with which we are called upon to deal. But in our survey of the situation in Canada, the inadequacy of wavelengths at present available for broadcasting in this country, namely six "exclusive" and eleven "shared" channels, has been persistently pointed out to us. This has been emphasized as one reason for the present unsatisfactory conditions of broadcasting in Canada. Many have expressed the feeling, with which we fully concur, that Canada's insistence upon a more equitable division of the broadcast band with the United States should not be relinquished.

Announcers—It has been stressed to us and we strongly recommend the importance of having competent and cultured announcers [French and English] and the desirability of having special training and tests of capability for such persons.

Interference— . . . There is no law in effect compelling the users of interfering apparatus to correct faults which interfere with radio reception once such are pointed out. . . . The desirability of having legislation to meet such cases has been suggested to us. We recommend the earnest consideration of this suggestion.

Control—The Minister of Marine and Fisheries under the Radiotelegraph Act is the licensing authority for all classes of radio stations, which includes radio broadcasting stations and receivingsets. Direct control over such technical questions as wavelengths, power of stations, and the collection of license fees should, we consider, remain with this authority. In order to promote good reception conditions, it is most desirable that the radio activities of other departments of the government should conform to the regulations and be subject to the authority of the Radiotelegraph Act. We are also of the opinion that the radio branch of the Marine Department should continue to carry on the service to broadcast listeners, which includes the suppression of inductive interference.

Summary of Recommendations

[a] That broadcasting should be placed on a basis of public service and that the stations providing a service of this kind should be owned and operated by one national company; that provincial authorities should have full control over the programs of the station or stations in their respective areas;

[b] That the company should be known as the Canadian Radio Broadcasting Company; that it should be vested with all the powers of private enterprise and that its status and duties should correspond to those of a public utility;

[c] That a provincial radio broadcasting director should be appointed for each province to have full control of the programs broadcast by the station or stations located within the boundaries of the province for which he is responsible;

[d] That a provincial advisory council on radio broadcasting should be appointed for each province, to act in an advisory capacity thru the provincial authority;

[e] That the board of the company should be composed of twelve members: three, more particularly representing the Dominion, and one, representing each of the provinces;

[f] That high-power stations should be erected across Canada to give good reception over the entire settled area of the country during daylight; that the nucleus of the system should possibly be seven 50,000-watt stations; that supplementary stations of lower power should be erected in local areas, not effectively covered by the main stations, if found necessary and as experience indicates;

[g] That pending the inauguration and completion of the proposed system, a provisional service should be provided thru certain of the existing stations which should be continued in operation by the Canadian Radio Broadcasting Company; that the stations chosen for this

provisional service should be those which will give the maximum coverage without duplication; that all remaining stations not so needed should be closed down;

[h] That compensation should be allowed owners of existing stations for apparatus in use as may be decided by the Minister of Marine and Fisheries; that such apparatus should become the property of the Canadian Radio Broadcasting Company; that the more modern and efficient of these sets of apparatus should be held available for re-erection in local areas not effectively served by the high-power stations; that the cost of compensation should be met out of an appropriation made by Parliament;

[i] That expenditure necessary for the operation and maintenance of the proposed broadcasting service should be met out of revenue produced by license fees, rental of time on stations for programs employing indirect advertising, and a subsidy from the Dominion Government;

[j] That all facilities should be used to permit of chain broadcasting by all the stations or in groups; that while the primary purpose should be to produce programs of high standard from Canadian sources, programs of similar order should also be sought from other sources;

[k] That time should be made available for firms or others desiring to put on programs employing indirect advertising; that no direct advertising should be allowed; that specified time should be made available for educational work; that where religious broadcasting is allowed, there should be regulations prohibiting statements of a controversial nature or one religion making an attack upon the leaders or doctrine of another; that the broadcasting of political matters should be carefully restricted under arrangements mutually agreed upon by all political parties concerned; that competent and cultured announcers only should be employed.

[l] That consideration should be given to the question of introducing legislation which would compel users of electrical apparatus causing interference with broadcast reception to suppress or eliminate the same at their own expense;

[m] That the licensing of stations and such other matters prescribed in the Radiotelegraph Act and regulations issued thereunder for the control of radio stations in general should remain within the jurisdiction of the Minister of Marine and Fisheries; that that authority should continue to be responsible for the collection of license fees and the suppression of inductive interference causing difficulties with radio reception.

The Canadian Royal Commission on Radio Broadcasting—whose report filed September 11, 1929 promises to become the basis of the Canadian system—consists of the following members: Sir John Aird, president, Canadian Bank of Commerce [chairman], Toronto, Ontario. Charles A. Bowman, Esq., editor, *Citizen*, Ottawa, Ontario. Augustin Frigon, D.Sc., director, *Ecole Polytechnique*, Montreal, Quebec; director-general, Technical Education, Province of Quebec, Montreal, Quebec. Donald Manson, Esq., chief inspector of radio, Department of Marine, [secretary], Ottawa, Ontario.

An Appeal to Canada

LEE DEFORREST

I HAVE BEEN INTIMATELY CONNECTED with radio for more than thirty years. After fundamental technical work, which laid the foundation for the modern radio industry, I began broadcasting. In New York as early as 1910, by means of a temporary radio-telephone transmitter on the top of the Metropolitan Opera House and a microphone placed among the footlights of the stage, I put the living voice of Caruso on the air. In 1916, four years before Westinghouse gave the public a similar service, my Highbridge station broadcast the returns of our presidential election. We also maintained at that time a thrice-weekly concert service, using the records of the Columbia Phonograph Company.

The war, of course, interrupted private broadcasting, but we resumed in 1919 and moved our transmitter downtown to the heart of the theatrical district where artists could be easily brought to the microphone. We had hardly gotten under way in the new location when the federal radio inspector of that district cancelled our license on the bizarre theory, then current in official circles, that there was "no room in the ether for entertainment." So our transmitter took another journey and, finally installed in the stage loft of the California Theater in San Francisco, daily broadcast orchestral concerts. I am, therefore, no novice in radio.

It is not unnatural that, having fathered broadcasting, I should, like any parent, cherish high hopes for my offspring. In 1923, on the occasion of Station WOR's first anniversary, I hailed this new instrumentality as a beneficent force in civilization with potentialities which could only be compared to those initiated five centuries ago by the art of printing. I saw it as a noble agency for the diffusion of education and culture. I saw it as a boundless source of pleasure for the multitude. I saw it as a means of uniting the nations of the earth in closer bonds, as the herald of worldwide peace.

So much for the dream. The reality you know. Within the span of a few years we in the United States have seen broadcasting so debased by commercial advertising that many a householder regards it as he does the brazen salesman who tries to thrust his foot in at the door. Under what the present masters of radio are pleased to call the American Plan—which is no plan whatsoever but a rank and haphazard growth that has sprung up in default of proper regulation—broadcasting

is regarded as a nuisance by uncounted thousands. Radio sets here are a drug on the market. In many a home the cabinet gathers dust. Thinking people resent the moronic fare that is mostly offered them. They resent the fact that the rights of education on the air have been steadily curtailed by the insistent advertiser. They are in revolt against the policies, rooted in greed, which have made the ether a marketplace. They demand that this huckstering orgy be curbed, that they, the owners of receivingsets, whose financial stake in radio is vastly greater than that of the station owners, shall no longer be fobbed off with a vulgar, cheapjack show designed solely to coax dollars out of the pockets of the public.

I well realize that good programs must be paid for, that the cost for adequate artists, network transmission, and station maintenance is expensive. But it has been abundantly proven here in America that the programs of the highest quality are accompanied by the least sales talk or ballyhoo. Almost invariably this is the case. And yet such wise and efficient business organizations as the Standard Oil Company of California, Atwater Kent, and a few others, have found thru years of experience that their highclass musical programs are abundantly paid for by the mere sponsoring notices which introduce and terminate these programs. This fact clearly offers, in my mind, a just and practical solution; just to the public and profitable to the sponsoring organization.

Let legislators therefore be directed along this line—to prohibit all direct sales talk from broadcasting—permitting brief sponsoring notices only.

The deplorable conditions which overwhelmingly exist in the United States are known to you in Canada. May I voice a hope that many Americans share? We trust that you, our neighbors across that undefended boundary line which, for a century or more, has been the world's noblest symbol of peace, will strengthen our hands. We have faith that you, who have in so many ways set a lofty example in selfgovernment, will point the way to a wiser use of this scientific boon that we have let fall into unworthy keeping. We look to you in Canada to lead radio in North America out of the morass in which it is pitiably sunk. May Canada fulfil my early dream!—Proceedings of the Special Committee on Radio Broadcasting, Canadian House of Commons, April 13, 1932.

THE RADIO INDUSTRY has maintained that broadcasting in this country is impossible without income from advertising. ¶The fact is that about thirty stations are maintained by state-supported and private colleges and universities without advertising and that at least two college stations have received considerable amounts in contributions from listeners. ¶How many of the commercial stations which claim to be giving the public what it wants would dare to suggest that the public pay them for broadcasting the programs they do! The American public never has shown any unwillingness to pay for anything that it wanted and since the broadcasting industry seems afraid of any suggestion to make broadcasting dependent on public financial support, there must be some question in the mind of the industry as to whether it is really giving the public what it wants. What the American buying public needs is not radio advertising but an impartial factual agency.

University Broadcasts Opera

THE SUCCESSFUL BROADCAST of opera by Station WLB of the University of Minnesota bespeaks the ability of educational stations to match the best efforts of commercial stations in this field. Station WLB's broadcast of the overture and a portion of the first act of the comic opera, *Robin Hood*, direct from Northrop Memorial Auditorium, Minneapolis, probably marks the first time that any radio station in the Northwest has ever endeavored to broadcast an opera from the stage. The university station may be credited with a worthy achievement. Reports from listeners have been enthusiastic and indicate that reception was unusually good. The chorus work came in perfectly and all dialog could be heard.

The music from the orchestra pit, the dialog, and the singing on the platform were all picked up thru two condenser microphones placed on the front edge of the stage. In order to make the pick-up successful, it was necessary to borrow special remote control equipment. The technical details in both the auditorium and studio control room were handled by student operators, Fred Shidell, Lyman Swendsen, and Vir James.

Difficulties in broadcasting such a program from a stage as large as that in the Northrop Auditorium can readily be imagined and the operators deserve credit for their efforts. Details of the program could have been picked up more completely with additional microphones and other equipment, but an exceptional broadcast resulted with the equipment at hand.

The success of this broadcast indicates the possibilities of WLB, and other educational stations. Operas and other lengthy programs which commercial stations could not broadcast because of commercial restrictions can be handled successfully by university stations if the proper equipment is available.

The university pursued its pioneer work in broadcasting with a unique program in answer to its own question, *What Does the Radio Public Want?* This was the first of a series of programs given from 8 to 8:15PM on seven consecutive Tuesday nights from Station WLB.

The series simulated an atmosphere resembling that which surrounds after-dinner coffee conversation. A dialog was carried on by the hostess, her friend the professor, and two other guests. Mrs. M. S. Harding, managing editor of the University of Minnesota Press, arranged the programs. Other topics discussed were: *Can Character Be Read At Sight?*; *Can A Third Party Survive in American Politics?*; *The Prairie Pioneers—Heroes Or Ne'er-Do-Wells?*; *Should College Students Earn Their Expenses?*; *Are The Classics Dead?*; *How Can Minnesota Birds Be Saved?*

IF EDUCATION is going to get its place on the air, it will have to fight for it very strenuously. The interests that are now controlling radio facilities are organized and if they are to be combatted they will have to be met by just as carefully organized a situation.—Levering Tyson in *National Association of State Universities*, Vol. XXVIII, p145.

Service or Profit?

I DO NOT THINK educational institutions should maintain and operate radio stations," said the editor of one of the radio-broadcasting magazines in a recent letter to the director of Station WCAJ. Other conclusions reached by this spokesman of commercialism in radio were that "None of us has yet found a proper solution of the educational problem . . . stations should be required to assign specific hours for educational purposes . . . it is uneconomical for anyone to operate a radio station partime . . . a greater audience will be available to educational institutions by using the regular established commercial stations . . . perhaps stations are overdoing advertising now . . . so far educational institutions have not been able to make any kind of satisfactory arrangement with stations . . . sometime or other, the owners of commercial stations will be forced to sacrifice some of the hours which are considered most valuable for advertising."

"Do you know of any institution of higher learning that is being run for profit?" wrote Professor Jensen, director of Station WCAJ, in reply. "Why should a college or university expect to make dividends from its broadcasting station any more than from its department of English or mathematics? Is there any more reason why an educational institution should be prohibited from reaching its constituents thru the radio than for preventing it from publishing 'faculty studies' and research papers over its own name? . . . What guarantee have you that any better arrangements would be forthcoming once the large commercial stations got a complete monopoly of broadcasting facilities?"

"Granting that the legislation was passed requiring each station to set aside a certain number of satisfactory hours for educational purposes, how could you guarantee that rival stations would not vie with each other to obtain schoolroom listeners by injecting cheap humor and cheaper music into their features? Suppose for example that the NBC is putting on one hour of educational programs each morning from 9 to 10AM. What guarantee have we that the Columbia system will not put on a competing series with better comedians, but with correspondingly less time given to the serious work in hand? Who will decide for the rural teacher which of these programs her children shall listen to? Granting that both programs were placed in the hands of dry-as-dust pedagogs so as to eliminate nonsense and competition, what will prevent these companies from running up to the very beginning of the nine o'clock period with an attractive tobacco program, and beginning sharply at ten o'clock with a chewing gum advertisement before the teacher can get it tuned off?"

"Why should the commercial broadcasters insist that they are better prepared to do educational work than the educators themselves in radio any more than in the work of the classroom? Everyone knows the answer, namely, that radio pays dividends, and the commercial group wants those dividends regardless of the consequences to educational forces."

[It will be recalled that WCAJ has had considerable difficulty with a commercial station with which it shares time, and is hesitant about mixing education with commerce.]

The Radio and the American Future

GLENN FRANK

President of the University of Wisconsin

WITH THE IMPROVEMENT in the Stevens Point radio station, and the improvement we are about to make in the university radio station, hereafter to be the voice not only of the university but of other departments of the state government as well, Wisconsin takes another step forward in the betterment of the means of contact between her people and their agencies of government, information, and education.

I have an exalted conception of what radio can mean to the American future. I think the invention of the radio equals in significance the invention of the printing press. Specifically, the radio promises to render two important services to the American future: [1] it promises to unify us as a people, and [2] it promises to debunk our leadership.

The radio is potentially the most important single instrument we have for gaining and guaranteeing national unity. This vast nation, with its 123,000,000 people, faces a dilemma. It must not iron itself out into a dull sameness. It must resist the forces that seek to impose an extreme standardization upon its thought and life. It must, at all costs, maintain the color, the character, the charm, and the creativeness of its various regions and classes. But it must, at the same time, play for national unity.

This is a difficult order for a vast territory and a vast population. All history shows that far-flung empires have sooner or later failed because they could not maintain the necessary unity of mind and purpose. They fell apart because they lacked the cement of a common vision of their problems and of their possibilities. The Greek republics began to slip when they grew beyond the city-state stage in which the whole population could at once have access to the counsels in which public policy was being shaped. The Athenians gathering *en masse* at the Acropolis had an ideal agency of unification. They could all listen at once to their peerless leader, Pericles.

Until radio was invented America lacked her Acropolis. Her Pericles, when she has been lucky enough to have one, had had to make the swing around the circle if he wanted to speak to the people of America face to face. And even then he could touch only the strategic centers. The masses had to "hear" him at second hand as they scanned the reports of his speeches in the next day's press. With radio, an American Pericles can have his Acropolis and speak to all America at once.

As a medium for the discussion of political, social, and economic issues, the radio promises also to have a profound influence towards a more rational consideration of problems by our leaders. The microphone is the deadly enemy of the demagog. Two-thirds of the appeal of the rabble-rousing of the old-fashioned shyster lay in the hundred and one tricks of posture and voice that caught on when the crowd was massed together and the speaker was looking in its eye.

Even the most average of average men are more critical listeners when they are not part of a mass meeting. The slightest trace of pose or of insincerity shows up on the radio. A new type of leader is likely to be developed by the radio. Ideas must stand on their own feet without the benefit of the crutch of emotionalized crowd-reactions. Long and involved sentences must go. And the realization that millions may be listening to him puts the speaker on his mettle. He has an added compulsion towards accuracy. When the speaker resorts to demagogic tricks over the radio, there is likely to drift back to him the thought that here and there and yonder in quiet rooms thousands of Americans are laughing derisively.

In WLBL and WHA stations, Wisconsin is perfecting agencies thru which her departments of state can maintain intimate contact with and seek to serve the people of Wisconsin in the following half-dozen ways:

[1] To serve the agricultural interests of the state by furnishing technical and market information, and sound guidance in economic organization.

[2] To serve the households of the state by furnishing technical counsel on the construction, care, and conduct of the efficient home.

[3] To serve the adult citizenry of the state by furnishing continuous educational opportunities.

[4] To serve the rural schools of the state by supplementing their educational methods and materials, by sending over the air the best teaching genius we can muster.

[5] To serve public interests and public enterprise by providing them with as good radio facilities as the commercial stations have placed at the disposal of private interests and private enterprise.

[6] To serve the interests of an informed public opinion by providing a statewide forum for the pro and con discussion of the problems of public policy.

The state of Wisconsin, by long tradition, is interested in the safeguarding and promoting of a free and full discussion of the problems of the common life of the commonwealth. And these state-controlled radio stations may enable Wisconsin to recreate in this machine age the sort of unhampered and intimate and sustained discussion of public issues that marked the New England town meeting and the Lincoln-Douglas debates. If Wisconsin could demonstrate the practicability of recreating the New England town meeting with the state for a stage, it would render a national service. It is our eager hope to realize thru these two stations a state-wide forum in which issues of public policy may be threshed out.

Permit me, then, to say again how gratified we should be that, in these improved radio stations, Wisconsin is perfecting an important social agency for the unification of its people and the rationalization of its public discussions.

A Winning Issue

Already young and able men are preparing to run for Congress on the issue of free speech on the radio and the rights of the states to have broadcasting channels for use by their educational institutions. The people are not ready to barter away the precious right of free speech, won thru centuries of struggle. Men who have the vision to appreciate the magnitude of this issue and the courage to take the lead in radio reform are certain to win. The people will not place freedom of teaching in America at the mercy of privately-appointed committees in New York.

The Illustrated Radio Meeting

VANRENSELAER SILL

Agricultural Extension Service, Ohio State University

RADIO HAS RECENTLY BEEN SYNCHRONIZED with a film projector using radio station WEAO of the Ohio State University. In an experiment just completed by the agricultural extension service, adult extension classes in poultry problems were successfully conducted by this method.

Educational institutions maintaining broadcasting stations are the leaders in conducting research to further the cause of adult education. It was the search going on in the various universities for a method providing an incentive for adults to attend radio meetings, holding the attention of groups and at the same time increasing the effectiveness of teaching by air, that inspired the experiment. This use of radio should prove helpful to universities in extending their facilities to the public.

The agricultural extension service at the university in cooperation with the writer secured the support of five county agricultural agents and with the help of P. B. Zumbro, extension specialist in poultry, and other members of the poultry department, conducted an illustrated radio meeting on some of the poultry problems faced by Ohio farmers.

Description of method—In broadcasting the illustrated radio meeting, a film projector was set up in front of the speaker in the studio. This apparatus is not a motion picture machine but a device which separately projects each of a series of pictures contained on a strip of film. The projector was operated by an attendant who at the signal of a gong struck by the speaker turned to the next picture. This method insured that the speaker would not forget to warn county agricultural agents, who had similar film strips and radio receivingsets at their local meeting places, of a change in the picture. Before the speaker discussed the next picture on the strip, he warned agents that they should turn to slide number so and so. Each slide was conspicuously numbered and at each sound of the gong five agents in five different counties in the state turned simultaneously to the next picture.

Pictures of the various speakers were shown in local meeting places while they were being introduced over the radio. This helped to personalize the talks.

Local discussions on the subjects emphasized in the radio talks and film strips were led by county agricultural agents immediately after the illustrated radio part of the program. During this discussion period, questions were phoned in to designated phones at the university. Later the questions were answered by radio.

Evaluation—At the end of the meetings, summaries of the radio discussions were passed out, and the visitors answered a questionnaire. Data obtained thru the questionnaire, questions phoned from local meetings to the university, comments made by agents participating in the experiment, and the statements of observers attending meetings from the college of agriculture, served as a basis for evaluation.

The possibilities in the illustrated radio meeting as an extension method are indicated by the fact that 98 percent of those attending the meetings indicated that they considered them successful. Many others asked for additional meetings on various subjects.

Questions and answers popular—The radio question-and-answer forum was, perhaps, the most popular part of the program. More questions were sent in than could be answered over the radio, and from 14 to 50 percent of the visitors at the various local meetings asked questions they wanted answered from the broadcasting studio. Statements made by observers and county agents as to its importance led to a recommendation that a long period be devoted to the question-and-answer forum in future illustrated radio meetings.

Timing easy—Contrary to predictions, detailed reports from all five counties conclusively show that proper timing of the film strips is about the simplest part of the procedure. In not a single case was there any difficulty whatever in keeping the pictures synchronized with the speaker's discussion. Those attending the meetings almost had the impression the speaker was operating the film projector himself instead of being scores of miles away.

Illustrated radio versus "talkies"—The illustrated radio meeting has been compared by some people to the "talkie" meeting of the future. Obviously such a comparison is not based on fact. The radio provides flexibility, speed in reaching large scattered groups simultaneously from a central point, a more personalized form of contact—inasmuch as the interests of the groups listening can be mentioned—a better adaptation to the needs of known audiences, and a greater ease in keeping subjectmatter presented in the talks uptodate. When these points are considered, in addition to the radio question-and-answer forum, it is readily seen that the "talkies" and the illustrated radio method of instruction are far from being the same.

After analyzing data obtained from the five meetings, it would appear that in agricultural extension work the illustrated radio meeting can be used effectively in a large number of projects. Indeed, any project requiring the use of illustrative material may be partly conducted by this method with a consequent saving in time and travel expense.

Other uses—Sunday schools and day schools may find the illustrated radio method of instruction helpful in supplementing some of their classwork with talks by authorities from universities. Subjects cover a wide range, varying from geography to the higher phases of engineering.

Night schools for adults, study groups of many different types, community organizations, libraries, cooperative associations, museums, women's clubs, and the like, may find the illustrated radio meeting helpful in broadcasting discussions on some of the problems of interest to their memberships.

Censorship?

EVERY ONE OF US practises censorship in some form or other every day of our lives. Too much tolerance is often responsible for some new racket which has a degrading effect on our national life.

"Thus the crooked politician, whose business it is to fool all of the people all of the time, is a vociferous advocate of tolerance," writes Dagobert D. Runes in the March 1932 issue of *The Modern Thinker*. "And we tolerate him, because we are so broadminded, so intellectually advanced! A swarm of social parasites—quack doctors with sure cures for new diseases, glib salesmen with a new gadget to unload, purveyors of pornography, political opportunists, mystical fakirs—all are out for their 'share' of the public blood. Hollywood skims layer after layer of sentimental slime from its boiling pot for the public consumption; radio injects nauseating hypodermics of ballyhoo into its broadcasts; the tabloids . . . pander to the worst instincts of the semi-literate populace. And behind these sit the myopic moneymen, vain of their cynicism, expecting to profit by this pollution of the public mind and taste.

"We know that the channels of public information are tainted, that this poison is gradually corrupting the growing youth and degrading the thought and spirit of the great commonwealth at large. Yet because we are lazy, or because we cling to an abstract principle of 'free speech,' or because we are making our own profits thru social exploitation, we refuse to take the one practical step: censorship.

"Sometimes it is objected that censorship would interfere with a certain individual freedom of choice which is wholesome. . . . The aim of censorship is not to fix a single standard of good and truth and beauty; it is not to prevent choice, but to enable the better to compete for man's attentions against the wellfinanced worse. . . .

"Assuredly, what they [the people] need is a chance to develop their judgment thru the exercise of choice. But the present lack of censorship secures them no such wholesome freedom to choose. Where, for instance, must the average citizen exercise the greater personal choice in the matter of radio entertainment, in Great Britain, where broadcasting is under government supervision, or in the United States, where such censorship is shunned in the interest of 'free speech'? . . .

"We censor the environment of our children, attempting to keep them away from pernicious influences. But we cannot protect our own homes unless we protect the communities and in a larger sense, the country in which we live."

Who should exercise this needed censorship in radio in the United States? Should it be private commercial interests with exploitation as their sole objective, or should it be a competent, educated, and cultured group whose sole interest would be to raise standards of taste and appreciation in the fields of both education and entertainment? **The substantial citizens of this country will not tolerate the present radio situation much longer.** When they do rise up, they will put advertising off the air and adopt a system operated entirely in the public interest. Then education and culture by radio will become a reality.

Commercialism or Altruism?

NINE CLEARED CHANNELS and twenty-seven shared channels will be available for Canadian radio broadcasting as a result of the recent agreement made by the State Department of the United States with the Canadian government.

A few years ago, the United States made a "gentleman's agreement" with Canada whereby the ninety-six available frequencies in the broadcast band were divided between the two countries. Canada was given the sole use of six of the channels; eleven were used with limited power by both countries; while the remaining seventy-nine frequencies were left for the exclusive use of the United States.

It is wellknown in technical circles that the number of broadcasting frequencies needed in a country is dependent upon geographical factors. When Canada's immense area is considered, this increase in radio facilities cannot be questioned. Surely a country's need for radio is not contingent on its population. Do not the rights of the individual listeners count most? Yet Orestes H. Caldwell, editor of *Radio Retailing* and former member of the Federal Radio Commission complains that the United States got the worst of the deal. He says, "Canada, with a population about the size of New York City or the state of California, already has three times the radio facilities per capita that are enjoyed by the United States with its 125,000,000 population."

As a matter of fact the population of Canada according to 1930 figures was one and one half times that of New York City, and larger than the total population of the states of California, Oregon, Washington, Idaho, Nevada, Utah, Arizona, and Wyoming. These states, by the way, represent over one fourth the area of the United States. Canada's climate is another factor that should be considered.

How much more representative of public interest would be such a statement as "The United States recently agreed to make available additional radio broadcast frequencies for Canadian use. The fact that the area of Canada is greater than that of the United States, and that her population is more scattered, makes the use of radio a greater necessity to her than to our own more closely settled country." However, until radio broadcasting in this country is divorced from the commercial motive, it is unlikely that its spokesmen will make such altruistic statements.

Radio Aids Quacks

THE RADIO NIGHTLY REPEATS: "Sunshine mellows," "Heat purifies," "It's toasted," . . ., *ad nauseam*. However, there evolves an association that brings profits to a certain corporation. Repetition lulls the desire to analyze, and the trick of association brings action—without ratiocination . . . once upon a time, the fakir and the quack could reach only those who came to the rear of their wagons. Now the radio brings fakirs and quacks without number to every fireside, each one accompanied by a crooning tenor or even more persuasively by the chords of beautiful orchestration.—Walter R. Hepner, Superintendent of Schools, San Diego, California.

Wire-wireless Broadcasting on Power Lines

GEORGE O. SQUIER

AS A RESEARCH STUDENT in physics and electrical engineering under Rowland and Duncan in the golden age of the Johns Hopkins University over forty years ago, I well remember the discussions which then took place as to the relative merits of direct and alternating current for power transmission. When the alternating current system began to appear the major decision to be made was to select the frequency. Little did the small group . . . realize that when the number sixty cycles per second was selected after wide discussion thruout the small engineering profession in the United States at that time, at a single stroke a step was taken which has determined the design of the whole vast power-wire pattern which today links this country from ocean to ocean, and from the Great Lakes to the Gulf of Mexico. Today this aristocratic number sixty throbs incessantly thruout a vast territory extending from the remote farmer's cottage to the heights of the Empire State Building in New York City. This national pendulum ticks with a regularity and accuracy which permit us to live in a split-second world which it has created.

There was another key decision made at that time whose history is not so easy to determine. Some unknown mechanic or electrician casually decided to construct the standard lamp socket of the diameter of one inch, and to employ the basic principle of the screw for reliable electrical contact. Today the number of these standard sockets in use in the United States is roughly estimated as 500,000,000. On September 18, 1910, for the first time, two separate telephone conversations were carried on over a single "twisted pair" wire telephone circuit between the Signal Corps Laboratory at the National Bureau of Standards in Washington, D. C., and the small laboratory at 1710 Pennsylvania Avenue. Then was born the new art of wire-wireless communication engineering.

At the annual meeting of the National Academy of Sciences in April 1931, I brought to their attention a new development of wire-wireless called the monophone, or one-way telephone for broadcasting, and pointed out at that meeting the astonishing fact that our telephone plant, which has now reached

eighty million miles of wire, was operating only about eighteen minutes a day or at an "overall inefficiency" of some 98 percent. The magazines recently announced that these idle wire facilities are being reserved for a two-way long distance television service as supplementary to the point-to-point service on the regular telephone plant.

At 4PM on March 24, 1922, in the presence of the Associated Press and a group of radio engineers, occurred the first demonstration of wire-wireless broadcasting of programs on the regular standard electric light circuit in the office of the chief signal officer of the army, in the Munitions Building, across the street from the National Academy of Sciences Building in Washington. Today, after nine years, I have to report a practical development extending continuously thruout this period at a cost of some three millions of dollars where at present a staff of seventy-five men are employed in the laboratory at Ampere, New Jersey. Superimposed upon the sixty cycle power transmission plant without interference, is a thirteen kilocycle carrier current which is stepped up in multiples of the lucky number thirteen to deliver three separate programs simultaneously into the homes of subscribers from the standard light socket on frequencies of 26, 39 and 52 kilocycles per second. The complete equipment designed, manufactured, and tested for 270,000 homes is now ready for shipment to Cleveland, Ohio.—*Science*, Volume 74, Number 1929, December 18, 1931, p636.

THE RADIO IS CAPABLE of unlimited development. No one will hazard a guess as to its immediate possibilities. . . There must be the greatest vigilance in the enactment of legislation and in the administration of it to protect the public in the use of the radio and against monopoly and unfair discrimination in granting licenses for broadcasting stations.—Representative William W. Hastings of Oklahoma, *Congressional Record*, May 31, 1932, p12063.

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Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

The Menace of Madrid

THE NINTH International Radiotelegraph Conference opens in Madrid, Spain, on September third. Earlier conferences, naturally enough, were meetings of engineers, commercialists, and military men. The situation has changed since then. The listening public is the major party at interest today. Will Congress protect this party, or will the American delegation at Madrid be dominated by monopolists wishing to control free speech, and advertising racketeers seeking to force sales talks on foreign peoples? Will both houses of Congress be represented by radio experts from their own membership? Will education be represented? Congress faces a supreme public trust in answering these questions.

Nationally-Owned Radio System for Canada

A GOVERNMENT RADIO SYSTEM for Canada is practically assured. The Canadian House of Commons concurred in the report of the special radio committee on May 11, 1932. The remaining steps to be taken in putting the plan of the committee into effect are looked upon as a mere formality.

The special committee of the House of Commons was appointed on March 2, 1932. The duties assigned to it were—first, to consider the report of the Royal Commission on Radio Broadcasting dated September 11, 1929 and commonly known as the Aird report; second, to advise and recommend a complete technical scheme for radio broadcasting for Canada, so designed as to insure from Canadian sources as complete and satisfactory a service as the present development of radio science will permit; third, to investigate and report upon the most satisfactory agency for carrying out such a scheme, with power to the said committee to send for persons and papers and to examine witnesses, and to report from time to time to this House [of Commons].

The committee appointed consisted of Raymond D. Morand, chairman, W. A. Beynon, P. J. Cardin, W. D. Euler, Onesime Gagnon, E. J. Garland, J. L. Ilsley, R. K. Smith, D. McK. Wright.

The evidence and proceedings growing out of the twenty-seven meetings of the committee are found in a 728-page printed report. Included therein is found the testimony of fifty-six witnesses who appeared in person before the committee. Of this number, Major Gladstone Murray of the British Broadcasting Corporation, explained the operation of the English system, while Joy Elmer Morgan, chairman of The National Committee on Education by Radio, gave a careful analysis of conditions in the United States. All of the other witnesses called by the committee were Canadians. The thoroughness of the Aird investigation made it unnecessary to call others from outside the Dominion.

In addition to the witnesses called, six briefs were submitted and printed directly without the appearance of the witness directly concerned, while forty-six papers were in-

serted as appendices at the end of the record of certain day's proceedings.

The official report of the committee taken from *House of Commons Debates*, Volume LXVIII, Number 64, May 9, 1932, follows in full text:



JOS. F. WRIGHT, *director of Station WILL, University of Illinois, Urbana, Illinois, who was recently elected to the presidency of the Association of College and University Broadcasting Stations and who will represent that organization on the National Committee on Education by Radio. He succeeds R. C. Higgy of Ohio State University, who held the position two years.*

In accordance with the duties and responsibilities delegated to us, and the terms of reference submitted, your committee met on March 8, and, since that time, held twenty-seven meetings, heard evidence, received briefs and submissions from fifty-three sources, including governments, individuals, corporations, associations, leagues, and clubs.

Your committee was seized, from the inception of the national importance and international character of radio broadcasting, and the evidence submitted has served to further consolidate our opinion of the far-reaching scope and benefits of proper, wellregulated broadcasting services thruout Canada, as a medium of education, thotprovoking development, and fostering of Canadian ideals and culture, entertainment, news service and publicity of this country and its products, and as an auxiliary to religious and educational teaching, also as one of the most efficient mediums for developing a greater national and empire consciousness within the Dominion and the British Commonwealth of nations.

Your committee desires to express at the outset, to the present radio broadcasting stations, this tribute: That they entered as pioneers in a field of service in the art of radio, and, under trying handicaps and sacrifices, worthily kept pace with a science fraught with ever-changing improvements and developments, and rendered this service under handicaps, which is most praiseworthy.

Your committee is convinced, however, that *the present system, excellent as it is in certain respects, does not meet the requirements in quality and scope of broadcasting to ensure its maximum benefits.*

Reference No. 1—"To consider the report of the Royal Commission on Radio Broadcasting, dated the 11th day of September, 1929, commonly known as 'The Aird report'."

Your committee was fortunate in having the three members of the Aird commission appear before us to amplify and explain their report, and much valuable information was thereby secured, and, if we are unable to completely accept their findings, it must be obvious that there has been a great change in the science of radio broadcasting, and in the financial condition of the country, in the last three years.

Reference No. 2—"To advise and recommend a complete technical scheme for radio broadcasting for Canada, so designed as to ensure from Canadian sources as complete and satisfactory a service as the present development of radio science will permit."

THE PHILIPPINES, as a relatively isolated country, off by itself, not yet in the grasp of a conscienceless band of private broadcasting corporations, may well determine upon and follow a radio development program of its own—liberal, instructive, entertaining, delightful, and, at times, even beautiful. We need not take all our ideas from the masterminds in the broadcasting game in the United States!—A. V. H. Hartendorp in *Philippine Magazine*, Vol. XXVIII, No. 11, April, 1932, p580.

Your committee recommends a chain of high-power national stations, operating on clear channels, located at suitable intervals, the location to be determined by a careful technical survey of Canada.

Your committee recommends that consideration be given to the use of five 50-kilowatt stations, one in each of the following provinces of Canada, namely, British Columbia, Manitoba, Ontario, Quebec, and in the maritimes, three 500-watt stations, one for each province, or one 50-kilowatt station, as may be determined by the commission. In Saskatchewan and Alberta, we suggest two 5-kilowatt stations in each province, synchronized on a common channel. Further, a 10-kilowatt station in Northern Ontario and one in Western Ontario, a 1-kilowatt station at Port Arthur-Fort William, a 500-watt station in Toronto, and a 1-kilowatt station at, or near, Ottawa, Montreal and Quebec.

Your committee further recommends a number of stations of 100-watt power and under, operating on shared channels, located where required,—

[a] To serve areas not satisfactorily covered by the national stations.

[b] For secondary stations in areas where there is a demand for several channels to be in operation at the same time.

[c] For educational purposes.

[d] For legitimate experimental work.

[e] For local broadcasting of community interest.

Your committee further recommends that the cost of radio in Canada be self-sustaining and that only the money available from transmitters' and receivers' license fees and advertising income, be expended, and that the question of the amount of receivers' license fees be left entirely in the hands of the governor in council.

Reference No. 3—"To investigate and report upon the most satisfactory agency for carrying out such a scheme."

Your committee recommends that a commission be appointed, consisting of three adequately paid commissioners: a chairman to hold office for a period of ten years; a vicechairman for a period of nine years, and the third commissioner for a period of eight years.

That there be appointed an assistant commissioner in each province, who shall also act as chairman of such provisional or regional advisory program committees as may be formed; the assistant commissioners to be selected in consultation with the governments of their respective provinces.

Your committee further recommends that the commission be vested with the necessary powers to carry on the business of broadcasting in the Dominion of Canada, such powers to extend to the following matters:

[a] To regulate and control all broadcasting in Canada, including programs and advertising.

[b] To own, build, and operate transmitting or receiving stations in Canada.

[c] To acquire by lease, purchase, expropriation or otherwise, any or all existing broadcasting stations.

[d] To enter into operating agreements with privately-owned stations.

[e] To originate programs, and secure outside programs by purchase or exchange, and to make the arrangements necessary for their transmission.

[f] To determine the number, location, and power of all broadcasting stations required in Canada.

[g] To control the issuing or cancellation of licenses to broadcasting stations.

[h] To cancel the allotments of channels to any stations, or to make substitution of channels.

[i] To prohibit the establishment of privately-operated chains of stations in Canada.

[j] Subject to the approval of the parliament of Canada, to take over all broadcasting in Canada.

[k] To be vested with all other powers necessary or incidental for the fulfillment of the objects of the commission.

Your committee recommends,—

[a] That one of the first duties of the commission be the establishment of trans-Canada chain broadcasting thru the securing of the necessary land-lines as soon as possible.

[b] That a nationally-owned system of radio broadcasting be instituted and that all stations required for its proper organization be eventually acquired, same to be financed from the revenues, accruing to the business of broadcasting, without expense to the taxpayers thru the public treasury.

[c] That all stations, 100-watt and under, not required for the national system, remain under private ownership, but be regulated as to programs and advertising by the rules of the commission.

[d] That all revenues obtained from license fees, sale of advertisement, and other revenues accessory to the business of broadcasting, be used by the commission in the interest of radio.

[e] That advertising be limited to not more than 5 percent of each program period.

[f] That the developing of Canadian art and artists, and the securing of outstanding programs from outside Canada, be encouraged.

[g] That the commission make available to the provinces, when possible, the facilities of national and chain broadcasting.

[h] That the commission make special effort to give such programs as will be acceptable to provincial and local requirements.

[i] That before making changes in Canadian radio broadcasting, the commission make a complete survey of the present system with particular reference to adequate coverage.

We desire to call attention to the extreme importance that the commission should not assume, or even be suspected of assuming, a political complexion. Your committee append hereto a copy of the proceedings and evidence adduced before your committee, for the information of the House.

The technical plan for this national system proposes one 50-kilowatt station in each of the provinces of British Columbia, Manitoba, Ontario, Quebec, and eventually one in the maritime provinces. In each of the provinces of Saskatchewan and Alberta it is proposed, for the present, to use two 5-kilowatt stations, synchronized on a common channel. In Ontario, in addition, there will be two 10-kilowatt stations—one in the western part of the province and the other in the northern. Four smaller stations of 1-kilowatt capacity each are provided for the Port Arthur-Fort William area, and for Ottawa, Montreal, and Quebec. There will be one 500-watt station in each of the three maritime provinces. Lastly a 500-watt station on a shared channel is provided for the city of Toronto.

An increase in power up to 50 kilowatts is provided in the case of the stations in Alberta, Saskatchewan, Northern and Western Ontario, should such an increase seem necessary.

For local service, the use of twenty shared channels is planned. In all probability one hundred low-powered stations will eventually be required. The maximum power of each of them will be 100 watts.

The frequencies in kilocycles to be used for the larger stations are: 540, 600, 630, 690, 730, 780, 840, 880, 910, 930, 960, 1030, 1050, 1100, 1120.

Negotiations have already been completed with the United States approving the use of the frequencies proposed.

NOW THAT CANADA HAS DECIDED to own and operate its own radio system, citizens of states along our northern boundary line will be given an excellent opportunity to compare the merits of public versus private radio administration.

North Carolina School Broadcasts

THE STATE DEPARTMENT of public instruction of North Carolina offered an educational radio program the past year for the schools of the state. Its purpose was to provide educational broadcasts for the public schools, designed especially to meet their needs and interests, and to enrich and supplement regular classroom instruction.

Governor O. Max Gardner headed the advisory committee in general charge of the broadcasts. Assisting him were A. T. Allen, state superintendent of public instruction, and Hattie S. Parrott, state supervisor of elementary instruction. A faculty committee supervised specific broadcasts—each member being responsible for a particular subject. Other prominent persons contributed to the program from time to time.

A twelve-weeks' experimental unit inaugurating North Carolina's school broadcasts, began February 23, 1931. Half-hour programs were broadcast every Monday, Tuesday, Wednesday, and Thursday between eleven-thirty and twelve o'clock over WPTF, a 1-kilowatt commercial station at Raleigh. The number of schools served was limited to the area in which the signals of this low-power station could be dependably received.

At the end of the experimental period, it was found that over 26,000 in seventy-one schools used the broadcasts. In one city alone six thousand boys and girls listened-in to these radio lessons, while in a single school a total of nine hundred listeners was reported. Many schools, lacking radio equipment, were unable to use the programs, but hoped to receive them when facilities were provided. The principal disadvantage was the large area of the state in which station WPTF could not be heard.

The second unit, which started October fifth, was divided into two sessions of five weeks each. The subjects offered were: current events, geography and travel, nature study, recreational reading, citizenship, here-there-and-home-again, living well, music; in the second: time and topics, art, science, guidance, modern adventure, history, literature, health talks. Each subject occupied fifteen minutes. Programs were broadcast between eleven-thirty and twelve o'clock every schoolday except Friday.

Projects of this kind show what could be done if each state was provided with adequate facilities for reaching its entire population with radio education under responsible authority and without advertising sponsorship.

Should Religion Aid Chains?

THE JOINT RELIGIOUS RADIO COMMISSION announces, thru the Federal council, revised plans for national broadcasting. . . . There will be changes in the length of the broadcasts and in the time schedules. These are all matters of method rather than of policy . . . But is it not about time that the Federal council, and the Catholic and Jewish bodies . . . gave some attention to the question of the principle on which religious broadcasting is conducted? *As matters stand, all these programs are concentrated on the chains.* Granted that by this means they are given maximum distribution; by this means they also serve to bolster up the claim of the chains to be a sufficient agency of radio service. And the chains, it must be remembered, seek to support this claim in an effort to maintain American radio as it now is—a commercial enterprise, largely concentrated in the hands of a near-monopoly. *Why need the Federal council put all its radio eggs in the NBC basket? By electrical transcription and by the sponsoring of speakers over other than chain stations it would be easy to keep from any appearance of endorsing the monopoly claim.*—Editorial in the *Christian Century*, Volume XLIX, Number 16, April 20, 1932.

Radio in Saskatchewan

RADIO LESSONS to supplement correspondence work have been tried out in the province of Saskatchewan, Canada. The broadcasts were given each schoolday from October 18 to December 18, 1931 between the hours of 6 and 6:30 p.m. The subjects taught included French, Latin, German, literature, history, and science. The radio instruction was prepared for ninth- and tenth-grade pupils.

This experiment grew out of an educational emergency facing the province. Severe droughts and the low price of farm products made it impossible for thousands of children to attend high school. The educational authorities arranged to correlate the regular correspondence work, in which nearly eleven thousand students are enrolled, with radio lessons. All work in connection with the development of the broadcasts was in the hands of the government educational authorities.

Data collected to date have been favorable to the value of the radio as an aid to correspondence work. Future developments in Saskatchewan will depend on conclusions reached from a study now being made of the results of this experiment.

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James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.

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An Unweeded Garden

THE COMMERCIALIZED RADIO monopoly interests and their publicity representatives talk and write of the advantages of what they call the "American System" of radio broadcasting. There is no American system of broadcasting. There is the exact opposite of a system. Our radio is an unweeded garden of sales talks and mismanagement. America is peculiarly situated—because of her high level of schooling, her vast area, and her great wealth—to develop a system of radio broadcasting infinitely richer in content, more varied, and more powerful than any other country. This task lies ahead. It cannot be done until the Congress of the United States takes the matter in hand and assures to each of the states a radio channel or channels by which the educational institutions can reach all the homes and schools of the state, free from commercial domination or control. There will be plenty of channels left over for every legitimate national use.

The Radio in Supervision

CLINE M. KOON

Senior Specialist in Education by Radio, United States Office of Education

THE ULTIMATE PLACE that radio will occupy in the American school system will be determined by the educators themselves. As leaders in educational theory and practice, the supervisors and directors of instruction must assume a large share of the responsibility of determining what is to be broadcast for schools; what methods of broadcasting are to be employed; and how the broadcast lessons are to be used in school. If supervisors will seriously apply themselves to the solution of the problems in the field—and they are principally problems of education rather than problems of radio transmission—broadcasting and centralized radio facilities may become an important aid in the supervision of instruction, as well as in direct instruction. Considered educationally, radio is not a separate entity but is simply a conveyer of sound. Its value depends upon what is broadcast and how the broadcast material is used.

Educational problems—Many of the radio problems being discussed are essentially problems of education rather than problems of radio. While it is important that educators possess an intelligent appreciation of the art of broadcasting, it is more important that they be thoroughly familiar with the principal purposes and best practices of education.

For if radio is to be applied to education, education must first be applied to radio.

Radio's achievements—Even tho the radio has formed some unfortunate associations in the minds of many educators, it has a number of noteworthy achievements to its credit. It has already become the principal source of entertainment and last-minute news. Steadily, it is breaking down the barriers of isolation as it broadens the horizons and enriches the lives of countless millions of people. It has become an important social factor in nearly every country in the world.

If educational leaders accept a broad social conception of education, they will realize with ever-increasing significance

the importance of harnessing radio and putting it to work to help bear the constantly growing burdens of education.

For demonstration—Numerous school officials are willing to bear witness to the educational power of radio. By means of broadcasting and centralized radio facilities it appears that supervisors are able to guide the work of the teachers and the classes. Important announcements and instructions may be given, and superior work can be made generally available. But above all, *radio broadcasting is peculiarly well-suited for the improvement of instruction by means of demonstration lessons.*

Supervision's task—Supervision, being a cooperative enterprise for the improvement of instruction, can be especially helpful in the securing of suitable radio-sound equipment, in selecting broadcast programs, and in devising methods of integrating them into the curriculum of the school. If the classroom teacher will bear her share of the burden in the three-way teaching arrangement, it appears that the radio may be used in many ways to advance the educational process. It can enrich the curriculum and vitalize instruction. The throbbing present may be brought into the classroom and the dead past made to live again. It is the responsibility of supervision to

determine how radio can be efficiently used. Supervisors are already aware of the opportunities radio affords and are pushing forward rapidly in the field of experimentation to determine what it can do to make their supervision more effective. This is a wholesome sign for it insures the introduction of radio in the schools on a sound basis. If the radio cannot assist in realizing the commonly-accepted purposes of education more effectively than they could be realized otherwise, it has little place in the school.

Abstract of an address before the Department of Supervisors and Directors of Instruction of the National Education Association, June 27, 1932, Atlantic City, New Jersey.



CLINE M. KOON, who was assistant director of the Ohio School of the Air previous to his appointment as a member of the staff of specialists in the United States Office of Education.

THE FEDERAL RADIO COMMISSION permits the broadcasting of advertising on short waves which are reserved for inter-continental broadcasting, provided no compensation is received by the broadcasting company for such advertising. This enables American advertisers, without paying any charges which can be made legally, to broadcast their advertising into foreign countries regardless of the wishes of the governments of those countries. ¶American broadcasters are continuing their efforts to secure a foothold in the European radio channels, not only by arranging for exchanges of programs, but by other less ethical methods.

Radio's Value to Schools

WHILE THE RADIO exerts an enormous influence upon modern education, its best use and control as an educational medium are yet to be determined. The Cleveland junior high schools are accepting a share of the responsibility for the determination of how and what desirable educational outcomes may be furthered thru its use. A number of schools have received regularly inspirational programs dealing with civic affairs, English, science, and music. A few schools have made considerable use of public address systems, installed either by the board of education or the school itself, to stimulate written and oral composition, as well as to teach regular lessons. Superior teachers in the various subjects have been at work for some time assembling material and constructing lessons, which, it is hoped, eventually will be of value for general distribution. In the social studies more than twenty lessons have been completed and tested in the classrooms.

It is the opinion of those connected with this experimental work that certain desirable educational outcomes reasonably may be expected from radio lessons.

Pupil accomplishment—There is evidence that, as regards pupil accomplishment, the concentration and interest of pupils are greatly increased. The novelty of the radio lesson does not seem to wear off. There is developed an alertness which undoubtedly makes pupils much more responsive to spoken suggestions even after the broadcast has ended. There seems to be a positive advantage in the fact that pupils are not permitted to ask questions—in themselves relevant—but which sidetrack the main issue of the lesson. This is particularly true of pupils in the brighter sections. Achievement tests indicate an advantage in favor of radio lessons for some subjects as compared with lessons regularly taught.

Improves curriculum—Frequent radio lessons in a selected subject serve to unify to a desirable extent the subject-matter for that field, thus influencing the curriculum. The care with which such lessons are prepared results also in a general improvement of subject-matter.

Teachers profit—Teachers are likely to improve their own performance by observing good teaching on the part of others. It seems reasonable to expect, therefore, that the technic of the regular class teacher will be improved thru her audition of lessons presented by master teachers.

The preparation of lessons for radio presentation tends also to center attention upon the importance of lesson planning. Constant criticism of the lessons brings a realization of the desirability of eliminating all superfluous and irrelevant material. The regular teacher is free during the radio lesson to interpret pupil responses and to diagnose individual pupil needs.

Administration of uniform tests is facilitated by the use of

radio. With children in all parts of the city taking exactly the same work, tests of the results can be easily measured.

Salary savings unlikely—Undoubtedly slightly larger classes can be handled in most subjects and much larger ones in some subjects. However, this economy is not so great as might be supposed. Because of the increased amount of preparatory work, the constant evaluation of the radio lesson, and the desirable diagnosis and guidance of individual pupils, the regular class teacher should not be responsible for an abnormally large reception group. It would seem that radio lessons will bring economy in pupil progress to a greater extent than in salaries saved.

Parents profit—Parents, and the public in general, seem to have a more intelligent interest in the schools as they learn, by tuning in, more about the methods and content of the various courses which are being offered to the children.—R. G. Jones, superintendent of schools, Cleveland, Ohio, in his annual report to the Board of Education, 1931.

British Advance

THE BRITISH BROADCASTING CORPORATION has sent out its last program from its historic headquarters at Savoy Hill, London, and has moved into more commodious premises at Portland Place, about a mile farther west. This is likely to prove an event of cardinal importance in British radiocasting, for work at Savoy Hill was carried on only in the face of great difficulties. Portland Place, however, offers every possible facility for radiocasting under ideal conditions.

The world's best—The BBC can look back on its nine years at Savoy Hill with considerable satisfaction. In that time *British radio has acquired a cultural reputation second to that of no other radio service in the world*; and viewed merely as an entertainment it stands very high. It introduces millions of listeners to the most famous statesmen, actors, thinkers, writers, and scholars of the day, and has perhaps done more than any other single influence to raise the popular taste in music. It radiocasts regularly all the most important public functions, from the opening of disarmament conferences to the fighting out of cup finals. And it successfully financed the famous Promenade concerts when they were in danger of being discontinued from lack of sufficient support.

Progress—All these things are developments of the BBC while it has been at Savoy Hill. Technically also immense progress has been registered during this period. Seven years ago there were only one million licensed receivingsets in Britain; today there are 4,473,227, representing roughly twenty million listeners. Its record, therefore, encourages the BBC to enter Portland Place with every confidence that its achievements there will be a significant contribution to the history of radio.—Editorial in *Christian Science Monitor*, June 10, 1932.

IRISE to point out the dangerous trend in the use of radio, altho I do not find the great interest on the general subject that there ought to be on the floor of the House. Every year our Radio Commission will come in with recommendations to clarify existing law, rather than to recommend changes in the system, which the American people will soon demand.—Representative Charles L. Gifford of Massachusetts, *Congressional Record*, February 10, 1932, p3791.

Radio Commission Defends Nebraska

WHEN THE COMMERCIAL BROADCASTING STATION, WOW, located at Omaha, Nebraska, tried to drive the Nebraska Wesleyan University Station WCAJ off the air, the Federal Radio Commission decided in favor of WCAJ.

WOW carried its case to the Court of Appeals of the District of Columbia.

The Commission, represented by D. M. Patrick, its assistant general counsel, appeared and successfully defended its decision in spite of the fact that the case had been crippled by excluding from the record letters and affidavits from Governor Weaver and other state officials.

The Court of Appeals, altho officially ignorant of the wishes of the state officials, decided in favor of Nebraska Wesleyan University. Apparently there are no grounds on which WOW could appeal to the Supreme Court of the United States.

The reason given by Elmer W. Pratt, the examiner of the Commission who conducted the hearing, for excluding from the record the letters and affidavits of the state officials was that the Commission had ruled against the acceptance of evidence in those forms.

William Boyd Hunter, a Washington attorney, represented the university.

The Commission in its decision said:

[1] Respondent station WCAJ offers a varied and interesting type of program comparable to that which is broadcast by the applicant, station WOW.

[2] Inasmuch as respondent station WCAJ is owned by an educational institution of good standing the station is in a position to and does broadcast programs educational in character.

[3] No sufficient showing is made in this record that applicant station WOW is in a position to and does broadcast a program materially superior to that of respondent station.

[4] While it appears that the operation of respondent station has not been in conformity with regulations of the Commission, a construction permit has recently been granted which should enable said station to operate in a manner consistent with the requirements of the Commission.

[5] The granting of the application would not materially increase the rather complete service now being offered by the applicant station and would require the forfeiture of the entire assignment now used by the respondent.

[6] Public interest, convenience and/or necessity would not be served by the granting of this application. [R. 13 and 14.]

The brief [No. 5425], which was filed by the Commission when the case was appealed, was written by Miss Fanney Neyman, assistant counsel.

While Article 4 of the Commission's decision intimates that WCAJ had violated the Commission's regulations, Miss Neyman explains in her brief as follows:

The Commission found that while the operation of respondent station [WCAJ] had not been in conformity with the regulations of the Commission in that it was not making *maximum* use of the power assigned to it, *its operation was nevertheless in the public interest* because of the type of service it was, and is, rendering, and because it did have a fair coverage.

The brief also states:

While it appears that appellant incurred a deficit of \$13,957.90 in 1929 in the operation and maintenance of station WOW [R. 545] which is the smallest deficit for the past six years [R. 95], the witness, Stiles, when asked whether he considered that WOW had any deficit when the advertising the station gave to the Woodmen of the World Life Insurance Association was taken into account, replied in part, "we were talking about dollars and cents. I should say I do not consider it as any deficit" * * * [R. 80].

This indicates that money paid by members of the Woodmen of the World is used to pay deficits of station WOW, and that they are charged to advertising. It is reported that there have been serious disagreements within the Woodmen of the World as to the wisdom of operating the station.

In a later hearing, in which station WOW was opposing the application of a commercial station in another state, a member of the state legislature of that state demanded to know if the Woodmen of the World were backing station WOW. He was told that the organization was backing the station. He then declared that he was a director of the Woodmen of the World and that his own money was being used by station WOW to fight the broadcasting station which he was trying to assist.

Nebraska Wesleyan University and its broadcasting station have a long and honorable record. In spite of difficulties caused by the unjust attack of the commercial station operated in the name of a fraternal organization, it has continued its service to its state and its constituents and will continue to defend the rights given it by its charter from the state.

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- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
- James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
- Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
- H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
- Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Camouflage

IT IS WELLKNOWN that since the educational institutions began their campaign for independent radio channels under their own control, the commercial broadcasting stations have been most generous in their offers of free time on the air. They have been more than generous just as the National Electric Light Association was generous with free material to be used in school classes. This generosity was recently revealed in the data which the Federal Radio Commission submitted to the Senate in response to the Couzens-Dill Resolution. The fact that is camouflaged is that the hours offered for educational purposes are the least valuable hours—the ones which are most difficult to sell to advertisers. So far there is nothing to show that the Federal Radio Commission recognizes any difference in value between hours offered for education. They seem to assume that school people can get results from hours that commercial interests have found worthless.

Consider Publicly-Owned Station First

ARTHUR J. W. HILLY

Corporation Counsel, City of New York

STATION WNYC . . . owned and operated by the city of New York, had applied . . . to the Department of Commerce . . . for a license to broadcast, which was granted on July 2, 1924, authorizing the city to use the channel requested, to-wit: channel 570kc. This application of the city of New York had been made after a a thoro investigation and survey over a period of two years for the purpose of determining the use to which radio might be put by the city government. It was determined, at that time, that *every effort should be made to obtain a broadcast channel which would be open, free, and unobstructed at all times for the use of the state and municipal authorities* in broadcasting those things deemed of interest and aid to the people of New York, and contributing to the prompt and efficient conduct of the business of the city and state of New York. The matter of utilizing radio was taken up and handled in the same deliberate way as any other municipal undertaking, and with the definite idea in mind that in applying for and obtaining a broadcasting license the city was acquiring a certain right to an air or ether channel that would belong to the city of New York so long as it complied with the rules and regulations that necessarily surrounded such a use. The license was granted. The station became part of the municipal government of the city of New York. It allied itself with each and every integral part of the government. It went further. It allied itself so closely that *it became, as it were, part of the curriculum of the board of education and the board of higher education of the city of New York*, which is a branch of the government of the state of New York. As has been said, it became part of the municipal government of the city of New York with the same prospects as to its growth and development as that great city possessed when it started on its way to become the greatest city of the world. It was not contemplated, or even imagined, at that time, that the interest the city had acquired or possessed in this particular broadcasting channel was to be considered in the year 1928 no more nor less than a claim that any individual, or group of individuals, might thereafter in their mad race for business advancement reach out and demand said channel. . . .

Crowding begins—And now we come to the year 1928

and what do the records show? They show this [commercial] station WMCA already having sampled two wavelengths, to-wit: 880kc and 810kc, reaching out for its third, and succeeding in getting it within its grasp. This station proceeds to have half time on channel 570kc allotted to it, which channel had never before been used or occupied by any other than the city of New York, the pioneer thereon. . . .

Now we come to the year 1931 and what do we encounter? Again the mad scramble of "Big Business" to go further—to gobble up what was left of that channel, the use of half of which it had acquired the right to in its upward march back in 1928. And how had they plotted to acquire this other half in the year 1931? It was very simple. Merely by having WNYC put over to channel 810kc, and bringing the controlled stalking horse [commercial] station WPCH over on to this channel 570kc, and thus the scheme hatched out in 1928 became a reality. "*Big Business*" had again triumphed. Each and every thing in the path of its onward rush was pushed aside in the mad scramble for a big place in the radio field.

. . . What activity and what success in this activity! All this great activity, presumably, must be in the public interest, convenience, and necessity, because uptodate the station has always met with success in its applications. Would this same station and the individuals controlling it be so active and interested in public interest, convenience, and necessity if the advertisers decided that the old way—that is advertising thru the medium of newspapers, cars, and billboards—was the only medium of advertising and the most dependable? Would this station be so active? Would it endeavor to satisfy the public's interest, convenience, and necessity if this advertising should cease? The answer is too apparent. WNYC would be able to get, without opposition, that which it so conscientiously endeavored to utilize for public interest, convenience, and necessity.

Present or future?—Is it not fair to take into consideration the future when dealing with applications such as those now before this Commission, and is it not equitable to grant applications undeniably made in good faith and honestly in the interest of the people in the locality where the station is endeavoring to give satisfaction, and which said station will

UNQUESTIONABLY, THE RADIO can play an important part in the program of education, but unfortunately there seems to be an increasing tendency on the part of manufacturers of all sorts of panaceas, fake remedies, and similar products to be granted more advantageous time over the radio for their propaganda work. Doubtless they are paying for this time, which simply means that radios are becoming commercialized to an increasing and confusing extent to the general public who frequently feel that these products might be superior in order to have place on radio programs.—Statement made by a land-grant college department chairman.

carry on whether advertising thru the medium of the radio continues or ceases? This is a question that should not be overlooked by this Commission. This is a question that may become a reality in a very short time, and if so, this Commission can readily realize how this country of ours will be glutted with unused broadcasting stations, while such stations as WNYC will be conscientiously performing that duty which WNYC is now doing.

After radio-advertising ends—Do any of these stations that are so madly scrambling for new channels, more time, change of location, consider the duty and obligation they owe the public to operate a radio broadcasting station? Is this their objective in applying for licenses and renewal of licenses—to satisfy the public, or simply to increase their balances? *The question will be very quickly answered when radio advertisers cease air advertising, and the time is not so far distant when this will happen.* Then the scramble for new channels, more time, change of location, and the like, will be no more, and those who today are endeavoring to perform a public service will not be brought to Washington to account for time used or time sought. The stations causing all this annoyance and embarrassment to stations which are conscientiously carrying out public duty will no more be interested in broadcasting channels. Such thoughts as these should undoubtedly be considered in applications made in connection with radio broadcasting, and particularly so when stations such as WNYC are involved; for whether advertising lives or dies, survives or perishes, WNYC and such stations will still be carrying on while these commercial “go-getters” will be active in other fields. It is time, therefore, that those in control of radio recognize this and give to those using radio for the betterment of communities, and for the world generally, what they ask. . . .

Public interest first—It is high time that the value of radio for purposes other than making money for the broadcasting operators, is recognized. To those who really have the public interest, convenience, and necessity at heart should consideration and recognition be given and shown. . . . WNYC has—since it first commenced utilizing radio for the benefit of the inhabitants of New York city and state—done all in its power to conform to all the rules and regulations that govern the operation and ownership of a station, but since 1928, when it was compelled to share time with another station, this station [WMCA] has at times embarrassed and, one might say, harassed WNYC to such an extent that it [WNYC] has seriously been interfered with in properly carrying out its broadcasting plans. Now it is compelled to appear here and tell why it has not entered into an agreement with this other station—a station with which WNYC did—in an honest endeavor to carry out plans that would be satisfactory to all, make what was at that time called “a gentleman’s agreement”—an agree-

ment, however, which turned out to be an agreement only insofar as it met the whims, fancies, and desires of the other stations. . . .

Violated agreement—It is submitted that such acts on the part of WMCA as interfered with station WNYC in the broadcasting of the Captain Fried and Sir Thomas Lipton receptions, and the refusal of station WMCA to abide by the gentleman’s agreement made with station WNYC and to permit the city to broadcast the programs requested as of “transcendant importance,”—such as the speech of Mr. Justice Hughes at the dinner held at the Hotel Astor in January, 1929—would justify [a decision favoring the public station]. *The refusal to permit the last-mentioned broadcast, that is, the speech of Mr. Justice Hughes, resulted, as the record will show, in that speech never having been broadcast at all by WMCA—which contracted so to do—and accepted in advance thereof the sum of \$355 which the Bronx County Bar Association, the sponsor of said broadcast, had great difficulty in having returned to it, to such an extent in fact, that it was finally compelled to sue this station to obtain the return of this money.*

Vulgar and false—Furthermore, the permitting of the broadcasting of such programs as *La Belle Rose* from the Village Nut Club; the *Edrolax Medicinal Talk*, to the effect that it “. . . can heal your tonsils; it can heal your appendix; it can heal anything”; and such advertising talk by a clothes company as that it will give “a flight absolutely free, and what is more, the Solo Clothes Shop will give a free flight with each purchase of a man’s suit”; *this and many other long-winded and extravagant sales talks on eye-lash growers, face creams and other advertised articles cannot by any stretch of the imagination be considered in public interest, convenience, and necessity.* The constant disregard of the rules and regulations of the Commission, such as using the same operator on both stations for listening in on the 600 meter, coupled with all that has been noted hereinabove, would have necessitated the recommendation by the chief examiner that the application for a renewal be denied, if it apparently had not been the desire of the examiner to give this station another chance. Nowhere in the whole record can this station and its sister station—both of which are owned and operated by Donald Flamm and Marion K. Gilliam—justify their existence from a standpoint of public interest, convenience, and necessity, unless it is contended that night clubs, prize fights, wrestling bouts, marathon dances, cheap jazzy music, are in the public interest, convenience, and necessity. . . .

Witnesses compared—Chief Examiner Yost could not have reported other than that the license of station WNYC be renewed. He heard the character of the testimony given by those witnesses who testified as to what they were doing or using said station for. He saw the high calibre of those wit-

BEWARE THE MACHINE-GUN SALESMAN. His health patter is pseudo-science. His eye is on your check book. In these days especially he prostitutes the radio to his uses. Quacks and quackery, fakers and fakery of all kinds appeal to a bewildered public, between jazz and the nasal tenor, with blatant advertisements that no reputable journal will print. Oh, Health, what crimes are committed in thy name!—Dr. E. P. Lyon in *Survey Graphic*, June 1931.

nesses as they testified. He recognized that they were people who were performing a public duty with high results in better government, better conditions, higher class citizens, and the general improvement, betterment, and contentment of the citizens of New York City. He was in a position to thoroly understand that station WNYC, for this class of broadcasting and the services these people were rendering, were to be highly commended for their efforts in an undeniably proper direction. They were educating, advising, and at the same time entertaining their listeners. The educators were carrying on a state function, and in an interesting way. Listen to the phonograph record of the board of education broadcast [a WNYC exhibit] as an illustration of what the board of education is doing; then, for a comparison, listen to the record of *La Belle Rose* and the face cream talk [WNYC exhibits], and it is submitted that nothing further in the way of argument as to what is in the public interest, convenience, and necessity is required. These educators are men with a praiseworthy object in life. The dollar mark is not their objective. They are interested in the progress of their community and the betterment and advancement of the youth of today who will be the men of tomorrow. Their broadcasts are of far greater import than whether this particular face powder, cold cream, or that certain face powder or shaving cream should be bought by you and me and the other fellow. The long-suffering public which reads its advertising in papers, magazines, street and railroad cars, as well as the billboards of every road a motorist may wish to travel over, is not even permitted, at a time when it might desire to relax from advertised articles, a little freedom when using its radio. It is submitted that support and recognition be given—and gladly given—to those who make proper and praiseworthy use of radio and will continue to so make use of it when those who now are so madly scrambling to possess radio broadcasting stations will, like last winter's snow, have vanished from the scene with advertising on the air when it has ceased, diminished and failed as a necessity in money-making for the advertisers. . . .

Unemployment relief aided— . . . If there were no other reasons why this station should have time, and lots of it, the very fact that . . . in the past year there were upwards of 4700 positions filled thru the medium of this [unemployment] broadcast over WNYC, would justify the city's demand in its application.

Protect the homes—It cannot be said that public interest, convenience, and necessity is served tho the program as re-

ceived by the listeners *may* appear harmless to those unfamiliar with a certain character of night club, while the actual enactment of that which is broadcast is such that no parent in the city of New York or in the country at large would permit his wife or children to witness, such as the spectacle of *La Belle Rose* performance in the Village Grove Nut Club. Reference again is made to the record [WNYC exhibit] of this broadcast for the purpose of having the Commission appreciate what is conveyed by the above statement and may perhaps have been in the mind of Commissioner Sykes of this Commission, who is quoted as having said: "The greatest responsibility that rests on the licensee of a station is to thoroly realize that his programs are going into the homes and are heard not only by the grown folk but by the children as well. It should constantly be his ambition that his programs will help to develop those children into good American citizens."

Public interest versus personal gain—Public interest, convenience, and necessity comes first in the operation of a broadcasting station and where it is undeniably apparent that the prime motive, in fact the only motive in the operation of the station, is personal gain, then public interest, convenience, and necessity is not served and no consideration should be shown to the operators of that particular station.

Abstract of brief before the Federal Radio Commission by publicly-owned station WNYC in attempting to secure a fair division of time with commercial station WMCA and at the same time defending its rights against the request of commercial station WPCH for its facilities.

Britain Honors Broadcaster

BROADCASTING is prominently represented in the King's Birthday Honors list by the knighthood which is conferred upon Admiral C. D. Carpendale, the controller of the British Broadcasting Corporation. The conferring of this honor is doubly welcome, both for personal reasons and as a compliment to the BBC in the form of a recognition of the high status and prestige of broadcasting in the community. Admiral Carpendale has been associated with the BBC ever since July 1923; and in addition to the signal services which he has rendered and the respect in which he is held as controller of the BBC he has gained widespread popularity abroad thru the success with which he has presided during the past seven years over the *Union Internationale de Radio-diffusion*.—The *Listener* [London], Volume VII, Number 178, June 8, 1932, p816.

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Boring from Within

NOT SATISFIED with having crowded nearly half the educational stations off the air the commercial monopoly radio interests are seeking to destroy the others by boring from within. The station is approached with the subtle suggestion that it sell time for advertising or that it take the national chain advertising programs originating in New York. Glowing pictures are painted of the profits that can be made. An institution which does not see far ahead is sometimes induced to sell its birthright for a mess of pottage. How can we expect freedom of teaching, which is the one excuse a university has for being, if the radio station is under obligation to commercial interests whose primary interest is not truth or common sense values but profits? To turn the college stations commercial is to destroy them, and the monopolists know this.

Making Good Use of Radio

ERNEST R. HAGER

Principal, Asa Messer School, Providence, Rhode Island

DURING THE PAST YEAR AND A HALF decided steps have been taken for the introduction of the use of radio into the public schools of Providence. Approximately three hundred classrooms in seventeen of the schools have loudspeakers connected with central radio sets in the principals' offices. These installations were made at a cost of more than fourteen thousand dollars, nine thousand of which was appropriated from tax moneys and five thousand contributed by the schools themselves. The teacher in each of these rooms may regulate the volume of her loudspeaker or disconnect it at her discretion. At the central set the principal or an assistant may send out to the rooms a program tuned in "from the air," phonograph records, or personal broadcasts from his microphone.

Equipping schools—These splendid radio installations have been made possible thru the cooperation of several individuals and groups. First, the superintendent of schools mapped out the cooperative plan and secured the interest of all who were to be partners in it. As indicated, a part of the financial obligation was met from tax moneys, while the balance was raised by school principals, teachers, and pupils. These funds were pooled with the superintendent, giving him greater purchasing power thru the seeking of bids. One of the deputy superintendents, with the aid of the Providence Trade School, designed ingenious devices for adapting radio sets and amplifiers, and made some of the work of installation a project for the students of the Trade School. This resulted in economies, and in outfits that are admirably suited to the purposes of the schools.

Preparation, reception, follow-up—The superintendent next brought together the principals of these schools for a permanent organization, to meet regularly and confer upon the educational uses of the new equipment. At the outset the superintendent stressed the importance of three steps for the radio listening lesson: preparation, reception, and follow-up. It is now more than a year since the first of these radio conferences was held, and a number of practical lessons in the use of the radio equipment have been learned.

The Damrosch Music Appreciation Hour over the NBC and the American School of the Air over the CBS are so wellknown that it is unnecessary to dwell upon them. They are practically the only programs from the radio broadcasting stations in this vicinity that are properly planned for classroom reception. There is much that is of educational value in the programs that

the commercial broadcasters are sending out. We receive lists of these "Educational Broadcasts" from the NBC, Teachers College, Columbia University, and the *Journal of Education*.

Disadvantage of radio-advertising—There are, however, almost insurmountable obstacles to our practical use of this material. *First, of course, is the objectionable advertising which is frequently interspersed thruout the program.* Then there is the failure to receive the lists far enough in advance to plan for the reception. A very real difficulty is our inability to classify programs as to subjects and grades from a mere list of titles which are not sufficiently descriptive.

We have been able to make some use of these programs of the radio stations thru "home lessons by radio." Valuable broadcasts out of school hours are assigned to pupils having radio sets at home. These pupils listen, take notes, and report.

Unanimously the principals have found the school "mike" the most valuable part of the equipment. Here we may produce for our pupil-listeners programs that are free from advertising, that are planned in advance, and that are classified and graded. The criteria for planning a microphone lesson include the aid that

it will give the classroom teacher by supplementing her efforts, the interest that it will add, and the time that it will save.

Lecture method poorest—There is a microphone technic, as the professional broadcasters well know. Our teachers must acquire the simpler elements of this technic in order to teach successfully via "mike." As in the classroom, so here the lecture method is one of the poorest. The Socratic dialog is better. Dramatization is excellent. Character-training lessons are presented in this way by groups of pupils at the microphone, for their fellow students at the loudspeakers in the various classrooms. Language dictation exercises for the entire school are conducted over the microphone, including correction of papers and immediate tabulation of results. The visiting music teacher at her piano in the broadcasting room teaches certain elements of the music lesson to half the school at one time. Arithmetic fundamentals and language usage tests are given regularly in this way with a decided economy of time.

Auditorium programs without assembling in the auditorium are often more successful than the usual "assembly." The amplifiers make the training of platform speakers unnecessary. The auditors in the classrooms follow the programs better than they would if they were seated at the rear of a hall, where



SUPERINTENDENT A. J. Stoddard, Providence, Rhode Island, one of the nation's leaders in fitting the radio into the program of the public school system.

they could hear only half of what is said. In these "radio auditorium" programs we preserve community spirit by providing for listener-activity in unison. We switch on the phonograph to play the accompaniments for community songs, and thru-out the corridors the classes may be heard, all singing together. In this connection we made a discovery. The tone quality of the singing improved. In order to keep together it is necessary to hear the accompaniment, and this subdued singing eliminates the gusto with which children usually sing familiar songs.

A spirited march heard from each classroom loudspeaker at the close of the day sends the pupils home with a feeling of love for their school.

At the superintendent's direction, two committees, one for junior high schools and the other for elementary schools, have made plans to broadcast a series of programs for classroom reception. These programs are intended also to enlist the interest of parents who are able to listen in at their homes. An attempt has been made to provide lessons that are adapted to radio presentation, that will supplement the work of the classroom teacher, and that will arouse the active interest of the pupils.

In following the admonition to heed the three steps of preparation, reception, and follow-up, our teachers are acquiring what may be called "loudspeaker technic." The teacher at the loudspeaker becomes an assistant to the teacher at the microphone. Very ingenious are some of the devices by which she prepares the class for the coming radio program. She has pictures at hand or words on the blackboard. She introduces the speaker or the subject. During the reception she is alert to assist. In unobtrusive ways she uses a pointer or writes an unusual word, or she takes notes for use during the third step. Another important activity of hers during the listening is to observe the reactions of her pupils. They follow up the radio lesson by preparing scrapbooks or they write letters, essays, or poems.

Promising future—The question will naturally arise in the minds of taxpayers, schoolboards, parents, and teachers: "Is this marvelous invention, the radio, a proper tool for use in the schools?" A little careful reflection will convince one that in spite of obvious shortcomings there is good reason for anticipating that radio will find an important place in elementary and secondary education; its place in adult education is already assured. Radio is a means of communication; so was the saga; so is the picture in the textbook; so is the movie; so indeed is printing. We may assume that the loudspeaker promises to become an indispensable auditory aid in education.

From *Journal of Education*, Volume CXV, Number 15, p456, June 20, 1932 by courteous permission of the author.

RADIO, THE ASSISTANT TEACHER, is an interesting and valuable book for everyone interested in radio instruction. It is the first book dealing with the pedagogy of education by radio. Send \$1.90 to the author, B. H. Darrow, director of the Ohio School of the Air, State Department of Education, Columbus, Ohio, and a copy will be mailed to you postpaid.

Educator Leaves American School of the Air

ALICE KEITH, director of the American School of the Air since its inception, was forced to sever her connection with the Columbia Broadcasting System, which has been featuring these educational programs, at the conclusion of the 1931-32 series last spring. It is reported that her departure leaves no one in the educational department of the Columbia Broadcasting System who has a college degree or teaching experience. Officials of the broadcasting system state that they will themselves direct the school, and point to the prominent men and women of the advisory committee as proof of the continued educational merit to be expected of this endeavor. On the other hand the advisory committee [formed originally by Miss Keith] is known to be both honorary and unpaid and while it may be asked in a general way to pass on policies, it cannot check on every program. As a protest against the alleged unfair treatment of Miss Keith, several members of the advisory committee have resigned. Educators are skeptical about the future of this educational program and point to the necessity of employing fulltime a person with adequate background, training, and experience, if public schools are to use it.

Many broadcasting executives are either advertisers, salesmen, promoters, or showmen. Few, if any, are prepared to direct or understand a program aimed to be used by our boys and girls in the public schools. One educational director for a large broadcasting organization has been educated in the English type of preparatory school and knows little about the organization of the American system of education. Yet he is in charge of all the so-called educational programs it broadcasts.

Miss Keith, on the contrary, was educated in our own public schools and is a graduate of the University of Wisconsin, with an additional two years spent in the study of music. She has been a teacher in rural, elementary, and high schools, and has given lecture courses in the summer schools of Wisconsin, Ohio, Western Reserve, and Pennsylvania universities. She was supervisor of music appreciation in Cleveland for three years. She had charge of playground work and story-telling for chautauquas several summers and for a period directed plays and festivals for War Camp Community Service in Boston, Kansas City, New York, and other cities. Among the historical pageants which she either directed or organized was the Chicago Fire Semi-centennial. For three years, Miss Keith lectured in various parts of the country as a member of the educational staff of the Victor Talking Machine Company, and was made educational director of the Radio Corporation of America during the year it sponsored the Damrosch concerts. In this capacity she organized the advisory council and committee and made the necessary school contacts. It was from this position that she was called to organize and direct the wellknown American School of the Air.

Those who have maintained that "commerce" cannot be trusted with all of radio, lest its educational value be reduced to zero, point to this act of the Columbia Broadcasting System as another proof of their contention that radio frequencies must be set aside for the various states to use for educational and cultural purposes.

Public Stations Enlighten Wisconsin Citizens

THE TWO STATE-OWNED RADIO STATIONS in Wisconsin drew up an agreement on August 12, 1932, with representatives of the five major political parties providing for the free use of these stations in the pre-primary campaign. One of these stations is WHA at the University of Wisconsin, Madison, a daytime station which was recently authorized by the Federal Radio Commission to increase its power from 750 watts to 1 kilowatt. The other, also a daytime station, is WLBL of the State Department of Markets, which is located at Stevens Point and operates with 2 kilowatts power. Neither of these stations permits advertising and both are devoted to educating and informing their constituents and providing them with high-grade entertainment.

The agreement signed by representatives of each of the parties and the stations follows in full text:

We, the representatives of stations WHA and WLBL and of the various political parties and groups, heartily endorse the use of Wisconsin's state-owned radio stations in political campaigns.

We believe that one of our truest platitudes is that the success of a democracy depends upon an informed and enlightened citizenry. At present, many of our voters get only one point of view; they read only one newspaper; and they attend, when they go at all, only the meetings of one political party. But if each party or group is allowed an equal opportunity to present its case over the state stations, the voter can get a much more adequate understanding of the issues and can cast a much more intelligent ballot.

Another consideration touches the use of money in political campaigns. The state sets limits to the amounts that can properly be spent. The charge is often made that parties without large financial resources are handicapped because they cannot get their argument before the voters. If the state places its radio facilities without charge at the disposal of each party or group, a step will be taken towards meeting both of these situations.

We are aware that, unless political uses of the radio are properly safeguarded, unpleasant situations may arise. Some feel that the danger of friction is so great that the attempts to use the radio in political campaigns should not be made. However, we do not take this position. The process of avoiding danger often results in avoiding programs of any sort. Wisconsin has a real opportunity to lead the way in taking problems of government to the people by radio.

We agree to use stations WHA and WLBL in the pre-primary campaign under the following conditions:

[1] The authorities in charge of stations WHA and WLBL agree to place these two stations at the disposal of the five political groups from 12 to 12:30PM each Monday, Tuesday, Wednesday, Thursday, and Friday, for the four weeks beginning August 22, 1932; from 6 to 7PM on each of these days until September 1, and from 5:15 to 6:15PM for the remaining period; and to give each group a final opportunity to appear over each station on the afternoon of Monday, September 21. [If funds can be secured for the rental of telephone lines between the two stations they will be operated as a chain with the same program going out from both stations. In this case, programs can originate at

either station. Otherwise, the two stations must be operated separately and each group will be allotted time over each station. In that event the time schedule for station WLBL may differ somewhat from the one herein given.]

[2] The representatives of the five political groups agree to the following division of time. The schedule which follows was determined by drawing lots:

The Democratic Party—from 12 to 12:30PM on the following days: Thursday, August 25, Monday, August 29, Tuesday, August 30, Monday, September 5, Wednesday, September 7, Wednesday, September 14; from 6 to 7PM on the following days: Monday, August 22, Monday, August 29, Wednesday, August 31; from 5:15 to 6:15PM on the following days: Monday, September 5, Friday, September 9, Thursday, September 15; and from 6 to 6:15PM on the following day: Monday, September 19.

The Prohibition Party—from 12 to 12:30PM on the following days: Monday, August 22, Wednesday, August 31, Friday, September 9, Thursday, September 15; from 6 to 7PM on the following days: Wednesday, August 24, Friday, September 2, Tuesday, September 6, Monday, September 12; and from 4:40 to 4:55 PM on the following day: Monday, September 19.

The Republican Party—from 12 to 12:30PM on the following days: Tuesday, August 23, Thursday, September 8, Friday, September 16; from 6 to 7PM on the following days: Thursday, August 25, Tuesday, August 30; from 5:15 to 6:15PM on the following day: Wednesday, September 14; and from 5:20 to 5:35PM on the following day: Monday, September 19.

The Progressive Republican Party—from 12 to 12:30PM on the following days: Friday, August 26, Thursday, September 1, Tuesday, September 13; from 6 to 7PM on the following day: Tuesday, August 23; from 5:15 to 6:15PM on the following days: Thursday, September 8, Friday, September 16; and from 5 to 5:15PM on the following day: Monday, September 19.

The Socialist Party—from 12 to 12:30PM on the following days: Wednesday, August 24, Friday, September 2, Tuesday, September 6, Monday, September 12; from 6 to 7PM on the following day: Friday, August 26; from 5:15 to 6:15PM on the following days: Thursday, September 1, Wednesday, September 7, Tuesday, September 13, and from 5:40 to 5:55PM on the following day: Monday, September 19.

[3] It is mutually agreed that officials designated by each party or group shall have complete charge of the programs assigned to that group. They will select the speakers and apportion the time. The station will, before each of these programs, make a brief announcement of the arrangement under which these broadcasts are given.

[4] It is further mutually agreed that these programs should be limited to a discussion of state issues [or national issues when the candidates for the United States Senate are the speakers]. Candidates for local or district offices may be invited to discuss party issues but the radio stations shall not be used in local or district campaigns.

[5] It is further mutually agreed that station officials will not undertake to censor in any way the material presented. [It is taken for granted that all speakers are desirous of avoiding charges that might be regarded as violations of the law of libel.]

[6] It is further mutually agreed that these arrangements are experimental in nature and should not necessarily be regarded as a precedent for future campaigns; that a meeting should be held after the primary election to draw up rules governing the use of the two stations in the pre-election campaign.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:

Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
Thurber M. Smith, S. J., St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Radio Trust Denies Free Speech

THE POWER TRUST last week proved that it has grown strong enough to put a censorship on the air. Hundreds of millions of dollars have been lost by investors in public utility securities, and a heavy part of this loss has fallen on savings banks. Professor William Z. Ripley of Harvard, one of the leading economists of the country and a cautious conservative in his general attitude, was asked to speak to the National Association of Mutual Savings Banks on ways and means of preventing similar losses in the future.

The National Broadcasting Company refused to broadcast Ripley's address! "I have been asked to blue-pencil my speech," said Professor Ripley, when he faced his audience. "I have never submitted to blue-penciling, and will not begin now." He did not begin—but neither did his scathing analysis of public utility financing get on the air.

When a man of Ripley's age, eminence, and known conservatism can be cut off the air, then free speech in this country does not go beyond the range of an individual voice. The power trust, with its ally or subsidiary, the radio trust, controls the air.

Canada has seen that menace coming, and has met it by moving to nationalize radio. What will the American people do about it?—*Wyoming Labor Journal*, June 24, 1932.

Administration and Supervision by Radio

L. F. TAYLOR

Superintendent, Sharyland Independent School District, Mission, Texas

SCHOOL ADMINISTRATORS, finding their work continually increasing, will look with favor on any device that will help them conserve and apply their time more effectively. In the last few months there has been placed on the market a new electrical device known as a sound-distribution system, which has given very satisfactory results in those schools where it has been tried.

A sound-distribution system is a combination of a public-address system, a radio, an electric phonograph, and a special switchboard to which the loudspeaker of each room is connected. The equipment may be arranged either in panel or cabinet form, and located in the administrator's office, or wherever desired. The wiring from the central office to each of the rooms may be run unnoticeably along the corridor walls. In the office is the microphone for use in speaking to any room or rooms. In the rooms will be found the loudspeakers which, in addition to reproducing, act as microphones and thus enable the administrator to hear to a fair degree what is going on in the rooms.

Reducing costs—The installation cost of the factory-made systems is prohibitive for many school systems. However, a good electrician can take a blueprint and assemble and install a sound-distribution system at a saving because of the low prices at which radio and public-address equipment can be purchased. An electric radio-victrola with a microphone attachment may be used with a special switchboard and loudspeakers in the rooms. The installation in the Blum Rural High School, Hill County, Texas, was assembled by the writer and used two years. Its contribution was satisfactory both from the supervisory and administrative viewpoint.

A few of the uses—The following list, tho not exhaustive, contains some which might be considered administrative, some supervisory, and some merely teaching devices.

- [1] Radio programs transmitted to any room or rooms.
- [2] Music appreciation thru radio and records.
- [3] Music supplied for parties and plays.
- [4] Radio and public speaking training for pupils.
- [5] Inter-room broadcast of recitations and programs.
- [6] Reviews by one grade listening in on recitation of lower grade on forgotten subjectmatter.
- [7] General and special announcements too short to warrant calling a general assembly, yet too important to neglect.
- [8] Short talks without loss of time in assembling.
- [9] Conversation with teacher in her room at any time.

[10] Observation of classroom work without the disturbing presence of observer.

[11] Assisting teachers in disciplinary matters which do not appear while the principal is present.

[12] More classroom observations with fewer steps.

Radio-supervision—The administrator, who is very often a supervisor as well, will find after trial that the system is an excellent supervisory device. Altho at the beginning some teachers were sensitive about being listened-in on, the writer found that this soon disappeared.

Absent observation can easily be overused, and should not be considered as a substitute for classroom visitation, but rather as a valuable auxiliary to it. I doubt the wisdom of the supervisor's taking the initiative in referring to any listen-in observation unless there is a sympathetic understanding between teacher and supervisor. It would be a wiser plan for the supervisor to keep in mind the mistakes and good points observed by listening in and refer to them only when verified during visitation. Observation by radio should acquaint the supervisor better and more quickly with the teachers because they can be observed in their normal teaching situations.



CHARLES T. CORCORAN, S.J., *director of Station WEW, St. Louis University, St. Louis, Missouri, new member of the Committee from the Jesuit Educational Association.*

In a hurried classroom visit there are probably several important phases of the teacher's work that are unobservable due to the presence of the principal. A few which might be enumerated are pupil spirit, social climate of the classroom, normal teacher-participation, and normal pupil-reaction to teaching stimuli. Had the principal been able to observe such normal activity before the visitation, he would have had a better background for constructive criticism of the teacher in conference. The sound-distribution system to a fair degree makes possible the observation of these normal classroom activities, where the system makes use of the microphonic loudspeaker arrangement.

Proves profitable—Only a comparatively small number of schools so far have been so bold as to invest in sound-distribution systems, but administrators reporting their use believe they make fairly large educational contributions, according to the recent survey made by Grayson N. Kefauver and Harold C. Hand. The experience of the writer confirms the opinions secured as a result of the survey. The experiment which is now in progress at Blum, altho begun at an early date when some of the apparatus had not yet been perfected, has already proved to be a profitable investment from the standpoint of teaching, supervision, and administration.

Predicts Still Lower Standards For Radio Programs

WALTER NEFF, assistant director of sales, station WOR, Newark, New Jersey, predicts that breweries, distilleries, and famous rendezvous will broadcast if the repeal of the Eighteenth Amendment is accomplished. Writing in the September 15, 1932 issue of *Broadcasting*, the outspoken organ of commercialized radio, p7, Mr. Neff says:

Breweries and wineries are polishing up their apparatus against the day when Congress lifts the embargo against the sparkling beverages that exhilarate or damn according to one's personal lights. . . .

Thus far, the managers of major stations have been reluctant to declare their position as to whether they plan to carry commercial programs setting forth the merits of the several brews and wines. It is known, however, that certain independent stations, including WOR, are studying the problems involved. . . .

There is no question that every famous rendezvous, or at least its modern counterpart, will spring into existence with the repeal of Volsteadism and they will want to get on the air. And the consensus of opinion in broadcasting circles is that they will get on the air; that the breweries will broadcast, and the distilleries as well, if the repeal of the Eighteenth Amendment is accomplished.

With all the disgusting, false, and harmful advertising now on the air, we find commercial broadcasters already looking forward to further polluting it.

Even in England, where all sorts of intoxicating beverages can be legally purchased, the radio listeners are protected against having it brought into their homes thru the radio. Here in America, will we next be hearing the announcer say, "Drink a quart of Sap's Beer twice a day and visit your neighborhood whiskey shop at least twice a week"?

It is the opinion of many that before many years, advertising by radio in the United States will be prohibited, as it is in England. How soon that will be, will depend on whether advertisers, advertising agencies, and commercial radio operators continue to insult the intelligence of the listeners.

Radio Chains Fail at Chicago

PUBLIC SERVICE could not compete with the opportunity to earn \$50,000 an hour, so listeners depending on the Columbia Broadcasting System or the National Broadcasting Company to furnish them complete radio accounts of the Democratic National Convention, were disappointed. Station WGN, Chicago, was the only major station having the courage to cancel its commercial programs between 7:30 and 9PM and broadcast the platform as presented at the convention. No doubt station WGN needed the revenue it might have derived from the sale of the time as much as did the "chains," but its interpretation of the doctrine of "public interest, convenience, and necessity," was much broader than theirs. Station WGN, being owned by a newspaper, operated on the theory that broadcasting is a public service and that the paramount duty of a

radio-broadcasting station is the publishing of news and events, rather than the selling of time.

Did the advertisers using the hours between 7:30 and 9 on that convention night, derive any benefit? Most people would be inclined to say, "no!" With the listeners all over the country at a fever heat to hear the platform, they could not help but be resentful when all they could get was commercial "clap-trap." Surely no advertised product is benefited by a forced and untimely presentation.

The present radio problem is even deeper than this. The power to select what the listener gets, confers enormous powers on radio stations and "chains." Select the better things and there will be a general elevating of the educational and cultural level of the people. The opposite effect can, and is now, in many cases, being secured by a conscious selection of the cheap and tawdry. One cannot but praise the high purpose of WGN, in "carrying on" in spite of heavy financial loss, but can he blame a radio system dependent on selling advertising, when it does its best to fatten its own coffers?

The ultimate solution is, no doubt, a system of radio, supported by those who receive the benefits—the listeners. How soon that will come will be determined by the farsightedness of the American people. Meanwhile, we should protect a reasonable amount of radio broadcast frequencies for the use of states for purposes of education and government.

Radio Abroad

CONTRASTING WITH THE DEPRESSION in the radio trade in this country—a depression so severe that the annual Radio World's Fair in New York and similar expositions in other cities have been called off—is the apparent flourishing condition of the radio trade in England and other European countries.

More than 200 exhibitors and 300 exhibits, strung out into five miles of radio equipment valued at \$5,000,000, were in evidence at London's National Radio Exhibition at Olympia in August, the greatest of its eleven shows to date. Germany's International Radio Exhibition on August 19 also was a record affair. . . .

Television is commanding considerable attention at the European shows, as it did at the more recent American shows. Short-wave sets and tone control on broadcast receivers were much in evidence at London's Olympia show. From the meager reports from London, it appears that nothing radically new, at least to American radio fans, was on display there, but the fact remains that the holding of the show indicates a buyers' interest that seems to be lacking in this country at a time when only the midget-set market seems to be active. England, of course, has less than 5,000,000 radios and Germany only recently passed the 4,000,000 set mark, whereas latest census computations place the number of American homes with radios at 16,000,000. —*Washington Star*, September 4, 1932.

THE BROADCASTING MEDIUM IN CANADA should be protected against being reduced to the level of commercial exploitation as it has been reduced in a neighboring country.—Sir John Aird in testimony before Canadian House of Commons, April 14, 1932.

Radio Broadcasting in the Philippines

A. V. H. HARTENDORP

Editor, Philippine Magazine

IT CAN HARDLY BE QUESTIONED that the radio is an instrument that will prove of increasing value, especially to the people of such a country as the Philippines, where millions of the population live on comparatively isolated islands. Before long the radio will appear to them to be not merely a means of entertainment, but an almost vital necessity. To the nation as a whole, the radio is the only means available for direct communication between the government and other social entities and the masses of the people.

There should be at least one good radio instrument in every town and barrio of the Philippine Islands, and the sale of some tens of thousands of instruments thruout the country would probably do more for Philippine progress than any other thing that could be so easily accomplished.

Listener's responsibility—But it must be emphasized to the individual radio owner that a good instrument does not assure him of worthwhile reception; and broadcasting will long continue to be the barbarous yap which, generally speaking, it is today, unless he asserts himself.

Radio broadcasting is so important, or will become so, that it should be either a government monopoly, as it is in European countries, or a private monopoly under strict government supervision. For the same reason, as great care should be exercised in the selection of a director of an important broadcasting station as is exercised in the selection, say, of a director of a government bureau of education.

Music—Since the radio appeals to the mind exclusively thru the ear, a good part of the broadcast may very well be music. There can be no question, however, that music is broadcast to such an extent that people are growing sick of it. Never has the world been so flooded with music. Music used to have for us the preciousness of something rare; it was reserved for our hours of relaxation and recuperation. Now we have it over the radio for breakfast, for lunch, and for supper; at work, at night, and after we go to bed. No wonder that under such circumstances, great musicians, among them Rachmaninoff, have railed against the radio as the devil's own device against the divine art. But it is one thing to attack the wrong and stupid utilization of the radio, and another to condemn the radio itself.

Due to atmospheric conditions and other causes, radio reception can never be even as satisfactory as the playing of good record music on a phonograph. However, the radio is a boon to people of musical taste living in isolation or to those who are for any other reason unable to attend concerts. But musicians need not fear that either the phonograph or the radio will ever supplant the actual public performance of music. Music lovers able to attend concerts will continue to attend them and will listen over the radio only when there is no other way.

Less and better radio—The solution to the broadcasting problem lies chiefly in giving the people less, much less, and better, much better. Both the radio industry and the public

would be the gainers if broadcasting were cut down from all day and most of the night to two or at most three hours after six o'clock in the evening—eliminating most of what is now "buncoed" as entertainment.

What we should have in the Philippines are the market broadcasts for the sake of radio owners in the provinces; a brief summary of the most important news of the day; one or two short lectures prepared, perhaps in series, by the extension department of the university or by such government bureaus as those of health, education, agriculture, forestry, and science; and an hour or a little more of good music.

How often, in the Philippines, have we suffered the barbarity of listening to a broadcast of the Constabulary Band on the Luneta—good music—with the pauses between the concert numbers filled in with jazz records, completely destroying the effect of the Luneta music and causing hundreds of radio listeners to switch off in disgust!

Broadcasters seem to be afraid of nothing so much as silence, and the last strains of the finest pieces of music are interrupted by such an incongruity as *Stand by, please. You will now hear a Victim recording of the popular Stamping Hot Mamas by the Fiends of Broadway Orchestra.*

Talking about the incongruous! Often on a Sunday morning the stay-at-home is afforded the opportunity to tune in on a church service,—or his neighbor does it for him—and he is compelled to listen to a long and solemn prayer which may not at all harmonize with what he at the moment may be doing or feeling. The heights of frenzy may be reached when some one immediately thereafter switches on a piece of jazz.

Jazz should be abolished from the air entirely, at least as a regular dish. The ringside reports of prize fights should also be eliminated, except perhaps of the most important contests, and the same should go for ball games. The scores could be reported with the day's news. Speeches and addresses made upon special occasions, as at the inauguration of a new governor-general or the opening of the legislature, should of course continue to be broadcast.

Don't copy U. S.—The Philippines, as a relatively isolated country, off by itself, not yet in the grasp of a conscienceless band of private broadcasting corporations, may well determine upon and follow a radio development program of its own—liberal, instructive, entertaining, delightful, and, at times, even beautiful. We need not take all our ideas from the master minds in the broadcasting game in the United States!

AFTER ALL, if the American public had been fed a wellbalanced diet over the air there would be little discussion now of the radio problem.—Levering Tyson.

Evening Hours Preferred

COLORADO AGRICULTURAL COLLEGE had been giving educational programs at 5PM once a week over a commercial radio station in Denver. In an endeavor to secure facts concerning the preferences of members of its audience a questionnaire survey was conducted by F. A. Anderson, director of the college extension service and in charge of its radio programs. A total of 1532 usable returns was tabulated. Only 213 of those replying did not have radios. The 8PM and 7PM hours were by far the most popular according to the tabulations.

The questions and responses follow:

[1] Do you listen to the programs presented by the extension service, Colorado Agricultural College, over station KOA at Denver, Wednesday evenings at 5 o'clock? Yes—749; No—491.

[2] Has the change in time to 5 o'clock made it inconvenient for you to listen in? Yes—965; No—248.

[3] Are these programs of sufficient interest and value to you that you desire to have them continued? Yes—970; No—202.

[4] Do you listen to the daily Farm and Home programs broadcast by the U. S. Department of Agriculture over the National Broadcasting Company network? Yes—945; No—277.

[5] Do you consider our programs in any sense a duplication of the National Farm and Home Hour? Yes—221; No—594.

[6] Please designate time of day for our college programs that would be most acceptable to you [indicate by check mark after period designated]. Morning—18; Noon—94; Afternoon—80; Evening—971.

[7] What hour of the day or evening would be most satisfactory to you to listen to our college programs? 12M—87; 5PM—65; 6PM—90; 7PM—350; 8PM—411; 9PM—33.

[8] Do you get all the information you wish on markets from the present radio broadcasting schedule? Yes—735; No—147.

In spite of the findings of the questionnaire study, the station asked the college to change the time of its program to 4PM. This the institution refused to do, preferring to discontinue broadcasting rather than use an hour at which farm people could not be reached.

Following the discontinuance, the station suggested a noon-day hour. In spite of the fact that listeners had expressed a distinct preference for early evening hours, the college finally was forced to accept the period from 12:30 to 1PM each Monday and has continued on the same schedule since that time. It is

probable that with the exception of the hours of the early evening, the noon hour is preferred to any other daytime hour by agriculturists.

This is just another demonstration of the need of an adequate number of publicly-owned radio stations to provide programs in the "public interest" at the most appropriate hours. It is only in this way that the people can be protected in a country which has allowed itself to become largely dependent on an advertising-supported radio.

Should Be Non-Commercial

RADIO STATIONS owned by publicly-controlled educational institutions should not accept advertising. At the present time only a few do and they have not on the whole been very successful. Most institutions which started to sell time, finally retired from broadcasting and assigned their licenses to commercial operators.

There are three principal reasons why we here at the University of Illinois will not accept advertising and I believe these same reasons will apply to other similar institutions.

[1] This is a tax-supported institution and we carry on no activity which might be considered in competition with any line of business in the state. Of course we must dispose of our surplus agricultural products, including milk, butter, eggs, and the like, but all such items are sold at a price higher than the local market.

[2] Education and commerce simply do not mix. While it would not be true that to accept an advertisement would mean the university was indorsing that particular product, the inference would be there, and it would certainly be harmful to the best interests of all concerned. Any tests made in our laboratories or any research work carried on is done for purely scientific purposes and even tho one line of products, or one make of a machine proves to be superior to another, that information is never allowed to be used in a commercial way.

[3] We feel that the use of advertising would cheapen any educational broadcast we might render. Advertising over a commercial station may be all right in the eyes of many people, but in the eyes of those who are concerned primarily with education it is not all right. For instance, I learned yesterday that one of our medical men had been offered by a commercial concern as high as \$600 per talk for a series of discourses on a certain subject. He turned the offer down because he did not wish to commercialize his knowledge.—Jos. F. Wright, director, radio station WILL, University of Illinois.

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Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

The Future of Radio in American Education

JOY ELMER MORGAN

Chairman of the National Committee on Education by Radio and Editor of The Journal of the National Education Association

THE WORLD IS NOW passing thru one of the greatest transitions in the entire history of civilization. Under circumstances like these it is not necessary to point out the importance of adapting schools to new conditions. Everywhere education is recognized as the hope of civilization. If the schools do not adapt themselves to the new conditions, if they do not take hold of the new methods and tools which are now available, some other institution must eventually take their place.

It is not an easy thing to undertake new enterprises. One finds many difficulties in the way. Among others might be enumerated mass inertia and preoccupation; the failure of the first enthusiasts who underestimate the difficulties to be encountered; the absence of technics and procedures; the absence of facilities for the training of specialists who are to do the work; the uncertainty of results; the high cost of early equipment; and finally the difficulty schools find in engaging in new undertakings on account of the present economic emergency. I have enumerated these obstacles in the way of new undertakings because they are all present in education by radio.

School radio—Let us now turn to the possibility of radio in the formal schools. Is it possible to teach by radio? There is enough experience now to answer this question in the emphatic affirmative. The experience of leading countries of the world in using radio in the schools substantiates this assertion.

The Ohio State Department of Education maintains under legislative appropriation the Ohio School of the Air. Oregon, Iowa, Michigan, and Wisconsin are doing notable work. The Cleveland public schools have been experimenting with the teaching of arithmetic in the third grade correlating the work of a master teacher on the radio with lesson outlines and the work of the classroom teacher. The children who have had this radio instruction have done better work than the children who have not had it, while at the same time the tests of school physicians show an improvement in their hearing. This last fact suggests that radio may have a similar effect on the development of our auditory senses as printing has had on our visual faculties.

Let us now turn from arithmetic to a simpler subject like reading for appreciation. Think what it would mean to the children of New Hampshire if you could go into one of your fine schools and select a child who has read one of the third-grade memory selections better than any other child in that room, who has a fine voice and enunciation, and a keen appreciation of the quality of that selection. Put that child at the microphone and let every child in New Hampshire listen to his voice read that beautiful poem. This procedure, repeated day after day, year after year, will build into the very lives and souls of the children appreciation of our literary and cultural heritage.

What would a statewide system of education by radio in New Hampshire be like? To begin with, we may assume that within ten years every home and classroom in the state of New Hamp-

shire will be equipped with a radio receivingset. We may assume that New Hampshire is going to demand her rights and insist on having from the federal government—just as Germany, Belgium, or Switzerland would insist on having in the European conference—her own chance to reach everyone of those receivingsets in the homes and schools. There is no reason why the federal government should not assign to each state a channel or channels which would reach every home and school in that state. There would still be an abundance of channels to serve every legitimate national purpose.

Let us next assume that the New Hampshire government and the members of the legislature have awakened to the tremendous importance and the wonderful economy of using this most powerful medium of reaching the human mind, and that the state will gladly appropriate the relatively small funds which are necessary to maintain this service.

One of the greatest obstacles to the use of radio broadcasting in the schools has been the lack of coordination between the planning of radio programs and the planning of school programs and curriculums. Radio programs have been largely in the hands of sponsors who operate in cities and states distant from the points where schools are actually administered. A few nationwide or even worldwide programs may be desirable, but the major development will not come until the broadcasts are undertaken by the people who are legally and constitutionally responsible for the operation of the schools, namely the state and municipal education authorities. This will give the maximum opportunity for variety and experiment.

Let us recognize at the start the fundamental difference between education on the radio and sales talks on the radio. Sales talks seek to reach the large popular audience which gives a decided tendency to pull down and to cultivate the lower tastes. Education seeks to reach not one large audience but a succession of smaller audiences composed of people who are interested in special lines of study and improvement.

How shall the program be set up? The state superintendent, being the head of the school system, calls together other state departments such as health and agriculture, the heads of universities and colleges, representative superintendents of the city, town, and county schools. It is agreed that all the educational resources of the state will be mobilized and put at the disposal of all the schools and homes of the state and that there will be microphones at all important educational centers.

The actual management of educational broadcasting will require special staffs carefully trained for that work. Radio broadcasting cannot be effectively done as a side-line. It is a fulltime, highly technical occupation. Educational broadcasting is vastly more difficult than commercial broadcasting. The people who do this work should be broadly trained in education, sociology, economics, psychology, and the history of civilization.

The next problem will be *How can we discover, in each field in which radio service is possible, the master teacher—the one*

Abstract of an address delivered before the New Hampshire State Teachers Association, Manchester, N. H., October 22, 1932.

in a thousand whose skill and insight are a priceless asset? Commercial broadcasters today are paying tens of thousands of dollars for talent that exists unused in the schools of this country. By means of radio it is possible for New Hampshire at a relatively small cost to place at the disposal of every teacher in either country or city a corps of master teachers. The task becomes the simple one of finding out who, in all the fine elementary schools, high schools, and colleges of New Hampshire, has the best contribution to make in a particular field.

In New Hampshire—There are in New Hampshire some 465,000 people. There are approximately 72,000 pupils giving their full time to the work of the schools. These 72,000 pupils will be distributed thruout the various grades. For example, if Miss A is assigned to teach third-grade arithmetic over the radio she will have a class of about 7000 pupils. Perhaps 40 percent of the class period can be devoted to radio teaching, leaving the other 60 percent for the regular classroom work, thus freeing the classroom teacher to give larger service to the individual pupils. Likewise there may be a class of over 5000 in the health lessons for the seventh grade, a class of over 4000 in the history lessons for the eighth grade, a class of several thousand studying American literature.

Within a few years each college and university, each city school, each county school system, each public library, each community organization would be making a rich and vital contribution to the cultural advance of the state. The improvement of the people would deliberately and inspiringly come to be the major enterprise of the school. The success of radio would be measured not by a sales-talk yardstick but by the growth in culture among the people.

Adult education—There is another phase of education by radio which is probably even more important than its use in the school classrooms. That field is adult education. There are millions of adults in the United States today who are as helpless as children amid the confused conditions which surround them. They need instruction to guide them in the management of their personal affairs, to help them understand the conditions of today's life, to enable them to adapt themselves to new conditions, and to play their part in the civic and cultural life of our time. There are millions of grownups who now have considerable leisure thru unemployment or the shortened working day, so that they have time for study and the improvement of their minds. The task of giving educational service to this vast adult population is immediate and pressing.

Radio in the hands of the college and university authorities of a state like New Hampshire could easily develop a program of adult education that would reach into every home of the state, that would bring into that home the best cultural heritage of the state, that would help the home to create a wholesome atmosphere for the rearing of children, that would acquaint the people with the economic resources, problems, and possibilities of the state.

While many thousand grownups are already enroled in adult schools of various types, indicating that the idea of lifelong education has already gained recruits, sufficient social responsibility in connection with this movement has not yet been developed. Inevitably society will come to support a program of education extending thruout life. Radio will take its place in

this program along with the textbook, the laboratory, and the newspaper.

It is thru the education in our schools, thru the education of adults, and thru the general community influences such as radio that we build and maintain our civilization. It is natural that we should think of civilization in terms of its machinery and its scaffolding. They are merely an incidental phase of it. When a great catastrophe wipes out a city by fire or storm or earthquake, we are astounded at the speed with which the material structure can be replaced.

Debasing culture—It is not so easy to replace the real foundations of civilization. Fundamental ideals and habits of character are not made over in a moment or in a year or even in a generation. Just now there is much discussion of our system of money and in some quarters there is fear that the coinage will be depreciated and debased. There is another coinage far more precious, far more essential to human happiness and stability than the pieces of metal or the sheets of paper which we use in our daily financial transactions. This more fundamental coinage consists of the ideas, ideals, purposes, motives, manners, and morals which make up the culture of the people. To debase this culture is a much more farreaching and serious matter than to debase the financial coinage of a nation.

We would strike down a man who would go into one of our art galleries and deface a beautiful painting, but the daily degradation of that more universal and precious heritage, the mother tongue, and of our manners and morals is going on over the radio on a colossal scale. This debasing of our cultural coinage may easily destroy all that homes, schools, and churches combined can build up, and the Smart Alec will possess and destroy civilization itself.

Comparative costs—New Hampshire is a small state as our American states go, but it is abundantly able to support its own program of education by radio. The cost of using radic for education is insignificant as compared with the cost of textbooks and other forms of equipment. An ideal radio equipment for the schools of a state would include a loudspeaker in every classroom of the state. It would include some kind of microphone pickup in every school in the state, including the high schools, the colleges, the teachers colleges, the state department of education. It would include broadcasting facilities which would reach every home and every classroom in the state so that there would be the possibility of picking up a program or a unit of instruction at any point and of distributing it to classes at any other point. To develop this close linking of the school system of the state so as to mobilize its entire educational resources would be relatively inexpensive. The cost of building and operating a firstclass radio broadcasting station is no greater than the cost of building and operating a single school plant of average size.

A few schools, a few states are already at work. Experiments will grow into established practise; the benefits of the new procedure will spread until within 10 or 20 years the radio broadcasting system under the direct operation of the state will be the major educational enterprise in the state. Life will take on a new significance. People's minds will be less occupied with the petty and the trivial; there will be more devotion to the fine, the important, the beautiful, the useful, the substantial.

Fundamental principles—I wish now to propose some fundamental principles which should govern the administration of radio broadcasting in any country. These are the principles which I set forth before the Special Committee on Radio Broadcasting of the House of Commons at Ottawa in April 1932.

[1] The ownership of air channels should remain permanently the property of all the people under complete control of the national government. By the very nature of the situation vested rights in the air should not be given to private parties.

[2] The public interest, convenience, and necessity should be the first consideration in fact as well as in theory. The rights of the listener are supreme.

[3] In the assignment of radio broadcasting channel units to different countries and to different parts of a country due weight should be given to [a] population, [b] area, and [c] peculiar natural conditions affecting broadcasting and reception.

[4] The freedom of the air should be preserved so that all groups and interests within the nation have as fair a chance to be heard thruout the nation at the most favorable times as any other group. The spirit of reform is one of the greatest assets of any nation and is to be encouraged rather than crushed.

[5] Particular care should be given to the rights of states, provinces, and localities. The very existence of a state depends on its ability to reach all its citizens with the most effective means of communication which are available. The presence within the state of commercial stations which may be sold at any time to outsiders does not protect this right of the state. It is not necessary to guarantee that the state shall have a particular channel; the situation may be met satisfactorily by providing that the state shall always have a channel. This allows for the adjustments which will be necessary as a result of new inventions and international agreements.

[6] Distinct channels should be provided for each kind of service in order that the listener may at any hour of the broadcasting period have a choice between several kinds of service. Putting all kinds of service on each channel tends toward monopoly. The advertising and popular programs tend to monopolize the best hours which leaves no time at those hours for people interested in educational and quality programs. Radio programs of various types should be so stabilized at fixed hours and on fixed channels that listeners will remember the type of program to expect.

[7] The educational interest, including universities, colleges, high and elementary schools, should have independent channels under its complete ownership and management. The maximum effectiveness of education by radio requires that it deal with a succession of smaller specific audiences who are prepared and eager to learn definite things, just as the school is subdivided into grades and classes. It cannot and should not be expected to reach the same groups as the popular entertainment type of program.

[8] If commercial programs are allowed on the air at all they should be safeguarded so that commercial interests shall not be allowed to make false statements on the air or to go over the heads of parents in an effort to form the habits of the children. Civilization cannot progress by abusing its children.

[9] If radio stations are privately owned they should not be allowed to ally themselves with other monopolies which have a powerful interest in the control of free speech. Thus it should not be possible for one monopoly to control both newspaper and radio in a given territory. If private monopoly is a social danger in the material field it is an even greater danger in the field of ideas and public information.

The future of education by radio in the United States depends in large measure upon radio reform based upon such fundamental principles as these. I believe that such reform is inevitable. While there are occasional bright spots in our radio broadcasting, the programs as a whole have grown steadily worse. There is a marked loss of public interest. Many people are ignoring radio entirely. The sale of radio sets has fallen off at the very time the sale of sets in England is increasing. Our people resent radio advertising and often deliberately refuse to buy products featured in radio sales talks. Income from radio advertising is falling off and may at any time prove inadequate to maintain our programs.

There is increasing dissatisfaction on the part of members of Congress. One evidence of this dissatisfaction is the Couzens-Dill resolution which required the Federal Radio Commission to make an investigation of the possibilities of government ownership of radio and of education by radio. As was to be expected, the Commission conducted that investigation from the point of view of the commercial interests as distinguished from the point of view of the listener or of education and as a result there is already demand for an independent and impartial investigation by the Congress itself.

Canada—Our neighbor to the North has already recognized the unsatisfactoriness of the American system which it at first attempted to follow, by working out a plan of its own, involving public ownership and operation in which the various provinces and dominion governments will cooperate. It is unthinkable that America will be satisfied with things as they are in the face of the breakdown of commercial broadcasting, the loss of public interest, and the persistent interference with the rights and needs of the states and localities.

The question of radio is particularly timely in view of the central theme of this convention—*Educating the Whole Child*. The new world which is created by radio is a part of the child's world. It will help to determine his ideals, his attitudes, and his tastes. He will learn much of his language and his speech from radio. His taste for music and entertainment will depend in considerable measure on what comes into the home by radio. Much of the information which is to guide him in the management of his daily life and in his activities as a citizen will come to him thru broadcasting channels. *Shall those channels be used to further the interests of private commercial monopolies? Shall they be dominated by big city centers, or shall they be brought close to the American culture?* The answer rests with you. The National Committee on Education by Radio can do little except as the people in the various states whose civic and educational interests are at stake are willing to do their part.

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Radio Debates for High Schools

HAROLD G. INGHAM, director, radio station KFKU, University of Kansas, announces that thru the university radio station, high schools and interested adult listeners are being provided with a series of four 30-minute radio debates on the taxation question which is the subject adopted by the State High School League this year. The debate series is preceded by four 15-minute radio periods devoted to a discussion of the question itself. These eight radio periods are in charge of E. C. Buehler, director of forensics at the university.

The introductory series consisted of four talks by Mr. Buehler which were given between 2:45 and 3PM on October 18, October 25, November 1, and November 8. The topics covered were as follows:

[1] General Nature of the Question and the Sources of Material.

[2] Interpretation of the Question and Definition of Terms.

[3] Survey of the Main Arguments for and against the Proposition.

[4] Questions and Answers Dealing with Technical Points.

The debates themselves cover different phases of the question and are presented by Mr. Buehler's debate squad at the university. They were scheduled between 6 and 6:30PM, November 9, 16, 30, and December 7. Following each of the debates Mr. Buehler is scheduled for a five-minute criticism and summary. The topics to be discussed are:

[1] Is the Tangible Property Tax Fundamentally Unsound in Theory and Principle?

[2] Should We Have State Income Taxes to Offset the Property Tax?

[3] Should We Have an Expansion of Sales Taxes to Relieve the Tax Burden on Property?

[4] *Resolved*, That at Least One-half of All State and Local Revenues Should Be Derived from Sources Other Than Tangible Property. [Discussing the alternative plan of the negative.]

Another Radio Inquiry Proposed

COMMERCIAL RADIO INTERESTS must feel more and more confident of the hold they have on the people of the United States. The recent decision of officials of the Columbia Broadcasting System to permit price quotations has aroused a storm of protests from listeners and radio writers, which it is freely predicted will lead to a congressional inquiry.

Robert D. Heinl, veteran radio columnist for *The Washington Post* in the issue of September 25, 1932, commented as follows:

The opening of the ether to national advertisers for direct sales campaigns may lead Congress to make an inquiry into the matter . . . any violent reaction on the part of the listeners to direct selling over the air will be almost sure to lead to an investigation.

The move by William S. Paley, president of Columbia, was considered a very bold one in Washington, inasmuch as price announcements, up to this time, have been frowned upon by the Federal Radio Commission. . . . at hearings, it has usually been a point against the station before the bar to admit the quotation of prices. . . .

Altho radio commissioners are noncommittal, they apparently were as surprised as anyone when Mr. Paley's announcement was made. As far as we have been able to learn the Radio Commission was not consulted with regard to the move nor was their approval sought. At least one member of the Commission seemed to show irritation about the Paley announcement when asked if he had anything to say about it. . . .

Bar Committee Repudiated

THE COMMITTEE ON COMMUNICATIONS of the American Bar Association has little standing with the legal division of the Federal Radio Commission or with attorneys engaged in radio practise if one may judge from the discussion of its 1932 report at the open meeting held in Washington on October 10.

Judge Ira E. Robinson, former member of the Commission, was the most voluble critic of the report. He felt that it was an indictment of the Commission and if true, the charges should be aired before the Senate rather than before the Bar Association. Among others who criticized the report were Duke M. Patrick, chief counsel of the Federal Radio Commission, Paul D. P. Spearman, Thomas Littlepage, George W. Sutton, F. P. Lee, and Horace L. Lohnes.

It is understood that Louis G. Caldwell, chairman, prepared the report for the committee of five members. It was unfortunate if not significant that John W. Guider was the only committee member present to attempt its defense.

The crystallization of procedures advocated by the Bar Committee, if adopted, would practically eliminate the need for a radio commission. A clerk, by the application of a set of rules, could instantly decide all applications. The purpose behind the establishment of the commission was to make it possible for each case to be judged on its merits and not to be either granted or denied by the use of rigid rules of procedure.

Is this report an incident in a nationwide scheme among radio trust lawyers to dominate the sources of legal opinion in America with relation to radio by controlling committees within the American Bar Association, legal periodicals given to radio, and radio law courses in universities? These are questions for the much-needed congressional investigation of radio to consider.

Smut on the Radio

A NOTE OF WARNING is contained in the comments of several columnists regarding the quality and use of humor on the radio. Roy Robert, writing in the *Atlanta Constitution*, says soberly: "It is to be desired that more care be directed in the various stations towards the eliminating of the tendency of certain comedians towards a slapstick obscenity that perhaps has a place in the Bowery burlesque halls but which is certainly revolting to a large majority of radio listeners. Cheap humor is bad enough mixed with puns at its very best, let alone being more mephitic with the addition of vulgarity and poor taste. . . . Some will offer the argument that the radio can go as far as the stage in risqué suggestions. But this is far from true. The public has the opportunity to choose those stage shows which please and to remain away from those which offend. . . . The public will not approve of smut in the home, whether it be thru the medium of radio or the kitchen stove. . . ."—*Broadcast Reporter*, October 24, 1932.

Canada, where radio advertising has not at any time, reached the proportions it has in this country, recently made a very decisive stand against air advertising. It has recently passed regulations drastically revising its practises. Apparently the United States is going to see what will happen if a country goes as far in the opposite direction.

A Congressional Investigation of Radio

RADIO IN THE UNITED STATES will be investigated by a committee of Congress created for that purpose. When that will come, is a matter of conjecture, but the rumblings of discontent continue louder and more insistent. Persons not connected with the industry or depending on it in any way for a livelihood are beginning to see that a "new deal" is the only solution. The Federal Radio Commission itself sees the handwriting on the wall as is evidenced by the exhortation of one of its members, Harold A. Lafount, delivered to the National Association of Broadcasters at their recent Saint Louis meeting. A few of Commissioner Lafount's most pertinent remarks were:

Everybody knows that the operation and maintenance of a radio broadcasting station is an expensive undertaking. Somebody has to foot the bill. *In the end, under any system, it is my belief that it is the public who pays.* The manner in which it pays differs in accordance with the various systems in use. In England the public is taxed directly. In the United States money for the operation of stations is obtained thru . . . advertising. The public wants service; the advertiser wants the public's attention and is willing to pay for it. He, in turn, adds the advertising expense on the price of his goods, so *in the end the public pays* indirectly for its service. . . . *the danger of over-commercializing is a real temptation for which many stations have fallen.* Instead of operating primarily "in the public interest, convenience, and necessity," they are operating mainly for the profits they gain thru excessive and uninteresting advertising. In so doing, I warn them, they are "selling their birthrights for a mess of pottage" and their judgment day will come. *Already an irate public is besieging their representatives in Congress for drastic action.*

. . . public interest should not be construed to mean entertainment only. An intelligent presentation of educational material is, in my opinion, imperative, and will increase the listening audience, consequently the demand for time by advertisers.

. . . I am convinced that the day of cleared channel stations on either the Atlantic or Pacific Coast has about gone, regrettable as it is to me.

There are four recent occurrences in the radio field that make a Congressional investigation especially opportune at this time.

First: Six agencies prominently mentioned in connection with a better utilization of radio, have just completed a thoroughgoing survey of the use of radio by the 71 land-grant colleges and separate state universities. This study contains the following chapters: Objectives of College Broadcasting as Viewed by College Executives; Financial Aspects; Existing Facilities; The Control and Operation of Broadcasting as Viewed by College Executives; Administrative Aspects; The College Radio Program. As a joint project, the survey will be of especial value in making an accounting of the stewardship of the colleges and universities in respect to the relatively insignificant portion of the radio spectrum allotted to them. The National Committee

on Education by Radio financed the study, furnished the services of its research director to direct, and its staff to tabulate it. One member of the staff from the federal Office of Education and one from the Department of Agriculture served as associate directors of the survey. The Association of Land-Grant Colleges, the National Association of State Universities, and the National Advisory Council on Radio in Education were the agencies in addition to those previously named that cooperated in the study. It is being printed and will be ready for distribution in a short time.



ELMER S. PIERCE, *principal of Seneca Vocational High School, Buffalo, New York, and director of radio station WSVS, one of the two broadcasting stations operated by public-school systems. Graduated from Alfred University in 1908, he received the Ped. D. degree from the same institution in 1927.*

Second: The Federal Radio Commission on June 9, 1932, transmitted to the Senate its answer to the Couzens-Dill Resolution No. 129. This was not a fact-finding document but a defense of the present radio system. It neglected a number of fundamental principles of research and avoided two fundamental considerations concerning radio itself: [1] The economic basis of radio broadcasting is unsound. The rate structure is based on a capitalization of supposedly publicly-owned channels. [2] The radio audience is in reality composed of a group of minorities. To serve the interests of these minorities is in direct conflict with the demands of advertisers whose continued support can only be had by collecting the largest possible audience.

Third: Canada has recently decided to nationalize radio. This came following an exhaustive study made by a royal commission headed by Sir John Aird. Among its recommendations were the elimination of direct advertising, financing thru license fees, and provincial control of programs. After giving the people ample time to consider the Aird report, the House of Commons last spring held hearings on the question and concurred in the principal findings on May 11, 1932. Their decision was, no doubt, influenced by their experience with and close proximity to the so-called American radio system.

Fourth: The Ninth International Radiotelegraph Conference which opened in Madrid, Spain, on September 3, has considered a number of questions of vital interest to the United States. The widening of the broadcast band, an equitable division of the North American frequencies, and provision for the representation of public interest in future conferences are among the questions at the forefront at this time.

It is for these reasons that the National Committee on Education by Radio adopted a resolution at its meeting, November 21, urging upon Congress the need of a thoro investigation of the whole field of radio broadcasting by a Congressional committee created for that purpose.

Suggestions for Radio Teachers

[1] Radio talks should be typed double space on one side of paper. Papers should be numbered consecutively. Papers pasted on cardboards will prevent rustling.

[2] Any pause to be made by the speaker should be indicated on the paper thus: pause—six seconds.

[3] Do not time your pauses with a watch as the tick can be heard over the radio. A finger-action for counting seconds is better.

[4] Introduce the subject of your talk by making a clear, brief, and self-explanatory statement.

[5] The radio talk should sound like informal conversation rather than a lecture.

[6] Present the talk on the level of pupils with a mental age of thirteen years.

[7] Make suggestions, state facts [from a reliable source], but do not give advice or preach to your audience.

[8] Informational details are better than mere generalities.

[9] Practise your talk a number of times, both silently and aloud, for the benefit of familiarity and time.

[10] Speak in a natural conversational tone directly into the microphone.

[11] Do not change the distance from the microphone or turn your head during the presentation of the broadcast.

[12] Use easy, non-technical words that may be instantly recognized by your audience.

[13] Avoid, whenever possible, words containing the high frequency letter "s"; substitute words having similar meaning; namely, instead of the word "scare" use "frighten." Avoid breathed consonants.

[14] Avoid, whenever possible, words ending in "p" or "t." They may sound similar over the radio; for instance, such a word as "suit" might sound like "soup."

[15] The average rate of speech is suggested from 130 to 160 words per minute. When speaking to elementary children the rate should be less than 130 words per minute.

[16] Pause—"phrase your topic" to interpret clearly its meaning.

[17] Repeat pertinent directions or facts that may not have been understood the first time.

[18] Try to anticipate the reaction of your listeners. Experiment with a small group, if possible, before attempting to broadcast on a large scale.

[19] Keep up the interest of your listeners by being interested in your own presentation and maintaining an enthusiastic dynamic rendition. Try to develop a pleasing radio personality.

[20] A well-sounding topic is no indication that the listeners have fully benefited from it. A radio presentation is no better than its "follow-up." This may be accomplished by: first, having the radio speaker suggest questions for further study; second, having printed material available upon request of the listener; and third, having the classroom teacher continue after the presentation by [a] asking carefully-prepared questions, [b] further discussion of the topic, [c] assigning reference material to pupils, and [d] distributing printed material that will further enrich the lesson and tend to make it more worthwhile.—M. R. Klein, Nathan Hale Junior High School, Cleveland, Ohio.

Iowa Psychology Series

THE STATE UNIVERSITY OF IOWA on October 14, began a series of 25 radio talks in psychology over its own broadcasting station, WSUI. These talks are all given by members of the faculty of the Iowa institution and are under the direction of Dean Carl E. Seashore.

Realizing that academic instruction thru the medium of radio is destined to play an important rôle in the near future, these lectures are in the nature of a trial series for the purpose of determining [1] the appropriate level and style of radio address in an academic subject, [2] means of recording the address for reproduction by other radio stations and by phonograph, and [3] ways of utilizing the printed address in the follow-up for extension of the service.

A new recording device has been developed in the WSUI laboratory which makes it possible to make very satisfactory phonograph records of each lecture. The records of this well-organized series will be made available to other radio stations desiring to carry the program. Broadcasting from a record furnishes a good substitute for expensive chain broadcasting from a single station.

The results of this experiment at WSUI will be watched with interest by both psychologists and educational broadcasters thruout the country.

Backwardness of Movies

THE COMMERCIAL ORIGIN of the film was blamed by R. S. Lambert for its backwardness compared with the British non-commercial radio system. Mr. Lambert, who is director of talks of the British Broadcasting Corporation, expressed this opinion in an address entitled "The Changing Audience," given before the Annual Conference of the British Institute of Adult Education at Oxford, September 24. *The Listener* [London], in its October 5 issue p484 had the following comment to make on Mr. Lambert's talk:

... Mr. R. S. Lambert drew attention to the educational development of the sister art to broadcasting, that is the cinema. He attributed the backwardness of the cinema in exercising a cultural influence similar to that of wireless to its commercial origins and to the fact that the box-office standards of values prevailing in regard to films were incompatible with the recognition of and catering for the needs of minority interests. At the present time, however, the situation was changing: the film industry required new markets and must seek them among the large class of intelligent persons who hitherto had kept away from the picture houses. The best way to influence the film for good was to introduce a centralizing body, as had been done in the case of wireless. It was likely in the near future that such a body would come into existence in the form of a National Film Institute.

WSVS Broadcasts Travel Talks

THE BUFFALO MUSEUM OF SCIENCE is utilizing radio station WSVS on Tuesdays at 2PM in reaching listeners with its series of travel talks. The five travelogs presented during November were as follows: A trip to the Hawaiian Islands; A round-the-world Cruise [three instalments]; and The Florida Keys. WSVS is owned by Seneca Vocational High School, part of the public-school system of Buffalo, New York.

Radio and the School

CHARLES N. LISCHKA

Assistant Director, National Catholic Welfare Council, Department of Education

RADIO IS A NEW SCIENCE having intricate technical problems that only the specialist understands; it is a new art that only the expert can practise with perfection; and it is a new industry requiring the guidance of versatile men toward proper adaptation to finance, to law, to politics, and to the public welfare. Radio used to be a curiosity and a plaything; it has become a common instrument and an uncommon power in private and public life.

Radio as an instrument and as a method of scholastic teaching is an actuality, tho its systematic employment on an extensive scale is still a dream. It is forever to the discredit of American educationists that the prompting of commercial interests was required to bring them to a realization of its educative value and classroom usefulness.

School uses—What can be taught in the classroom by radio? Almost every subject in the curriculum, including penmanship, drawing, and manual art. The most popular subjects are geography, history, music, English, literature, arithmetic, travelogs, stories, dialogs, dramalogs, health, civics, current events, foreign languages, nature study, character education, art appreciation, physical education, vocational guidance, domestic science.

There is, of course, no good excuse for the employment of radio in school unless it can accomplish something that cannot otherwise be accomplished, achieve a certain result better than by other means, or serve some administrative purpose. Under some subjectheads the radio can do remarkable things; for example: in literature, it can bring to hundreds of classrooms in scattered towns a talk or a reading by a living author; in current events, it can, thru the description of an eyewitness, make the school the very scene of a distant civic function; in foreign language, it can bring to a poor or remote school a lesson by a noted native teacher.

The teacher—What advantages does the classroom teacher gain? He has the opportunity to listen to a model lesson given by a master—for such the radio lesson should be. He is free to observe carefully the attention and the reaction of his pupils. His pupils are constrained to learn to withhold their questions until the end of a discourse. He may be made familiar with a new viewpoint. The radio instructor himself has the privilege of teaching a large and receptive group; perforce he takes pains to be wellprepared; he strives to be clear and concise, for he feels that he is under critical scrutiny.

The pupil—What advantages does the pupil gain? The novelty and variety in teaching personality, in subjectmatter and in presentation stimulates and pleases him. He is taught by an expert. The teaching of certain subjects is more vivid and vitalized. The material is frequently fresher than that of the textbook. In order to follow the relentlessly proceeding radio teacher, the pupil must be prompt and precise. Lastly, the pupil learns to become more "earminded."

The public—Do parents and the public gain anything? Obviously the taxpayer at last has an easy opportunity to exercise some supervision over the schools, while parents may readily become acquainted with modern methods.

Objections—There are some objections, more or less valid, to the use of radio in the classroom. Effective radio teaching requires two teachers. The radio instructor cannot help the individual pupil. The uninterrupted lecture becomes tedious for the young pupils. The radio teacher is elusive—he is almost a phantom; in many cases the pupils never behold him in the flesh. But these and similar defects would seem to be outweighed by the advantages.

One of the main objections to radio education is the expense it involves and the many practical difficulties it entails. My answer to the objection is: "Where there's a will, there's a way." The question in our minds should be, "What will we do?" not "How shall we do it?" Clear thoughts, determined plans, courageous vision will be followed by action, performance, achievement.

The future—I foresee a fair future for radio education, but that future can be prepared only by the thought and the labor, the sacrifice and the perseverance of educationists themselves. *Commerce cannot conduct radio education.* It would be sheer neglect of duty, sheer folly and sheer perversity to permit commerce to gain complete control of all broadcasting. Let commerce receive full recognition for the technical development of radio; let it be given all praise for making the good fruits of radio a repast for all the people; and let it have the gratitude it deserves for whatever beneficent favors it has bestowed upon the schools thru radio. But men and women with a measure of refined taste, of serious interests and of noble aspirations will agree that there has been a detrimental dominance of commerce in the art of broadcasting. It is palpably plain that the business of commerce is commerce—its concern is material profit, or at best the accumulation of eventually profitable goodwill; it has no substantial and sincere interest in such supposedly abstract things as religion, education, and culture, or in any set of moral principles, in any philosophy, or in any liberal science as such. A commercial radio station, regularly broadcasting educational material, is as anomalous as a machine factory maintaining and conducting a free school of engineering. On the other hand, let it be said in all fairness that an educational radio station, regularly broadcasting commercial material, is as monstrous as a theological seminary selling church goods. No! A permanent alliance between education and commerce for broadcasting purposes is out of the question. Education must be untrammelled, unentangled. Whether on the earth or in the air, whether under secular auspices or under sacred, education can achieve salvation only thru freedom, thru independence, thru regulated liberty under reasonable law.

Polluted Air

POLLUTED AIR, filled with smoke and noxious gases and bacteria, is a recognized peril to health, which hygienists have found very difficult to fight. Once in the atmosphere it is impossible to keep it out of human lungs—the open gateway of infection and disorder. While this danger is still unconquered another looms on the horizon, more subtle in its attacks and no less devastating in its effects. No one who pays much attention to radio broadcasts can have failed to note the lowered standards of the material that is “put on the air.” Sermons there are with millions of listeners. *Seth Parker* and *The Old Singing Master*, and other features still appeal to multitudes. But there is a progressive downhill trend. Certain stage and screen favorites who are notorious for their vulgar and *risque* expressions are heard—even on Sunday evenings—and the whole despicable choir of “crooners” offers its wretched drivel to every itching ear. Thus far the broadcast advertising material has been cleaner than some of that with which the cigarette makers have defiled the billboards. But we have heard enough to be forewarned as to what may be expected if and when the prohibition dam goes out and the flood of wine and beer pours in. In *Broadcasting*, September 15, 1932, the organ of commercialized radio, a representative of the sales department of one of the stations confidently predicts new business in these terms:

Breweries and wineries are polishing up their apparatus against the day when Congress lifts the embargo against the sparkling beverages that exhilarate or damn according to one's personal lights. . . .

Thus far, the managers of major stations have been reluctant to declare their position as to whether they plan to carry commercial programs setting forth the merits of the several brews and wines. It is known, however, that certain independent stations, including WOR, are studying the problems involved. . . .

There is no question that every famous rendezvous, or at least its modern counterpart, will spring into existence with the repeal of Volsteadism and they will want to get on the air. And the consensus of opinion in broadcasting circles is that they will get on the air; that the breweries will broadcast, and the distilleries as well, if the repeal of the Eighteenth Amendment is accomplished.

The British do these things better. There you can listen all day without hearing, “Drink a quart of Sap's Beer twice a day and visit your neighborhood whiskey shop at least twice a week.”—Editorial in *The Christian Advocate*, October 27, 1932, p1139-40.

PUBLIC EDUCATION of both children and adults is the major function of radio broadcasting. Advertising and entertainment are by their very character minor functions.

Education and the Drama

IF THE BROADCAST PLAY is to be developed, if its possibilities are to be realized and exploited, if it is to attain the place in the world of radio that it deserves, it can only be as the handmaiden of education. There is no promise or hope that the commercial broadcaster will ever experiment with it or develop it. Today it is an orphan awaiting adoption. It is for the educators to adopt. No one else wants it. Embrace it, nurture it; and it will grow to be one of the most powerful aids that education has ever known.—Merrill Denison, author Canadian history series, Canadian National Railways, speaking at the Institute for Education by Radio, Columbus, Ohio, June 6, 1932.

Debate Government Ownership

NINE UNIVERSITIES in the Western Conference are debating the question: “Resolved that radio broadcasting stations in the United States should be governmentally owned and operated.” The debates which are to be held in February will be participated in by the following universities: Michigan, Minnesota, Iowa, Ohio, Indiana, Wisconsin, Purdue, Northwestern, and Illinois. The many recent occurrences make it probable that some form of the radio question will be the debate subject in all parts of the country in 1933-34.

Nationalization Urged

A GREAT OPPORTUNITY, it [the radio] has often been degraded to the level of a purveyor of untruth about products and parties and programs and people. We believe that nationalization would purge the radio of these and other anti-social features. Until that takes place, we urge stringent restrictions upon its commercialization.—Action taken at Pittsburgh, October 26, in Methodist regional conference as reported in *The Christian Century*, November 9, 1932, p1383.

Correction

ERNEST R. HAGER, author of “Making Good Use of Radio,” which appeared in the September 15, 1932, issue of *Education by Radio* writes that thru an oversight the NBC was listed as including commercial programs in its Educational Bulletin. Franklin Dunham, educational director of NBC gives assurance that he does not list as educational a single commercial program.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:
Charles T. Corcoran, S. J., director, radio station WEW, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Iischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg Pennsylvania, National Council of State Superintendents.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

The Madrid Radio Conference

ONCE EACH FOUR YEARS, representatives of the various nations of the world hold a conference to make agreements concerning international telegraph, telephone, and radio services. These agreements, like the international regulations concerning postal service and copyright, are ratified by treaty and become the law of the world insofar as these matters are concerned. The most recent of these conferences was held in Madrid, Spain, September 3 to December 9, 1932.

In addition to the government delegations, representatives of private companies, recognized by their respective governments, and invited by the Spanish government, were in attendance.

The only representative of education at the conference was Armstrong Perry, director of the service bureau of the National Committee on Education by Radio. Mr. Perry went on the invitation of the Spanish government, because certain American companies concerned had attempted to gain control of education by radio and, presumably, would try to shape the treaty to fit their own purposes. Primarily, these conferences are governmental in character, for most national governments protect the rights of their citizens in electrical communications as well as in communications by mail. It is natural that the powerful commercial lobbies, which have been hammering at the doors of the American Congress, to forestall radio reform, were on the ground in full force at Madrid. These private companies, having secured admission, were trying to secure full voting power for their representatives. Radio officials of the United States government seemed to be fully in accord with this plan.

The American official delegation did not go as far as had been suggested by the commercial group. No open demand

was made to place commercial companies on an equal footing with governments in the conference of plenipotentiaries. But, to quote the Madrid convention:

The provisions of the regulations annexed to the present convention are revisable by administrative conferences of delegates from the contracting governments which have approved the regulations submitted for revision, each conference fixing itself the place and the time of the following meeting.

The private companies apparently conceded the right of the governments to make regulations but went after the right to vote on changing the regulations.

The American official delegation proposed that the following section be added to the article in the convention on "Conference of Plenipotentiaries and Administrative Conferences":

Each administrative conference may permit the participation of private enterprises of a country in which the government does not operate the service to which the regulations in question are applicable.

After much discussion the section was finally adopted as follows:

Each administrative conference may permit the participation, in advisory capacity, of private operating agencies recognized by the respective contracting governments.

The term "private operating agency" is defined in the annex to the convention as follows:

Any individual, company, or corporation, other than a governmental institution or agency, recognized by the government concerned and operating telecommunication installations for the purpose of exchanging public correspondence.

The American communication companies, which operate international radio, telegraph, and telephone services, are thus included in the Madrid convention, and it will become international law, binding upon the United States, if it is ratified by the Senate. The way is thus opened for the broadcasting stations affiliated with the RCA, thru its subsidiary, NBC, to



ROBERT C. HIGGY, director of radio station WEAO, The Ohio State University, Columbus, Ohio, and former member of the National Committee on Education by Radio. Trained in radio engineering, Mr. Higgy is an expert in the technical field as well as in the details of administration and programming.

AMERICAN DELEGATION
—The outstanding result of the [Madrid] conference was the adoption of a single convention [treaty], the first ever adopted by the nations of the world, which covers communication in general—not only radio but telegraphy and telephony.—E. O. Sykes, chairman. American delegation at Madrid.

AMATEURS—Two principles impressed me at the recent Madrid conference: [1] The general development of the radio art has forced international regulation back to fundamental considerations of technic and economics; diplomacy and political considerations alone cannot bring about any accord inconsistent with technical and economic necessities; [2] From these standpoints and from other considerations it has come about that radio cannot dam up its own fountain sources—the amateur identity must be preserved for the good of all branches of the activity.—Paul M. Segal, general counsel, American Radio Relay League.

GOVERNMENT—It is understood from an official source that the work of the American delegates at the Madrid conference is considered very satisfactory and that the radiotelegraph convention and annexed radio regulations adopted at that conference are deemed the best available under the circumstances, adequately protecting American interests.

Radio Poaching

be directly represented where regulations governing the allocation of radio channels and other important matters are changed. The convention recognizes no right of the other 550 American broadcasting stations, the 50 special experimental stations in colleges, the 30,374 amateur stations, and the 91 municipal and state police stations, to be represented either where the regulations are made or where they are changed.

The point of view of these groups was presented repeatedly to the official delegates of the United States government. The records show that requests to ensure the rights of state-owned and other educational broadcasting stations and college experimental stations were followed by definite efforts to leave them unprotected.

In the beginning it was officially stated on behalf of the American official delegates, that they were free to make decisions. Following the conference it was stated officially that the delegation was acting under instructions.

The way may be open for the Department of State to submit names to the governments of countries entertaining future conferences, as it did to the Spanish government. These governments may invite representatives of educational stations and other stations or groups of stations thus suggested, but a representative of the Department of State at Madrid declined to give any assurance that such invitations would be suggested.

Every radio station, according to the definitions annexed to the Madrid convention, operates a service which is international from the point of view of interference. Any station may be forced to suspend operation by regulations made by a conference of plenipotentiaries and changed by an administrative conference.

The chairman of the American delegation said, with respect to administrative conferences dealing with the telegraph and telephone:

Government representation would be impossible because the government must consider not only the companies but the users of the communication service. It would be impossible from a practical or political standpoint to give government credentials to those who furnish the service and leave the users unrepresented.

He stated, in the first meeting of the combined convention committee of the Madrid conference:

At the outset of our discussions, the United States delegation believes that the work might be expedited by briefly indicating the fundamental principle, on which rests the participation of the United States at this conference. This principle arises from the fact that the electrical means of communication in the United States are the property of the private companies that operate them.

A careful search of the official documents has failed to reveal any reference to the fact that the United States government and a large number of the states own and operate broadcasting stations for governmental purposes.

DURING RECENT MONTHS there has been an increasing tendency on the part of commercial radio broadcasters to assign time to various associations and civic bodies. Several reasons have been given for this new burst of "generosity."

First, a desire on the part of the commercial radio monopolies to make a better showing in view of the almost certain investigation of radio broadcasting by Congress.

Second, the increasing breakdown of radio advertising as listeners grow disgusted, and refuse to listen. As advertising clients withdraw, leaving vacant hours, it is cheaper to give these hours to others than for the company to employ talent and fill them.

Third, the efforts of the National Committee on Education by Radio—its insistent demand that the rights of the listener be given more consideration.

Fourth, the attempts on the part of the broadcasting "trust" to interpenetrate various civic bodies and associations in an effort to destroy and head off the growing demand for radio reform. This form of "political" lobbying thru organizations will in the end prove a boomerang because it helps to convince Congress of the futility of commercialized domination of radio broadcasting.

Fifth, the discovery by the radio companies that organizations with a large public following can be used to build up the value of an hour and to establish a listening clientele, with the knowledge that this hour can later be used to commercial advantage by replacing the civic program with an advertising program. This policy might well be described as "Radio Poaching." However profitable such a practise may be for a time, it is one of the forces that will help eventually to destroy the present American practise of financing radio from advertising contrary to the best experience of the rest of the civilized world.

Sixth, and by no means to be ignored, is the sincere desire of the better elements in the commercial broadcasting companies to perform really needed and useful public services. It is because radio programs supported by advertising are inherently wrong in principle, that this element in the broadcasting organization is always playing against a stacked deck.

WITH ADVERTISING TALK estimated to consume one-fifth of the day's broadcasting time in the United States, it becomes plain that all that annoys a radio listener is not static.—Editorial, *Christian Science Monitor*, December 2, 1932.

A COMBINED RADIO STATION AND NEWSPAPER constitute such a control over the agencies of free speech in a community as to destroy democracy at its very source.

THE NEW JERSEY CONGRESS OF PARENTS AND TEACHERS believes that radio broadcasting is an extension of the home; that it is a form of education; that the broadcasting channels should forever remain in the hands of the public; that the facilities should be fairly divided between national, state, and county government; that they should be owned and operated at public expense and freed from commercial advertising. In furtherance of these ideals the Congress instructs its corresponding secretary to send a copy of this resolution to the United States Senators and Representatives from New Jersey and to members of the New Jersey Senate and Assembly.—Resolution passed by the New Jersey Congress of Parents and Teachers in convention assembled, November 3, 1932.

Vocational Guidance By Radio

EDWIN A. LEE

Director, Division of Vocational Education, University of California

THE UNIVERSITY OF CALIFORNIA Radio Service is carrying on during the current year a most interesting and significant experiment in vocational guidance. Under the general supervision of the writer there began, on September 28, a series of discussions dealing with the topic "Vocations for which the University of California offers training." The response to the series is already such that it appears certain that the program may become a permanent part of the radio service.

The series is definitely pointed toward high-school and junior-college students. All over the state at 9:45 o'clock each Wednesday morning, in some places in small classes, at others in general assemblies or groups of classes, young men and women are listening to authoritative discussions concerning the vocations for which one may secure training at the university. Authority is guaranteed when such leaders as Professor W. C. Perry, director of the school of architecture, discusses architecture; Dean G. S. Millberry, dentistry; Dean H. F. Grady of the college of commerce, foreign trade; and Professor B. M. Woods, chairman of the department of mechanical engineering, aeronautical engineering; to mention but a few of those who have already spoken.

The problem of selecting the vocations to be discussed was not simple. It is not generally recognized that there are approximately one hundred vocations for which one may be trained at the University of California, ranging from architecture to zoology. So far as feasible the desires of listeners are controlling our decisions. It has also seemed wise, despite the fact that the series deals with vocations on the level of university training, to include a certain number of discussions concerning vocations for which training may be secured in the high schools and junior colleges of the state. In these addresses, which will be given from time to time during the year, we will have the cooperation of the commission for vocational education of the state department of education.

The reader may be interested in knowing the basis on which vocations are chosen for the weekly discussions. There are eight different questions which are applied to each vocation. Not all of the hundred for which the university trains rate highly in the list. Those for which the answer is uniformly yes are the vocations which are included in the group from which is selected the specific vocations to be broadcast each Wednesday.

These are the questions:

[1] *Is there a wideness of appeal?*

Aeronautical engineering rates an unqualified yes to this question.

[2] *Is there possibility of future development?*

Dentistry, for example, satisfies this question.

[3] *Is the vocation largely unknown but rich in opportunity?*

Criminology represents a group that this question uncovers.

[4] *Are the conditions of employment favorable?*

The overcrowded vocations generally, though not always, draw a negative answer to the question.

[5] *Is there a need for welltrained workers in the field?*

Law, for example, despite its overcrowding, is a vocation in which there is great need for welltrained practitioners.

[6] *Is the training offered at the university adequate?*

There are some of the hundred for which training is not adequate. Such will not be discussed in the series.

[7] *What is the social importance of the vocation?*

Practically all vocations for which the university offers training are socially important to a degree. Those which rate highest, other things being equal, are chosen for broadcasting.

[8] *Is there accurate information available concerning the vocation in terms of the above questions?*

This question is really of secondary importance, but in border-line cases may be the deciding factor.

The division of vocational education is eager to help any high school or junior college which wishes to supplement the radio broadcasts with a curricula program. There is no problem which calls for clearer vision on the part of principals and presidents than the problem of adequate vocational guidance. It is the hope that the University of California radio programs will stimulate a live and continuous interest thruout the state in this most fundamental aspect of secondary education.

Building Radio-Advertising Programs

MANY HAVE BEEN THE COMPLAINTS of listeners about the atrociousness of commercial radio programs. The blame has been laid at the door of the individual stations, the networks, the Federal Radio Commission, and Congress. Perhaps, after all, the fault lies in part with the practise of certain of the advertising agencies. Lloyd Jacquet, writing in the December 26, 1932, issue of *Broadcast Reporter*, page 24, describes this practise when he says in part:

These people—I mean the advertising agencies—put on really good shows. There are dinners, cigars, even an occasional drink, while captains of industries, with a few corporals from the press thrown in, listen to an audition which has cost the agency nothing to assemble, write, and produce. . . . They engage nice private dining rooms, have the telephone company pipe the program from the studio into the smoking lounge, send invitations with railroad tickets enclosed, shower attention, boutonnières, and Burgundy where they will do the most good. . . .

Is this method the best way to secure programs that will raise the educational and cultural standards of the people of the United States? Does this not illustrate the fundamental weakness of the "American Plan of Broadcasting?"

THERE WERE more than 340 radio programs [sponsored series] during 1932. Most of them were hardly fit for human consumption.—*Forum*, January 1933, p64.

Radio and Home Economics

A NEW ENEMY of home-economics education has appeared which will have to be subdued in the next few years. The radio is the most powerful and the most pervading carrier of misinformation of consumption which human ingenuity has yet invented. It has revived the medicine show on a grand scale. Judge Ira Robinson, of the Federal Radio Commission, describes the advent of radio in these inelegant but none the less graphic words: "Radio was born a crippled child, birth-marked by advertising and commercialism, and it behooves every one of us to get it out of that deformity." The quack and the fly-by-night man are not the only offenders. The stuffed shirts and silk hats of commerce are making hay while the sun shines. This Bacchanalia of Ballyhoo cannot go on indefinitely. While the law still allows it, the makers of cigarets, tooth pastes, antiseptics, patent medicines, yeasts, gasolines, and soaps are running riot.

The masses of people are swallowing the daily ethereal buncombe—hook, line, and sinker. Advertising patter becomes a part of their daily speech; theme songs a part of their vocal repertory. They are accumulating a new body of fears and superstitions. The selling power of radio is enormous. At the end of five weeks of broadcasting over WTMJ, the George Ziegler Company of Milwaukee reported that it sold twenty-seven tons of Betty Jane, a new brand of box candy in the Middle West. Carson, Pirie, Scott and Company, Chicago manufacturers, bought three broadcasts on WMAQ announcing new Bobolink full-fashioned hosiery and sold 200,000 pairs in three weeks. Against this tremendous force the school, thus far, has proved helpless.

If I were a teacher of home economics, I should make a list of the popular broadcasts which sell common commodities. I should then deliberately proceed to build learning units as an antidote to what is being let loose on the air. I should use brand names if permissible but nevertheless I should fashion the learning experience so that there would be no doubt that the pupil was discovering the truth about the quality and serviceability of radio-advertised products. F. J. Schlink of *Consumer's Research* in the May 1932 number of *Progressive Education*, suggests several ingenious ways of analyzing or testing commodities as learning enterprises. Teachers, especially, will welcome his suggestions.—Henry Harap, associate professor of education, school of education, Western Reserve University, Cleveland, Ohio.

The Spanish Telephone Contract

DURING THE DICTATORSHIP of Primo de Rivera in Spain, the International Telegraph and Telephone Company—the international branch of the AT&T—made a contract with the Spanish government by means of which it hoped to make a profit out of providing Spain with telephone service. Since that time Spain has had a socialist revolution. The Spanish people did not like de Rivera or the monarchy, and threw them both out; and they did not like the system of running public service for private profit and decided to put an end to it. Consequently the Cortes is now planning to abrogate the contract negotiated between de Rivera and the American telephone magnates. Our Department of State has objected strongly to this procedure and, it is reported, threatens even to sever diplomatic relations if the act of confiscation is carried thru. It is, in other words, defending American capitalists against Spanish national socialism. This is not our idea of a just, a wise, or a diplomatic attitude to take. Can the United States government guarantee to American profit-seekers that the system under which they endeavor to make their gains will endure against popular wrath in all countries? Is not the risk of confiscation by a possible socialist government one of the proper and inevitable risks that American investors in foreign countries must bear? Will the American people back up American capitalists in an effort to enforce capitalism on an unwilling world? Our idea is that business contracts are not the most sacred things in life; that they have not, for instance, a validity superior to popular revolutions. We believe that the friendship of the Spanish people is more valuable to the United States than the vanished profits of the AT&T.—*The New Republic*, December 14, 1932, p110.

BENEATH ALL THE PROBLEMS that trouble us today, both industrial and economic, there is one great and fundamental problem we must never lose sight of. It is the problem of keeping up a high quality both of body and mind in the mass of the people. If the human quality goes down, those other problems are bound to go from bad to worse. If the human quality goes up, those other problems will tend to solve themselves. In all the great cities of America I see forces at work which are causing damage to both the bodies and the minds of the people who live in them, especially to the young.—L. P. Jacks, *Education Through Recreation*, p155, Harper and Brothers.

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J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
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Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Shall Radio Be Used for Liquor Propaganda?

THE COLUMBIA BROADCASTING SYSTEM presented a chain broadcast of an interview with Prince Jean Caraman de Chimay, prominent French sportsman and proprietor of the most famous vineyards in Champaigne at 1:15pm [EST] on Sunday, November 13, 1932. "Why Drink, and What?" was the title of the program. The advance press releases and newspaper comments that followed the broadcast left no question but that the chain officials were making an attempt to bid for liquor advertising when and if intoxicating beverages are legalized in the United States. The complete text follows:

Prince Jean Caraman de Chimay: I enjoyed thoroly my recent trip to America. Everywhere I went I was so heartily welcomed and was given such a good time that the few weeks I spent over there passed like a dream. I can't imagine anything more charming than American hospitality. As a matter of fact, my American friends were so kind in every way that I felt as if I were at home. I am sure that such a kindly nation must be a very happy nation, and I am looking to see it again when it will be still happier. I say "happier," because I had a sort of feeling that the only drawback to most people's happiness over there was the false situation created by "The Noble Experiment."

Question: Do you think that the French people, generally, are looking hopefully to the end of prohibition?

Prince Chimay: Of course the French people are too respectful to set aside the law of any nation, but they can't help thinking, certainly, in the back of their mind that some day the Americans should have with them one more mutual taste, the pleasure and benefits of good wine. It really makes the French people a bit sad, you know, to see their wines which for centuries have held such a high place in the history, in the tradition, and the life of a country, despised and refused as something evil; while, on the contrary, they think it Heaven's bounty to mankind.

Question: Is that opinion general in France?

Prince Chimay: There is no doubt about it. Champagne, for instance, has become to be considered so important by doctors that there is a large consumption of it in all the French hospitals. Even the American hospitals use it. I understand the prohibition enforcement regulation has had to admit its medical properties and so permit a certain quantity of champagne to be imported each year. I have been told many a time that during the war champagne saved more lives than is commonly known. Champagne given at a critical moment often carries the patient thru to complete recovery.

This reminds me of a case in our vineyard. We had a very old peasant. As a matter of fact, he was well over 70, and he was lying dangerously ill. The doctors agreed the end had come and his friends gathered to take watch, as is the custom in old peasant France. One of them said, "It looks sad to see the old man lying there after all the jolly parties we have had together. How he would hate to see us sitting here with nothing to drink."

His companions reflected a moment and agreed. "I think wherever he is, he

would like better to see us with a bottle of good champagne," he said. So they went down to the cellar and got one. They popped the cork, but they did not enjoy drinking without their old pal. So they had the brainy idea of pouring a glass for him, too, and one of them poured a few drops between his closed lips. To their amazement, the old fellow opened his eyes, asked for more, and you must believe me, he lived ten years longer. During this new lease of life, he took a new wife who later on presented him with a son.

Question: With such a crowning argument about why to drink, you might tell us something about what to drink, and when to drink.

Prince Chimay: Well, to tell you the truth, my personal opinion is that, apart from drinking, I never can make up my mind when I like it best. Try it before lunch as a cocktail, and see if your lunch party won't be brighter! Take a drop

THE ONLY DRAWBACK to most people's happiness over there [in America] was the false situation created by "The Noble Experiment." . . . It really makes the French people a bit sad, you know, to see their wines . . . despised and refused as something evil . . . Champagne, for instance, has become to be considered so important by doctors that there is a large consumption of it in all the French hospitals. Even the American hospitals use it. . . . The children [in France] have wine with their meals almost from the time they leave off mother's milk.—Prince Jean Caraman de Chimay.

THE COLUMBIA BROADCASTING SYSTEM, New York, N. Y.—I want to protest against the liquor advertising that went out over your network on Sunday, November 13. Things have come to a pretty pass when a network such as yours will invade the home, even on Sunday, with such a piece of advertising. When a network such as yours has sunk as low as this it is time you heard from the public and heard in no uncertain terms.—Howard J. Chidley, First Congregational Church, Winchester, Mass.

on a fishing expedition and see the size of the fish you catch! And when you come to the 19th hole, see if a bottle of good champagne won't make you start another round. Some people, I am told, are said to wash golf balls in champagne, always hoping to get the longest drive. And when the weather is very hot, drink it, at least, with ice water. You will find it very much more refreshing than any ginger ale.

I might say every time seems good to me, apart from breakfast; and even then, I must say, that there are times when we go out on shooting parties, and we have very early lunch, almost breakfast, and when I see the way my friends gulp it down, it looks to me as if that time suits them as well as any other.

Question: Do you think that champagne is the only good drink?

Prince Chimay: My goodness, no! The Bordeaux wines are grand. All the French wines are good—so are the Burgundy's; they can't be beaten. For a men's club dinner [and this is no secret] champagne will always be the prize favorite, because it is the only wine that makes the girls laugh. As for a bottle of Bordeaux or Burgundy, which has been sunk in your cellar for thirty or forty years, or more, the custom was that only the master of the house could handle it and pop the cork. He would go and spend hours with his oldest son among the old bottles, transmitting to him the secret of the cellar.

Champagne is more like a "Jack-of-all-trades." You can drink it, even the oldest vintages, without notice. In moving it about, to picnics, and such, there is only one important thing to remember, it must be thoroly chilled.

Question: Is the question of age very important with champagne?

Prince Chimay: That depends on personal opinion. It is very difficult to say, but I think myself that champagne is at its best when it is about six years of age, and it remains at its best for 20 years. Of course, bear in mind, it takes four or five years to get a bottle of champagne ready for the market.

Question: Perhaps you would be good enough to give us some more reasons for drinking?

Prince Chimay: Does it really need any excuse? There are few, if any, reasons why we should not drink wine; certainly, there are very few champagne drunkards or Bordeaux drunkards in the world. I have never seen one. When they talk in America of "light wines" they mean champagne, Bordeaux, and other French wines; they do not mean heavy wines like port and sherry and the sweet wines. Champagne and claret are both in the light wine category. This means that they can be used with impunity as well as with pleasure. The fact that good clear wine promotes good cheer seems to me

good enough reason to have a bottle of wine at the table every day. Most everyone in France, and I hope the French have the good reputation for being sober, industrious, and intelligent people, thinks that food without wine is like meat without bread. In the country, they even put wine in their soup. They call it wine soup. Many of our dishes are flavored with wine. Prunes are cooked in claret, and they are best cooked in good red wine.

The children have wine with their meals almost from the time they leave off mother's milk. They serve it to scholars from age 7 and up with the meals in the public schools. Of course, children take their wine well diluted with water, and so do some grown-ups. But no one is called a drunkard who uses wine. We call drunkards people who over-drink, and especially those who abuse spirits. Spirits have their value, too, but we won't go into that now.

Question: What is the result of all this, what we Americans call drinking?

Prince Chimay: The inhabitants of the wine-growing regions, like our vineyards in Champagne, are invariably pleasant people. They are of kindly inclination, good nature, thoro, and very witty, and their wines cost them little or nothing, indeed so little that they can have all they want. But it is rare to find anyone among the vineyard people who over-drinks. I don't think I have seen a drunkard in my place for the past ten years.

Question: Their attitude is different from ours at home, no doubt.

Prince Chimay: Yes, perhaps, but even they look upon champagne as the wine to cheer, make life more happy. Whenever we feel the need for it, we can be sure there will not be any unpleasantness afterwards. All around the world champagne is chosen to cheer. It is essential at every formal dinner, and at very informal parties, too, for its promotion of joy. At every wedding, there must be champagne. When the baby is born, there must be champagne at the christening. At Christmas Eve, after the midnight mass, champagne is best with pancakes and Bock sausages. At New Year's Eve, champagne again, bottles and bottles and bottles of it, until the popping of corks resembles machine gun fire. It is easy enough to find excellent excuses to celebrate everything with champagne. When you stick to champagne and take nothing else with it, the after effects of even a good bit too much are not awful.

Question: That sounds very American.

Prince Chimay: You mean the joy of good wine? There are a good many ways of indulging one's self. Do you know the pleasant feeling your palate has when it is flavored with sparkling nectar? It is light and so easily digested. Why, even to look at it, it is good for the eyes—clear, sparkling, pure.

I WISH I HAD LANGUAGE emphatic enough to express just how much I do not want my home invaded by liquor advertising over the radio. I have four children, three of whom are boys, ranging in age from sixteen to five years. I will junk my radio before I will allow them to listen to the seductive lies the liquor interests have always used to entice young people. ¶ My husband is not at home at the present time, but I know he would heartily second my note of "no" on this subject. ¶ In the name of the young people of America, do all you can to keep John Barleycorn off of the air. My father joins me in this.—Mrs. Henrietta C. Mumford, Glendale, California.

Question: Gosh, Prince, you make me thirsty. The listeners in America must be thirsty, too.

Prince Chimay: Ha! Ha! The only thing I can do about it now is to drink their health. [Drinking a toast.] America, your health!

The National Committee on Education by Radio, as an organized agency working for the raising of the standards of radio programs, has been deluged with letters protesting against this invasion of the home. Leading publications of religious groups have carried articles vigorously denouncing broadcasts containing liquor propaganda and calling particular attention to Prince Jean's talk. Space will not permit quoting all of them, but the following are representative:

I am utterly opposed to advertising the liquor business and the drink habit over the radio.—Wallace E. Brown, Resident Bishop, Methodist Episcopal Church, Chattanooga.

I do not think the radio should be used to advertise anything that is destructive of the home, school, and church.—J. D. Leslie, Stated Clerk and Treasurer, The Presbyterian Church in the United States.

I am very much opposed to any liquor advertising in any manner and especially over the radio—it is another menace to good morals or citizenship.—William H. Groat, Executive Secretary, Oakland [California] Council of Churches.

I do not think that liquor advertising over the radio is in the interest of any home—quite the contrary. I am deeply interested in everything that will prevent the consumption and sale of liquor.—Avis A. Hawkins, Chairman, Christian Citizenship Committee, Federation of Women's Church Societies of Rhode Island.

God save America from liquor advertising on the air! The radio broadcasting is pagan enough without this added blight. Anyone who has seen the bill-board and tram-car liquor advertisements in Great Britain will shrink from anything of the kind in America.—Ralph S. Cushman, Resident Bishop, Methodist Episcopal Church, Denver.

The government would not permit anyone to promote the sale of narcotics over the radio. Liquor is a narcotic drug and should be handled in the same way. Children should be protected against urging of this kind—and many older persons are actually in need of similar protection. Don't let the air reek with urgings as to liquor.—Emerson Findley, Central Western Manager, *The Iron Age*, Cleveland.

In view of the fact that alcohol is considered a narcotic by modern science; that its use is socially unwise and harmful; that the manufacture and sale of intoxicating liquors is forbidden by the laws of the United States; and that the Presbyterian Church has for many years been strongly opposed to the manufacture, sale, and use of intoxicants, the Board of Christian Education states its opposition to the use of such important channels for influencing the public opinion, as the radio, in encouraging the use of intoxicants and in urging citizens of this country to a violation of our laws.

The Board of Christian Education is convinced that liquor advertising over the radio is detrimental to the interests of the fundamental American institutions such as the home, the church, and the school, and is opposed to the use of the radio as a medium for such advertising.—Resolution adopted December 7, 1932, by the Executive Committee of the Board of Christian Education of the Presbyterian Church.

The Elm Park Methodist Church of Oneonta, New York, comprising 330 members has officially passed a resolution opposing liquor advertising on the air.—Horace E. Weavers, Minister.

It is to my mind an intrusion upon the sacred rights and privileges of the home to permit such messages as were broadcast from France to America on the subject, "Why Drink, and What?"—Adna Wright Leonard, Resident Bishop, Pittsburgh Area, Methodist Episcopal Church.

Our Federation endorses the idea of keeping liquor advertising off the air and passed a motion requesting me as secretary to inform you of their action. You have our hearty approval of any plan that will accomplish this purpose and we will cooperate in every way necessary.—W. P. Watkins, Secretary, La Crosse [Wisconsin] Church Federation.

I most emphatically believe that liquor advertising over the radio is not in the interest of the American home, school, or church. I can say that this is not only my personal attitude, but is also the attitude of the Executive Board of the Duluth Council of Churches which met yesterday.—W. L. Smithies, Executive Secretary, Duluth Council of Churches.

I certainly am opposed to this propaganda in favor of liquor in any shape or form, and I consider the broadcast made from France to American homes over the Columbia Network, Sunday, November 13, as an outrage on American civilization, to say nothing of the pollution of the American home. It should not be allowed if it is possible to break it up.—W. R. Funk, The Otterbein Press, Dayton, Ohio.

The Columbia chain's international broadcast from France on "Why Drink, and What?" on November 13 was a shock to Nebraska which is dry and will remain dry whatever else happens.

It was a fundamental violation of every wet promise that dry territory and sentiment was to be respected.

Nebraska law prevents newspapers here from carrying liquor ads, etc., but the radio can get away with murder. I object to liquor ads on the air from any station but ordinary decent respect by the wets alone for their given word should prevent radio stations in dry territory from taking off a chain a wet program. We at least should have local option applied to the air and in some degree stop this moral debauch of American youth and the American home.—Ben F. Wyland, Minister, First Plymouth Congregational Church, Lincoln.

We understand that a proposal has been made that radio broadcasts be used for advertising beer. I am writing for the purpose of urging that all possible steps be taken to prevent the use of radio broadcasts for this purpose. I realize, of course, that the pressure of the brewery interests which are back of the beer measure is very strong and that the commercial and profit-making element is the strongest factor in the case so far as the agitation for return of beer is concerned. At the same time it would seem to me harmful for radio broadcasting companies to lend themselves to an enterprise of this kind; and that the real need right now is for constructive and intelligent education as to the dangers of the use of alcohol. People should be discouraged from the use of it rather than encouraged to increase the consumption of alcohol.

Radio broadcasts would tend to have the general effect of popularizing the drinking of beer which would entail a serious diversion of funds from the purchasing of food at a time when we are going thru our worst period of economic depression.

The radio is a wonderful institution but it is only in its infancy. The further commercializing of it for causes such as the one in question would seem to me to be detrimental to the future of the broadcasting business.

Millions of people in this country feel strongly on the subject of beer and will not be pleased with repeated broadcasts on this subject.—Claude E. Clarke, Attorney, Cleveland.

I NOT ONLY WISH to express my very strong disapproval of advertising liquor over the radio, but have been authorized to voice the disapproval of the Executive Board members of the Cambridge Federation of Women's Church Societies who will do what they can to fight it. We feel that our young people see and hear enough of such advertising without getting it served up in every program they tune in on.—Mrs. Susannah G. Oleson, Cambridge, Mass.

Radio and the Home

JOY ELMER MORGAN

Chairman of the National Committee on Education by Radio and Editor of the Journal of the National Education Association

RADIO BROADCASTING has made some very valuable positive contributions to homelife. It has helped to hold people in their homes, to acquaint them with beautiful music, to arouse interest in affairs, and to broaden human outlook to a worldwide horizon. Rightly used, radio may easily become a most powerful ally of happy homelife. But there is a negative aspect of the relation of radio to the home.

There has probably been no time in human history when the gulf between youth and adults was so wide as now. This has come about mainly as a result of motion pictures, children's features in the newspapers, the removal of industry from the home, automobiles, and radio broadcasting.

Radio broadcasting is the most farreaching of these new forces which play upon the child's mind. It goes into millions of homes that have no standards of discrimination; it reaches out-of-the-way places at all hours of the day and night; it exposes the child to programs which originate among the tenderloin elements in our large American cities.

In April 1932 I was called to appear before a committee of the Canadian Parliament at Ottawa which was then considering the problems of radio broadcasting. There came before that committee one of Canada's leading citizens. This man, who had traveled around the world to study the radio broadcasting systems of the different countries, was Sir John Aird, president of the Canadian Bank of Commerce. Sir John has a group of grandchildren living in his home and he has watched carefully the effects of radio in forming their attitudes and ideals. On the basis of such observation he told the Parliamentary committee that radio broadcasting is today exerting a greater influence on the character of young people than home, school, and church combined.

Music is more powerful than words in creating the subtle moods which fix attitudes, shape ideals, and fashion character. Plato once said: "The new style, [in music] gradually gaining a lodgment, quietly insinuates itself into manners and customs; and from these it issues a greater force, displaying the utmost

impudence, until it ends by overturning everything, both in public and in private." You can verify this in your own experience by recalling the relation between patriotism and the stirring national anthems of the various countries; between religion and the songs of praise and worship; between college spirit and the melodies of the schools; between the syncopations originating in the underworld circles in the cities and the growing divorce rate.

Up until this century we have assumed that the formation of the child's mind was the responsibility of his parents or of teachers and ministers selected by his parents or his community and especially licensed to perform the task of instruction. By opening the homes to radio advertising we have exposed childhood to all the wiles and tricks of the salesman. The dominating motive in this process is not the desire to improve life which animates every worthy parent or teacher, but the desire to make sales and to form habits which will lead to repeated and continuing sales.

Recently a new prospect has appeared, that of liquor advertising over the radio. On Sunday, November 13, there was brought from France over the Columbia network a preliminary liquor program. The National Broadcasting Company not to be outdone in this preliminary campaign to attract foreign liquor advertising, brought in from Berlin on New Year's Eve a midnight celebration in the Hotel Vaterland which was in fact a liquor propaganda program featuring the leading wine merchant of Germany.

The time has come for home, church, and school to take hold of this problem, to give it serious study, to understand its profound relation to child life and character. The time has come when the Congress of the United States should make a thorough investigation of the whole subject of radio broadcasting, not primarily as a phase of industry but as one of the major factors in American culture and character. Let every citizen who is a friend of childhood join in demanding that Congress shall make such an investigation and that on the basis of its findings it shall construct a system of broadcasting for America which will protect the finer and nobler elements of our civilization.

Abstract of an address delivered at the Conference on Home Conservation, Washington, D. C., January 11, 1933.

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Chain Monopoly of Radio Stations

CALEB O'CONNOR

THERE HAS BEEN MUCH AGITATION among the broadcasting stations of the nation's capital.

One of the two octopus tendons of the National Broadcasting Company now comes into Washington thru the local station WRC. This broadcasting station, in the opinion of radio experts, has a very favorable assignment both as to power and wavelength, and operates fulltime. Local advertising is being sold by this station, sometimes taking the place of sustaining programs from New York over the wire, and at other times sandwiched between programs as it is before the Amos 'n' Andy hour. Wonder if Pepsodent knows that a portion of its hour has been given over to local advertising?

The other tendon of the octopus, known at NBC as station WJZ, is about to gain entrance into Washington thru another channel. Should the Federal Radio Commission approve of the lease by NBC of one of the two remaining Washington stations, it will give New York an even greater control of radio programs than it now has. Much dickering has been going on for months, between the trust and the two local Washington stations, which now carry local advertising programs; but until they can boast of New York chain programs, and adequate power, their field will not be equal to WRC, the trust tentacle.

While NBC is taking advantage of the unsettled political upheaval, a *nip and tuck* Congress, and a powerless chief executive, to install its second station in the nation's capital, it does not seem to entirely eliminate CBS. NBC thru its connections must derive a tremendous income from the thousands of miles of wire which CBS must rent from AT&T.

The attention of Congress may later be called to the fact that NBC used this governless condition as a time to bring its second station into the capital. An incoming President without power and an outgoing President without authority makes an ideal time for combinations to perfect their plans for growth and usurpation.

New York once considered why NBC should be permitted two stations, while private owners were confined to one sta-

tion. It all depends upon how Owen D. Young, their democrat, has aligned himself and his combinations with the new Congress. It would not surprise us to find him quite a factor with his fellow democrats. Time only can tell just what his influence will be.



FRANK F. NALDER, *director of radio station KWSC, The State College of Washington, Pullman, Washington. Having been graduated from the institution which he now serves as director of the division of general college extension, Dr. Nalder later received an M.A. from Columbia and a Ph.D. from the University of California. KWSC is one of the highest powered of the college stations.*

The trust will now begin grooming a republican in their midst, to perform the same offices in 1936, should the other political party assume command. In corporation management, expediency and propaganda are two terms never allowed to fade too far in the background. There seems no limit to which capital will not go to accomplish its end, even in this unsettled, unequal, economic upheaval, and despite the recent decision against the RCA trust in Delaware.

CBS has changed from the Leese station, WMAL, to the Vance station, WJSV, paying some \$20,000 yearly for the station name, but using their own power plant "across the Potomac from Washington" for their power. Was it Al Jolson who said that his race would take over a certain secret organization as soon as it got on a paying basis?

Power is not the only factor, for while the Columbia station in Washington, now WJSV, boasts of ten-thousand-watts power, and can be heard in California and Vermont, there are parts of Washington in which it cannot be heard with clearness. CBS knows this; so does NBC.

So far, WJSV is not taking spot advertising of local origin, but is using the wired programs from New York.

It was a surprise to learn that Harry Butcher, who has worked to carry to completion their power plant "across the Potomac from Washington" and their offices in the heart of Washington in the Shoreham Building, is to be replaced by one of the many vicepresidents from their New York office. It was hoped that CBS would make Butcher a vicepresident, because of his loyalty, business sagacity, and charming personality, but CBS decided otherwise.

We have always felt that the CBS programs eclipsed those of either of the two NBC stations, which in itself is no mean accomplishment. CBS must make money to live. NBC could afford to pay out all it makes to accomplish its purpose of

THE DECISION OF JUDGE JOHN P. NIELDS in the RCA anti-trust proceedings rendered at Wilmington, Delaware, on November 21, 1932, was the "Crack of the Whip" for a new era in "Wired Radio" which is the backbone of education by radio.—Major-General George O. Squier.

securing the wire and air control of this entire nation of ours.

But the intention of NBC is to dominate the situation with two stations to Columbia's one in the nation's capital. No matter what Congress *does*, it *talks*, and talk, musical, and unmusical sounds are what a microphone can reproduce.

So, Mr. Advertiser, if you cannot come into Washington on NBC's choice chain, WRC, you have Columbia's ten-thousand watter, WJSV; and so far, purely local stations of 250 and 100 watts respectively, WMAL and WOL. You may soon have a chance on NBC's other chain. The *Evening Star* of January 14 gave a lengthy front page account of the leasing of WMAL by itself and NBC, yet the short account of the refusal of the Federal Radio Commission to grant an increase of wavelength to our remaining local station, WOL, was in an inconspicuous place on the back page.

Expediency and propaganda are terms not unknown to the trusts, in these ticklish times. Millions are spent with publications in order to maintain control of what they might print in their editorial or reader columns inimical to the trusts.

Will Change Clothes

THE NATIONAL ELECTRIC LIGHT ASSOCIATION, well and not-too-favorably known after the Federal Trade Commission investigation of utility propaganda, is being dissolved and the Edison Electric Institute is being formed to succeed it. The industry announces that it is taking this step "to divest itself of all semblance of propaganda activities." It will "assume an attitude of frankness and ready cooperation in its dealings with the public and with regulatory bodies."

But the same men who were officers of the National Electric Light Association are to be officers of the Edison Electric Institute, and some of the new trustees are men who figured prominently in testimony and exhibits of the Trade Commission probe, in spite of the fact that an attempt is being made to assign to Insull all responsibility for the widely condemned propaganda campaign.

The Trade Commission's official report on this phase of its investigation is due soon. Will the power industry try to dismiss it as a condemnation of an organization which no longer exists? More important still, will the new institute with its protestations of frankness, escape all suspicion of propaganda activities for some years?

The cleansing process within the industry includes reform of certain holding-company practises as well as frankness.

Members promise to limit their service fees so that they shall "be reasonable and commensurate with the value of the services rendered and the fair cost thereof." They promise also to furnish consumers, stockholders, and others with accurate information as to income, operating expenses, and surplus. Both of these are extremely desirable reforms, certain to be

enacted into law unless the public becomes convinced that need for such a law has ceased to exist.

Americans should insist on federal and state regulation in the interest of consumers and the stockholders. The issue will become less plain as claims are made that evil practises have been discontinued, and it may be necessary to conduct another lengthy and expensive investigation to ascertain the truth of these assertions.

For the objects announced by the institute no one can have anything but praise. But these aspirations should be buttressed by protective laws.—Editorial, *Washington Daily News*, January 16, 1933.

Advice from an Advertising Man

THIS IS THE SITUATION. What can we do about it? How are we to pull ourselves out of this slough of chicane and vulgarity into which, with every passing day, we seem to be sinking deeper? For it must be apparent to every thoughtful person that something ought to be done about it. . . . This is what I propose: *Let every person who feels himself concerned in this matter make a resolve not to buy any more goods which are advertised in any unseemly or unethical way.* . . . If enough people would do this—if only a relatively few people would do it—there would be consternation in the enemy's camp. The retailer would complain to the wholesaler. The wholesaler would complain to the manufacturer's salesman. The salesman would pass the word on to the manufacturer, and the manufacturer would clean house.—H. A. Batten in the *Atlantic Monthly* for July 1932, p56.

Coins New Radio Words

MAJOR-GENERAL GEORGE O. SQUIER has coined five new words in his new book, "Telling the World," being prepared for the Century of Progress Series of the Chicago World's Fair.

The new words are: **radovision**, to replace our present word, *television*; **radome**, to replace our present use of *studio*; **radovia**, a street, road, or way where radio is exhibited; and **radiopolis** or **radiopole**, for any radio city such as the present Rockefeller Center in New York.

These words have been submitted to and approved by numerous radio organizations and are a distinct contribution to the terminology of this new science.

BIG BUSINESS fears government ownership and operation, not because government management is inefficient, but for precisely the opposite reason—its very efficiency, which is constantly showing up the graft and corruption in the industrial bureaucracy.

THE SAME OLD OCTOPUS—The National Electric Light Association, mired in its own slime by the revelations of the Federal Trade Commission's power trust investigation—has dissolved to become the Edison Electric Institute. This habit of changing names has been made familiar by the practises of exploiters, lobbyists, high financiers, gangsters, and thieves.

Amateur Radio

LOUIS R. HUBER

Wireless Operator, First Class, United States Coast and Geodetic Survey

AMATEUR RADIO is one of America's own peculiar institutions, working toward a greater economic effectiveness. Perhaps it is not definitely within the classification of education or even definable strictly as education but it is a form of recreation and practical training which is already being sponsored by many schools.

Do you know the typical amateur radio operator? He is the odd and little-known lad who, in his attic, has assembled a strange collection of coils, tubes, and condensers, and who is known to have communicated with Australia. On June 10, 1932, there were 30,640 of these amateurs in the United States, and their average age was approximately seventeen years. These lads first learn the international code and then, after passing an examination, get a license from the Federal Radio Commission. This license authorizes an amateur to use his equipment within any of the seven frequency bands set aside for him in the "short-wave" territory.

Amateur Radio and the radio amateur perform valuable services in three different fields—in industry, safety of life, and national defense. A hobby, and in itself strictly non-commercial, it has a happy relation to economics which makes it unique as a recreation.

Johnny Jones, W7CXL, goes from high school to college and takes electrical engineering. In his senior year, General Electric or Westinghouse sends a man to interview all promising EE students. Among the many questions he asks is one to this effect: "Have you had experience in amateur radio and, if so, to what extent?" Johnny qualifies; he goes with GE or Westinghouse. Thousands of amateurs and ex-amateurs now engaged commercially in radio owe their initial, basic training in the fundamentals of radio operation to their amateur experience. It is no smirch on the record of an amateur if he is also a professional engineer, operator, salesman, or serviceman in commercial radio, so universally is this bond recognized.

There is hardly any major disaster, such as a flood, hurricane, or tornado, in which radio amateurs have not been the first to establish communication from the stricken area with the "outside." When wire communications fail, Johnny Jones gathers up "B" batteries and wire and goes on the air. He can, if necessary, build a transmitter out of your old receiver. His versatility with pliers and wire, and his unflagging sense of duty were proven in the Florida hurricanes of 1926 and 1928, in the Mississippi and New England floods of 1927, and in the Alaska Kennecott landslide last summer.

In time of war Johnny Jones becomes a radio operator for Uncle Sam. During the World War, Amateur Radio, then much smaller, furnished 3500 operators for the U. S. fighting forces. Uncle Sam was so thoroly impressed that now he provides reserve organizations for radio amateurs, in the Navy's Volunteer Communication Reserve and the Army-Amateur Network.

Amateur Radio thrives nowhere as it does in the United States. It is typical of America. Canada is the only country approaching us in the extent to which Amateur Radio has grown. Great Britain, France, Italy—all the others impose strangling restrictions in spite of the fact that the amateur is recognized in international radio law, and is assigned exclusive international frequency bands. But this hobby of youth, assuming as it has the proportions of a great national radio playground, of immense value to the radio health of our country, has already proven its claim to a place in our economic planning.

Radio in the Classroom

The twelve most important objectives in using the radio in the classroom [ranked in order of importance]:¹

- [1] To broaden the vision of the pupils.
- [2] To create, hold, and utilize interest.
- [3] To inspire the pupil.
- [4] To develop habits of concentration and listening.
- [5] To stimulate desirable, voluntary self activity.
- [6] To supplement classroom teaching.
- [7] To develop further intellectual culture.
- [8] To advance the cause of education.
- [9] To serve as an instrument of progress.
- [10] To stimulate the efforts of the teacher.
- [11] To allow the teacher time to study individual differences.
- [12] To supply certain needed recreational benefits.

Correction

EUGENE S. WILSON, vicepresident of the AT&T, has informed us that in the article entitled, "The Spanish Telephone Contract," page 4 of the January 5, 1933, issue of *Education by Radio*, IT&T should be substituted in the last line for AT&T. We regret the occurrence of this typographical error.

¹ Eibling, Harold H., *The Administration of the Classroom Use of the Radio in a Centralized School System*, Unpublished Master's Thesis at The Ohio State University, 1932, p. 17-18.

RADIO BROADCASTING has quite altered the intellectual life of the human race. It has modified the cultural climate. It has changed the background of our tastes and attitudes. It is today more powerful than home, school, and church combined in the formation of human character. If the human race wishes to rear its own children according to the standards furnished by homes, schools, and churches, it must reclaim radio from the hands of the greedy exploiters who now dominate broadcasting in America.—Joy Elmer Morgan.

Wisconsin State Radio Chain

WIRE LINES now connect the two state-owned broadcasting stations in Wisconsin, WHA, the university station at Madison, and WLBL, the station of the Department of Agriculture and Markets at Stevens Point.

This is the culmination of the move started in 1930 to merge the two stations. At that time the state's petition for a single 5000-watt station to be located near the center of the state, was denied. Since then, both of the existing stations have been rebuilt and improved. WHA increased its power from 750 to 1000 watts, acquired new antenna masts and installed a new transmitter. WLBL put in a modern 2000-watt transmitter and built new masts. Both stations now have efficient equipment and together are capable of reaching effectively an estimated ninety percent of the people of the state.

Each station retains its identity and all of the same programs are not heard over both stations. WHA, being located in Madison, the seat of the government and center of education, has available a wealth of talent. Consequently most of the programs used by both stations originate in its studios. Special market reports are heard only over WLBL, "The official agricultural voice of Wisconsin."

These are believed to be the first state-owned linked stations in the country and the move marks another accomplishment for a state long known as a leader in developments in the common interest.

Among the features used by both stations are the Wisconsin school of the air [two daily classroom programs], farm program, Homemakers' Hour, On Wisconsin series, health programs, news, safety club, music appreciation course, Spanish lessons, foreign language programs [German, French, Spanish, and Scandinavian], farm institutes, drama institutes, and some programs in music, drama, and literature which will be entertaining as well as educational in nature.

Among the features to attract the most attention is a daily program broadcast directly from a studio in the dome of the state capitol building. Prominent state officials and departmental workers come before the microphone and tell the people of their activities. Measures which are before the legislature are explained by those who understand the problems involved.

The first program to be presented over the hookup was the inauguration of the new governor and other state officials on January 2. During the primary and regular election campaigns, in the fall of 1932, both WHA and WLBL carried on an impartial program of political education. Wisconsin people seem to be political-minded and hailed the move as a real service.

Each recognized party, regardless of financial backing or power, had an equal opportunity to be heard by the citizens.

In this combination of stations Wisconsin controls the most efficient hookup now existing for covering the state. Listeners report that in certain of the northern areas WLBL is the only Wisconsin station which they can hear satisfactorily. The northwestern tip of the state still will not be covered effectively.

These stations are on regional channels and are authorized to operate during daylight hours only, a handicap which greatly limits adult education. Wisconsin people are looking forward to the day when both stations will have the privilege of using evening hours so as to make possible a more extensive program of adult education.—Harold A. Engel, assistant program director, station WHA.

Canada Reduces Radio Advertising

RADIO STATIONS in the United States would devote, on the average, 19.51 minutes to advertising sales talk during an entire eighteen-hour broadcasting day if the new Canadian radio plan were adopted here. Writing to the National Committee on Education by Radio, Hector Charlesworth, chairman of the Canadian Radio Broadcasting Commission, describes the plan as follows:

The intention of the Act of Parliament with regard to radio advertising as I interpret it is that the advertising sales talk must not exceed five percent of the time occupied by the sponsored program. On the programs which our Commission proposes to sponsor on its own account there will be no advertising except in some special instance that might arise, like a government bond issue.

We have, under the Act, the power to increase the allotment of advertising time beyond five percent, but I am adverse to doing this. We cannot put this rule into effect earlier than April next because all Canadian stations are licensed until March 31st.

The figure, 19.51 minutes, was arrived at by taking the average percent of commercial programs given by United States radio stations, to be 36.14, as reported by the Federal Radio Commission, on page 14 of Senate Document No. 137, Seventy-Second Congress, first session.

Canada is extremely anxious to eliminate advertising entirely, but does not feel like doing so at present. With broadcasting stations in the United States, bombarding Canadians with sales talks about American products, it would place Canadian manufacturers at a serious disadvantage.

Would it not be a delightful change, if in this country as a first step toward eliminating advertising completely, the radio advertising talks would be limited to five percent of the commercial programs?

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows: Charles T. Corcoran, S. J., director, radio station WEW, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association. Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities. J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association. Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association. John Henry MacCracken, vicechairman, 744 Jackson Place, Washington D. C., American Council on Education. Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association. James N. Rule, state superintendent of public instruction, Harrisburg Pennsylvania, National Council of State Superintendents. H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities. Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations. Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Should Advertisers Control Radio Programs?

WORDS WITHOUT END have been written in defense of the present "American Plan" of broadcasting. A few of these have been statements of honest opinion, but most of them have been inspired by the selfish interests of individuals who are now profiting from the present radio system and expect to continue to do so.

An advertiser who buys a fifteen-minute period or a longer one, whether it be on one station or on a nationwide network, uses that period precisely as he wishes unless he violates the laws of libel or obscenity. He knows that a tremendous protest must be registered against his program before he can be forced to discontinue the use of the time or improve that program. The reason is that the average individual is inclined to accept such a thing as a radio program without much question since it apparently costs him nothing.

However, certain advertising programs are calling forth loud objections from public-spirited groups thruout the country as is evidenced by recent articles appearing in the press. One variety in particular which has been protested against for at least a year, is the blood and thunder type of radio program. Programs of this type, if permitted at all, should be given so as to reach homes in the service area of each station after 9PM. The *Washington Evening Star* in its issue of February 3, reprinted an editorial from the *Chicago Daily News* under the heading, "The Children's Hour of Horror." It is such a good statement that it is given below in full text:

Parental complaint is heard against a surfeit of blood and thunder in commercial radio programs designed especially to intrigue juvenile interest. Many letters on the subject have reached the *Daily News* from disturbed mothers. Parent-teacher associations are discussing the effect of that sort of mental diet on child minds. An adult revolt seems to be brewing.

It is alleged that at the twilight hour, when eight-year-old Jimmy tunes in, the serenity of the home is assailed by raucous growls of desperate hoodlums, shrill screams of terrified victims, rattle of gunfire, and groans of the dying. In an atmosphere shivery with stealthy plotting and sanguinary with violent deeds, the temperature of Jimmy's imagination rises to fever heat. Later he kicks off the bedclothes and arouses his slumbering parents with yells of nightmare panic.

Girls of tender years, no less than boys, have developed a taste for the radio successor of the dime novel. They listen with gasps of creepy fascination to blood-curdling drama that, by vocal and imitative sound, carries intenser thrill and horror than does the printed word.

Theorists will differ as to the harmful effect such entertainment may have on the immature, beyond a temporary overstimulation and a crowding out of better provender for thot and emotion. It is certain, however, that altho it may profit the sponsors of the program, it contributes

nothing desirable to the mental equipment of the child; and if it alienates adult approval obviously it will not long profit the sponsors.

It is to be regretted that material of so dubious a sort should be used when there is so vast a reservoir of heroic deed and stirring adventure, of whimsical fancy and magic wonder, on which to draw for children's programs. In days when crime is a social problem of first magnitude, feeding crime thrills as leisure-time enjoyment to infant minds is surely to be deprecated, and good homes are justified in resenting an invasion of the undesirable, so easily made and so difficult to prevent. Moreover, to provoke such resentment scarcely can be wise business policy.



JOHN C. JENSEN, director of station WCAJ, Nebraska Wesleyan University, Lincoln, Nebraska, whose appointment to the Federal Radio Commission was recently sent to the Senate by President Hoover. A radio engineer of note, an educator and an executive of considerable experience, and a member of a large number of learned societies, Professor Jensen is well qualified for this position. His appointment meets with the approval of educators and others who believe the Commission needs at least one representative of education.

If the advertiser fails to take appropriate action, the Federal Radio Commission is the next line of defense, since it has the entire responsibility of enforcing the principle of public interest, convenience, and necessity in the administration of radio.

If commercial stations overload the ether waves with sales talks or inappropriate programs, a proper balance can be maintained if a sufficient number of educational stations are provided in each state. As the Iowa Press Association comments in the *Iowa Publisher*:

If the advertiser wants to pay forty or fifty dollars a minute to have cheap stuff broadcast from Boston to San Diego, that's his business. But it is distinctly the public's business when the Federal Radio Commission denies a university the right to broadcast information of real value during the evening hours because the time after 6PM is all needed by commercial stations.

Ballyhoo interspersed with threadbare jazz and moronic dialog is forced into millions of homes during the evening, to the exclusion of worthwhile entertainment and information of

value. It is time that Congress kicks radio out of the morass of commercialism and enables better programs to get on the air.

If we read history correctly we would have made a careful study of radio long ago and adopted a plan which would protect the interests of the listeners and still be a distinctly "American Plan." Lawrence D. Batson in *Radio Markets of the World, 1932*, p11, gives a careful statement of a monopoly system which the British government operates as contrasted with the independent-station system employed in the United States. He says:

Listeners' interests, aside from their program dictation, are centered in the degree of service available. Under monopoly systems the density of population of an area is given only superficial significance in developing a system of coverage, the intent usually being to provide service to all areas indiscriminately. Under the independent-station systems, however, the interests of the broadcasters are best served by locating the station in heavily populated centers, resulting in a tendency to concentrate in such centers all of the broadcasting service which the available channel facilities will accommodate. Radio regulation of several countries limits the degree to which these facilities may be used in such centers.

THE NEWS that the Supreme Court has declined to support the Rev. Robert P. Shuler in his appeal against the Federal Radio Commission will be received with relief mingled with regret . . . grave questions of constitutional rights enter the case, and in its ruling upon this aspect of the dispute, the decision of the Supreme Court is unsatisfactory. . . . The Radio Commission sent an agent to investigate [Shuler's station] . . . and altho the agent recommended that the license of the station be renewed, the Commission disagreed with him, and voted that the license be withheld on the ground that Mr. Shuler's addresses were not, as a rule, "in the public interest."

This decision was appealed in the District of Columbia, but the District court upheld the Commission. Mr. Shuler's next move was an application to the Supreme Court of the United States for a writ of certiorari. This was denied, and the decision closes the Los Angeles station. Practically, too, it also closes the commercial stations to Mr. Shuler, since these corporations will hardly care to put their valuable licenses in peril. . . . The issue here is whether or not the constitutional guarantee of free speech is a reality or only a pretense. If a man can be deprived of his usual means of uttering his sentiments, or of any means in itself lawful, by the action of a federal agent, acting under the authority of a commission whose constitutional warrant is highly dubious, then it would seem that this constitutional right is not much more than a flimsy pretense. . . . The sole reason why certain rights are embodied in the federal and in the state constitutions is to protect them against this summary process by placing them beyond denial or dispute, saving always the authority of the courts to review cases of alleged abuse. To place these cases under the original jurisdiction of a federal commission, acting on information supplied by its agents, is to open the door to the possibility of the gravest autocratic abuses. . . . Are messages, lectures, discussions, and statements, on matters of philosophy, ethics, theology, economics, news reports, and any and all matters that can engage the attention of the mind of man, to be subjected to control by the federal government, on the ground that they fall within the purview of the interstate commerce or the general-welfare clause of the Constitution? In that event, the constitutional right of free speech becomes little more than the right to utter what is not offensive to a federal commission.—Abridged from an editorial in *America, A-Catholic-Review-of-the-Week*, January 28, 1933, p397.

THE FOURTH ANNUAL MEETING of the Institute for Education by Radio will be held at The Ohio State University, Columbus, Ohio, May 3-6. These institutes, which are noted for open and frank discussion of questions on radio education, have been attended by leading educators and broadcasters from all over the United States and foreign countries. Their contributions have appeared in the published proceedings under the title of "*Education on the Air.*"

This year sessions will be devoted to the following subjects: use of radio in the schools; methods of presenting educational programs; ways in which the listener can be advised as to the educational programs on the air; studies of the audience response to programs and ways of measuring it. Many outstanding speakers have already been secured. As a special feature of this meeting broadcasters will bring sample recordings of programs already successfully broadcast. These recordings will be played for the members of the Institute and the broadcaster will explain why certain methods of presentation were used.

In addition to the regular sessions, roundtables will be held on the following special phases of educational broadcasting: commercial stations and educational organizations; college and university stations; school broadcasting; and research in radio education.

Florida Begins Radio Series

RADIO STATION WRUF of the University of Florida began on January 6 a new series of twenty-seven broadcasts falling under the general topic, "Economic Conditions of Today." National problems which are being discussed are unemployment, agriculture, taxation and public finance, federal bank policies, and American education. The effects of the present depression upon foreign trade and Europe will form the second part of the series.

The first discussion was by Dr. M. D. Anderson of the college of commerce and journalism at the University of Florida. This broadcast was in the nature of an introduction to the series and covered "General Conditions Leading to, and Characteristics of, a Business Depression." The broadcasts are given each Friday at 4:45PM EST.

These programs are being arranged and presented under the direction of the Beta Eta Chapter of Delta Sigma Pi, professional commercial fraternity.

WE BELIEVE that radio is a most powerful agency of education; that the broadcasting channels should forever remain under public control; and that more adequate facilities should be available to the national and state governments.

The college broadcasting stations, correlated with the purpose and programs of our common schools, are the one hope we have of a better use of radio in the future.

We commend the action of the state board of higher education in continuing the operation of station KOAC and earnestly urge that more adequate facilities be provided for this radio station so that it may in the near future serve the citizens of the entire state.—Resolutions adopted by the Oregon State Teachers' Association, December 28, 1932.

More Views on Madrid

THE ASPECT OF THE MADRID CONFERENCE which most impressed me was the attitude of forbearance, cooperation, and conciliation which was displayed by the representatives of the nations of the world and the fact that it was found possible in this diverse world of ours to obtain general international agreement on as complicated a subject as world electrical communications. In particular, I think it remarkable that general agreement should have been obtained on the laying out of radio wavelengths with respect to the various services.—Eugene S. Wilson, vicepresident, AT&T.

ONE OF THE OUTSTANDING THINGS to me was the willingness of all nations to rearrange facilities and make concessions to those services which protect human life at sea or in the air. Additional facilities were extended to the aeronautical services, and also for the extended use of the various types of radio beacons. Likewise, an improved situation was created for the short-distance maritime telephone which is adapted to small vessels, such as fishing craft, which have not formerly been equipped with radio apparatus. After returning there was some gratification in learning that the door had not been shut entirely upon the possibilities of a later conference to adjust the difficulties peculiar to broadcasting in North America.—Walter Evans, Westinghouse Electric Company, East Pittsburgh, Pa.

I AM DISAPPOINTED in the results of the Madrid Conference. The resulting convention has, I believe, defects which will embarrass and delay the sound development of radio in the interest of the public. No doubt it is an improvement over the Washington Convention of 1927 but it falls far short of what might have been accomplished. I do not blame the American delegates for what happened. The results were largely due to factors over which they had no control, including interference emanating from Washington. . . .

The chief defect is, I think, the failure of the treaty to give recognition to economic and technical facts in the allocation of the lower frequencies [long waves], with the result that, except in Europe, there is no allocation of such waves to broadcasting. . . . On the other hand, no provision was made which gives any better opportunity for meeting the broadcasting needs of North American countries [e. g., Mexico] than was already afforded. . . .

A second defect is the failure of the Conference to ensure the elimination of the spark transmitter nuisance on ships by 1940. . . .

A third defect, which is due to historic accident more than to anything else, is the fact that, in future conferences for the revision of radio regulations [including the allocation of wavelengths to different services], radio communication companies engaged in public correspondence will be permitted to participate, while no such provision is made for any other type of radio communication interest. . . .

The Madrid Conference was an interesting study in cross-currents. The fact is that on allocation matters, the same conflicting interests are to be found within every important nation—between the broadcasters, the mobile interests, aviation, and the military establishments. . . .—Louis G. Caldwell, representing National Association of Broadcasters.

Radio Course for Teachers

A FIELD COURSE in the advanced technics of teaching, consisting of twenty-five half-hour lectures by Dr. L. John Nuttall, Jr., superintendent of the Salt Lake City schools, is being given by radio each Thursday at 10PM over station KSL. The series began on October 6 and with the omission of one week due to Thanksgiving, will end on March 30.

This radio course has been given as a part of the work of the extension division of the University of Utah with the cooperation of the state department of education and the Salt Lake City board of education. Those who register, pay the six-dollar fee, and satisfactorily complete the course, will receive five hours upper division university credit. More than 150 persons are actually enrolled for this work, while many others listen without formally enrolling.

The course has three aims: [1] that the teachers may know how the various types of classroom work may be built around the modern concept of "directing study"; [2] that the teachers may study in the natural classroom setting, the application of this modern technic of teaching to real teaching aims; and [3] to bridge the gap between theory and practise by a process of experimental teaching as directed in the course.

Course requirements: [1] careful consideration of the study sheets which are mailed to each student the Saturday prior to the lecture; [2] listening to the lectures by radio, using the outlines as guides; [3] carrying out in the classroom the twelve exercises given as assignments on the study sheets; [4] preparing and mailing to the university a careful description of the work done on each assignment, a statement of the success or lack of success of the experimental classroom work, and questions that arise and call for further discussion; [5] study of the criticism sheets mailed after these papers are read; [6] listening to the "report" lectures which are given by radio; and [7] an examination given in each locality under the direction of some responsible person.

The topics for the twenty-five radio lectures follow: [1] the definition of learning and teaching aims; [2] pre-testing in defining aims and teaching aims; [3] selection and organization of subjectmatter; [4] pupil interest—motivation in teaching; [5] report on classroom work on "learning aims"; [6] teaching an "ability to do"; [7] report on classroom work in "pre-testing"; [8] teaching information—the assignment; [9] report on classroom work in "motivation"; [10] individualizing instruction; [11] report on classroom work in "teaching of skills"; [12] teaching rules, definitions, meanings, and the like; [13] report on classroom work on "assignments"; [14] teaching facts by silent reading or lecture; [15] report on classroom work on "individualizing instruction"; [16] teaching by discussion—the socialized recitation; [17] report on classroom work on "teaching rules," and the like; [18] methods of drill and practise; [19] report of "use of silent reading and lecture in the classroom"; [20] use of visual aids; [21] report on use of the "socialized recitation"; [22] lesson for appreciation; [23] report on classroom work on "methods of drill and practise"; discussion of expression activities; [24] report on "use of visual aids in the schools"; [25] report on the lessons for "appreciation"; summary.

Broadcasts for Chicago Schools

THE PUBLIC-SCHOOL SYSTEM of Chicago is continuing the sponsorship of half-hour daily broadcasts intended for classroom use. The present program schedule which began January 30 will continue thru and include June 23.

WMAQ, a Chicago commercial radio station furnishes the free use of its facilities for these broadcasts, but the program itself, as it should be, is in charge of members of the staff of the Chicago public schools. G. P. Drucek, principal of the Curtis Junior High School, is chairman of the committee in charge of the broadcasts. The excellent cooperation which has existed between the schools and the radio station is due in no small measure to the foresight and vision of Judith C. Waller, vicepresident and general manager of WMAQ.

The school broadcast period is from 1:30 to 2PM each school day. During each half hour, two fifteen-minute lessons are given. Programs are so arranged that some material is provided for pupils in all grades from the first to the ninth inclusive. The subjects for which supplementary material is given by radio include: music, social studies, geography, history, household science, science, stories in mathematics, poetry, art, guidance, current events, character inspiration, health, book club, prominent citizens series, primary story hour, and a series on the Century of Progress intended to give both pupils and teachers a better idea of this exposition.

Excellent material for school use is being broadcast in these programs, it was discovered by the research director of the National Committee on Education by Radio on a recent visit to Chicago. Pupils in classrooms he visited were intensely interested in the broadcasts and seemed to be profiting by what they heard. Not all schools are equipped to receive radio programs, nor are they required to use them, even if they do have radios, but the evidence school authorities have collected concerning the use of the programs convinces them of the desirability of their continuance.

Demonstration by Radio

AN EIGHT-MINUTE SPEAKER on the subject of reading is followed by an expert teacher and a well-prepared class to prove what the speaker has said. This is the plan the New York city schools follow in using the radio for purposes of demonstration teaching. By the middle of May 1932, a series of twenty-four of these demonstration lessons had been given, using WNYC a noncommercial radio station belonging to the city of New York.

Consent Decree Victory for RCA

WHILE THE FEDERAL GOVERNMENT sought to sever the interlocking ownership ties that bound RCA to Westinghouse Electric and Manufacturing Company and to General Electric Company, and obliterate the exclusive cross-licensing agreements, aims to which RCA scarcely could offer a gushing welcome, nevertheless RCA's goodwill and financial condition are improved by the terms of the contracts. . . .

While any violation of law is denied by the defendants, and the decree is specifically clear about the reservation of any such admission, nevertheless radio in nearly all its branches was generally regarded by the public as being obviously bottled up in the combination of interests. . . .

One would expect, since RCA was the chief defendant, that it might emerge from the fray somewhat damaged in repute and purse, but in fact RCA's position is morally stronger. It is impossible to see any financial penalty to RCA in the generosity with which Westinghouse and General Electric have treated it in respect to the floating debt owed by RCA to these two concerns. As a side issue the RCA building was purchased by General Electric at book value, \$4,745,000, while \$4,255,000 in ten-year debentures were issued by RCA to the two companies, these transactions cancelling the \$17,938,733 debt to the two of them, the difference, \$8,938,733 being discharged in consideration of the new agreements.

Since RCA is to move into Radio City ultimately, it will have no need for the beautiful office building it recently erected, and it is a treat under such circumstances to have a creditor take over an asset at book value in a depressed market, and join with a co-creditor in virtually writing off a difference of nearly \$9,000,000. Then, too, RCA was under heavy commitments for leases in Radio City. . . . and since the requirements will be much less than previously anticipated, RCA pays some \$5,000,000 [a bargain according to Mr. Sarnoff] to Rockefeller Center for the privilege of withdrawing from the excess of the lease commitments over requirements. . . .

Since the terms of the consent decree require that General Electric and Westinghouse dispose of half of their stock holdings in RCA in three months. . . . On what terms the distribution will be made has not been stated, but as to the one-half required in the three-month period it seems reasonable that the RCA stock will go to the stockholders of the two companies as a gift, which would strike some consoling balance with the \$9,000,000 write off. . . .—Editorial in *Radio World*, December 10, 1932, p20.

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Charles T. Corcoran, S. J., director, radio station WEW, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg Pennsylvania, National Council of State Superintendents.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Effects of Radio on Children

CHILD STUDY ASSOCIATION OF AMERICA

THE CHILD STUDY ASSOCIATION has been concerned for some time with the number of inquiries which it receives from parents in regard to radio programs for children. The Association has recently distributed a simple questionnaire to mothers in its study groups which are conducted at the Association's headquarters thruout the year under the direction of Mrs. Sidonie Matsner Gruenberg, who is director of the Association; Mrs. Marion M. Miller, associate director; and Mrs. Cecile Pilpel, director of study groups.

The results of this questionnaire are contained in a report of the replies received from eighty women, mothers of 134 children — seventy-one boys, and sixty-three girls, ranging in age from two to fifteen.

The Association does not consider this report either exhaustive in its scope or conclusive in its findings. Its importance lies in the fact that it indicates the trend of thought of intelligent parents.

What children like to hear—Music that comes over the radio makes an appeal to many babies, just as does music from any other source. This was definitely reported as early as six months in one case, and by a year and a half or two it seems to be quite general. It is several years, however, before "programs" have any meaning. At four and five there is some interest in special programs, particularly if there is an older child in the family. At six this carry-over of interest seems to reach the first of two high spots. [Does going to school perhaps give children a chance to compare notes and to stimulate each other's curiosity?] Intensive interest then appears to lull until about the age of ten. From ten to twelve or thirteen is the heyday of the radio, particularly of continued sketches and "thrillers." After that, the 'teen age becomes more selective—sports, current events, dance music, and science begin to be mentioned.

This pattern seems to be fairly general. Most children at any age "enjoy" the radio, since only nineteen are reported as indifferent and six as definitely disliking it—and these at scat-

tered ages. But of the remaining 109, just nineteen are described by their mothers as radio "fans," and these are with only three exceptions in the ten-to-thirteen-year-old group.

The amount of time spent at the radio fits into the same picture. Twenty children at ages varying from five to fifteen spend an hour a day listening; fourteen at ages from six to thirteen spend two hours; nine at ages eight to twelve [five of these are twelve] spend three hours; and one boy of thirteen spends five hours. The remaining ninety are reported as spending half an hour, fifteen minutes, or an irregular amount of time. It was not asked whether the children "did nothing else but" while the radio was on. But from the number of programs followed closely and



WALLACE L. KADDERLY, manager of radio station KOAC, and fulltime staff members. KOAC is located at Corvallis, Oregon, is a state-owned station, and is an integral part of the general extension division of the Oregon state system of higher education, of which Dr. William J. Kerr is chancellor. Those pictured in the front row from left to right are: Anthony Euwer, wellknown poet and lecturer, announcer, and featured program contributor; Mr. Kadderly; Mrs. Zelta Rodenwold, director of women's programs; Byron Arnold, music advisor and accompanist; Oliver D. Perkins, operator; rear row: James Morris, announcer; Luke Lea Roberts, music director and chief announcer; Grant Feikert, engineer; Don Kneass, announcer; C. R. Briggs, director of farm and related programs. KOAC, like other college stations, secures, without expense, talent that would cost commercial stations hundreds of thousand of dollars.

from the mothers' general comments it seems likely that listening is not exclusive when it takes up a couple of hours or more.

One mother disapproves particularly of her fifteen-year-old son's "ear massage" in his room. Another says in more detail:

It is, on the whole, a distracting influence. The fact that the radio keeps humming while he works on French or geometry is very disconcerting to me. [This is the boy who listens five hours a day.] For he claims that he pays no attention to it—but that he *needs* it to keep him at his work. It implies a division of interest—a lack of concentration of which I disapprove.

Most of the children who follow continued programs from day to day fall, as we would expect, in the six-year-old group or in the ten-to-thirteen-year-old group. The sixes usually follow one or two programs; the older children who are regular "fans" keep up with two, three, or four. Their preferences run strongly to continued dramatic sketches and comedy programs. But of those who do like music, just as many like concert music as the jazz and dance variety. Only one mentions French and dancing lessons, and one, Sunday morning worship service. In general, they like programs designed for adults better than programs for children, performed *by* children. But their preference over both these is far and away in favor of programs by adult performers but designed particularly *for* children.

In all but nine of these homes there is just one family radio in the living room, dining room, or sun parlor. [The nine were either hotel residents or older boys with a radio in their own rooms.] It might, therefore, be assumed that its use or abuse would be important to all the members of the family. But only about one-fourth of the mothers said they find it necessary to make definite restrictions as to time and in almost all these cases their children are the ones who actually listen an hour or more. Several mothers felt that it is "just hopeless," but the majority do not make any restrictions at all.

Does radio make for more companionship in the family or not? Very few children between six and twelve listen to the radio in company with their parents. Young children, apparently, accept their parents' choices and adolescents begin to share their tastes. But the school-age children definitely want to turn the radio on for themselves—they will not listen to programs tuned in by their parents and they do "want what *they* want when they want it."

Between the children themselves the radio makes a bond of common interest. Only seven mothers say their children disagree over it, and more than a quarter of them decidedly say that it prevents quarrels and gives children of different ages a pleasure which they can happily share.

But it does interfere with other interests—on this there is more agreement among the parents than on any other point. "Family conversation" is the greatest sufferer, with reading and music practise close seconds, and with mention also made of group games, creative play, crafts, singing, bath, and supper.

From the grownup point of view—What do parents think of all this? It is impossible to give a single composite answer, for their opinions vary from one extreme to the other. There are only eighteen who declare for unqualified disapproval in such terms as these:

- Too interested in sensational.
- Terrible.
- Jazz supersedes everything. Damning.
- Too exciting.
- Too stereotyped, sentimental, unreal. It fails where it could be of great benefit.
- False ideas and emotional reactions.
- Murder stories are bad.
- Not educational; a waste of time.
- The sheer impossibility and obviousness of the melodramatic. I class it with the funnies.

In some of the children's programs, the English is *terrible*; it is stupid stuff.

I question very often the entertainer's wisdom when he mentions behavior problems.

Does not promote a great interest in good music.

I believe my daughter would appreciate concert music more if she hadn't heard so many jazz programs.

I've no sympathy with night-club entertainers. Except for an occasional symphony concert I should not consider it beneficial.

My friends with children from seven on are perfectly frantic over the effect of the radio on the children. They say the programs are sensational nonsense, and their children are made nervous and develop fears they have never had before—fear of the dark—fear of men's voices if they are rough or deep. One mother says her children have developed a feeling of evil in the world. I know of one family where the interest in listening keeps the children glued to the radio from five o'clock on, to the distinct limitation of other play or activities. In another case, the child insists on having a loud speaker in her own room so she can listen after she goes to bed.

On the other hand, a few parents feel, as one said, that it is "all to the good," either as a social or an educational asset:

It is a pleasant diversion and addition to family companionship.

It brings recreation and pleasure to 'teen age groups at home.

It affords good information.

My boy is not interested in books. Unless compelled, he will not open the covers of one. I am very pleased at the interest he takes in these radio programs as I feel it is something to stimulate his imagination.

The radio has made my son alert to the news of the day. He reads the newspaper intelligently and correlates his information. I'm sure the terse snatches of news gleaned via radio have helped in this development.

I believe the radio plays an important educational rôle in my daughter's life. Without the radio, she would have little access to the outside world.

A small number of mothers feel that radio is simply negative and does not have much influence one way or the other. Not a few who question certain programs discount their "bad influence" because they feel that the preoccupation with one program or another is so transient.

This radio craze is a phase which the child is bound to outgrow. So I am not opposing her in any *obvious* way. I am patient with her and prefer to let the passion run its course, meanwhile offering pleasurable alternatives and hoping that some day she may find a new enthusiasm.

I know that eventually she will return to her reading and to her drawing. The encroachment of the radio simply makes it more difficult.

There are all sorts of expressions of this same desire to see both sides of the question:

The radio makes me a bit furious. It could be so marvelous from an educational and cultural point of view—but instead it is such a mess. And when a mother comes home to a house where three are running at

WHEREAS it has come to the attention of the Board of Managers of the Iowa Congress of Parents and Teachers, that many parents are protesting against certain radio programs given for children; that as a result of listening to certain radio programs children are reported to be afraid of the dark, afraid of walking in front of anyone on the street, afraid even of listening to these programs without an adult near them; and *Whereas* these parents feel that many such programs are producing distinctly unhealthy mental conditions in children—*Therefore* be it resolved that the Board of Managers of the Iowa Congress of Parents and Teachers go on record as opposing the commercial exploitation of children by means of radio programs of mystery stories, danger situations, and other so-called thrills whose chief appeal to the child's interest is thru fear for himself or for a real or imaginary character in the story; and be it further resolved that a copy of this resolution be sent to all advertisers using time in the Children's Hour, to Mr. Joy Elmer Morgan, chairman of the National Committee on Education by Radio, and to the radio chairman of the National Congress of Parents and Teachers.—Resolution adopted by the Board of Managers of the Iowa Congress of Parents and Teachers, February 8, 1933.

one time—each with a sillier program than the next—oh dear! At the same time the radio gives one Toscanini and *The Emperor Jones*. You want to smash it and you want to worship it.

A good many seem to share this desire both to laud and to condemn—some of them adding that much of the really good music comes after the children are asleep. Others who specify that most dramatic sketches are “too exciting,” and “murderous,” or “cheap” and “silly” still feel that on the whole the good outweighs the bad.

Several say they do not object to the radio in itself so much as in the crowding out, already referred to, of “achievements” and “creative interests.”

I like to see children get their pleasure thru participating. I suppose one can feel about radio as about books, that no child's taste is good to begin with, but will develop as general development goes on. Too great a time spent in listening to the radio by a child, if the interest continues for a long time, disconcerts me, for I feel that the child is wasting a lot of his time.

There is just as much place, particularly at the end of the day, for relaxation in the life of a busy child as of a busy adult. This is a point frequently stressed:

I especially like this hour, because it makes for a rest physically before dinner.

The radio has a place as relaxation and fun. I don't think it does any harm and the children have a right to their own choice. They pick up much information. It is a source of relaxation—but it would be *awful* if not controled.

Thus the large group of mothers which is moved neither to condemn nor praise is not taking a middle course thru indifference. There is a real effort to get perspective on this most modern and most universal interest and to relate its “problems” both to our social setting as a whole and to the intimate life within the family.

I don't think we can eliminate radio from the modern set-up. Concerning modern tools and mediums, my feeling has always been that instead of side-stepping them, we should attempt to use them in a constructive fashion. For example, my children have learned to be critical of the children's programs which contain obvious sales talks. They listen to the advertisement with amusement. My son often asks concerning

some food or other product, “Does it say that in *Consumer's Research?*” We have even discussed good versus bad programs. I feel radio programs for children are cheap and so are funnies, but it is a tolerable cheapness.

I do not understand how there is any argument about the radio in the child's life. It is a modern household appliance, almost a necessity and, like electricity and the automobile, should be used with discretion. The radio is a pleasant informal means of becoming familiar with the great musical masters; it opens conversations on politics and news items. As a means of teaching human understanding and geography, what could be more thrilling than tuning in on Paris, London, Rome? To our children the radio is one of the marvelous scientific inventions of the times. My five-year-old is more interested in how it works than in the programs and when it is out of commission its charms are double. In fact, the radio mechanic is his ideal.

I do not forbid tuning in on even the less desirable programs unless it is at a time that disturbs. Our children are always so busy that the radio is certainly not stressed; and if it is occasionally used for relaxation, what is wrong in doing so? Children cannot have adult tastes twenty-four hours a day. We do not expect it in other ways; why in this case?

Why not begin by asking what it is that gives children so much satisfaction in some of the radio programs disapproved by their elders and betters? Perhaps in these overprotected days the young Indian in most boys and girls has nothing else half so satisfying to which to turn for some deep inner craving. It is a phase which, other things being equal, they will grow thru and beyond.

When the radio becomes a serious problem in family discipline, why blame it? The trouble in such a case is likely to be deeply rooted in the home situation, and the radio just sets a match to the tinder.

The radio is not at fault if it is an outlet for something which is fundamentally wrong between the parent and the child.

As was pointed out in introducing it, there are no general conclusions to be drawn from such a comparatively small and deliberately informal inquiry as this. It serves first to suggest certain patterns that children at certain ages do seem to follow in their radio interests, and second to indicate how their parents regard these. There appears much fair-minded criticism and a desire to utilize the radio for the enrichment of home living—and this self-evident point of view is in itself a significant “finding.”

THE RADIO SET OWNER who prefers good programs uninterrupted with sales talks is another of those who “don't know which way to turn.”—Editorial, *Christian Science Monitor*, January 13, 1933.

Petition to those people responsible for the production of the radio skit called “Orphan Annie”:

We, the undersigned, as members and friends of the *Minneapolis College Women's Club*, a branch of the *American Association of University Women*, wishing to uphold the best standards of education for the nation's children, do vigorously protest the present character of the radio program called *Orphan Annie* broadcast especially for children in the advertising of children's foods.

A survey made by the preschool group of the *College Women's Club*, members of which are especially interested in the physical and mental influences surrounding the growing child, has revealed an overwhelming majority of mothers of children from every walk of life protesting against this program and confirming our convictions that:

[1] The character of this program is not only widely at variance with the normal and ideal life for the average young child, but is indeed so cheaply melodramatic as to inculcate in the listening child a taste for the poorest in literature and life, and an unnatural desire for over-stimulation and thrill;

[2] That this continual and unnecessary over-stimulation is an actual physical and mental detriment to the normal functioning of the child's emotions of fear, anger, and loyalty;

[3] The reflection of this over-stimulation in nervous, frightened children, with strident voices and objectional vocabularies is actually antagonizing the parents to the extent that the value of the program as an advertising medium is entirely lost;

[4] That now when all forward-looking people realize that the control of crime is one of our country's greatest problems, we should not allow a generation of children to be drilled in all the technic and realities of every sort of crime, which are in fact being injected into this program so vividly. This so-called daily entertainment is tearing down faster than can be built up in children the ideals and standards of right living.

Having audited this survey and presented its findings to our general education section, this group and its friends wish to record its protest against such programs being broadcast, and to petition you to [1] either remove the objectional features of this program, *i. e.*, the overdrawn dramatic crime episodes, the raucous, unnatural voices of the actors, and the coarse vocabulary; or better still, to [2] substitute therefor programs to stimulate children's imaginations in the right direction, such programs to be chosen or sponsored by children's libraries from our unlimited store of *good* literature, and to be told or dramatized by persons trained to convey to the observant child the worth of good drama, told in good language, thru the medium of good voices speaking correctly.

[An identical petition was drawn up concerning the *Skippy* program.]

Advantages of State Radio

THE STATE OF WISCONSIN is most fortunate in having its own radio facilities capable of reaching practically every citizen in the state.

No other state in the Union is so well-equipped as Wisconsin is now to serve its people thru the medium of radio communication. It is quite fitting that Wisconsin, the birthplace of WHA, the world's oldest educational broadcasting station, should take this position of leadership in the development of state-owned radio facilities.

Properly used, the two radio stations owned and operated by the state can serve the people effectively and efficiently:

[1] By extending free to the people the educational advantages of the normal schools, colleges, and university.

[2] By reporting daily the findings of agricultural workers for the improvement of farm conditions.

[3] By extending the work of service agencies such as the State Board of Health.

[4] By keeping open the lines of direct communication between the people and the government officials in whom they have placed their trust.

Other states are watching with interest the development of Wisconsin's pioneering projects in radio.

I am told that just this week the educational director for the midwest division of the NBC was here to observe the workings of the Wisconsin School of the Air. This great leader had high praise for the work done here and declared it far superior to other similar educational projects.

Wisconsin has pioneered also by being the first state to make use of its own broadcasting facilities in an election campaign—and this fact was reported by the *New York Times*, the *U. S. Daily*, and numerous other newspapers and magazines thruout the country. Time on the air over both stations WHA and WLBL was given free of charge to all parties and candidates. This time, if purchased at commercial rates, would have cost more than \$10,000.

I understand that thousands of dollars of the taxpayers' money have been saved by utilizing *without cost* the services of university electrical engineers in the construction of equipment. In one instance, by especially designing and building the new WHA transmitter instead of purchasing it from the Radio Corporation or Western Electric Company, the committee in charge saved \$13,250. It is, of course, our purpose to keep alert to the possibilities for further economies in view of the

distressing times. On the whole, however, radio provides a very efficient and economical means for serving vast numbers of people where, before, comparatively few could be reached at one time.—Albert G. Schmedeman, governor, State of Wisconsin.

British Approve Present Radio

THE HOUSE OF COMMONS made it clear, after a three-hour debate tonight, that it would allow neither advertising nor political interference in British radio programs.

Proposals to place the British Broadcasting Corporation under Parliamentary control were decisively rejected, and a motion by Laborites that a committee recommend changes in the existing system met a similar fate. The House registered the emphatic belief that Britain's noncommercial, state-owned broadcasting system was functioning well and should be left alone.

The debate, the first of its kind since 1926, was precipitated by an incident on New Year's Eve, when an announcer criticized Poland and involved the broadcasting corporation in international difficulties. Criticisms of favoritism also have been coming from Left-Wing Laborites, Right-Wing Tories, and other political groups, which allege they are not getting a fair share of the programs. The postmaster-general assured the complainers that controversial opinions were welcomed in the British programs, except opinions which were blasphemous or openly seditious.

David Lloyd George charged that British newspapers were growing so biased and unfair in their news columns that independent radio programs were the last refuge of healthy political thought in England.

"Very few speeches are reported in Britain nowadays," he said, "and we have a condition of things where headlines are creating opinion. I don't say there is suppression of news, but there is emphasis of the particular kind of news which favors the opinion of the particular newspaper.

"Opinions are thus created not by editorials but by the way the news is arranged and displayed. Certain news is elaborated, while other news is put somewhere in the backyard. I don't know any other agency whereby we can, under the present conditions, present the vast issues upon which the country's life depends except the British Broadcasting Corporation."—Dispatch from London in *The New York Times*, February 23, 1933.

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John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.

Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.

James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.

H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.

Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.

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NBC Changes Policy

CONSIDERABLE INTEREST HAS BEEN CREATED in radio circles by recent statements which give the impression that the National Broadcasting Company has made a definite change in policy. Previous public pronouncements by its officials had convinced the man in the street that the company did not believe in the support of broadcasting from any other source than the sale of time to advertisers. It is now reported on good authority that a new source is to be tapped, namely, listener contributions. The scheme does not provide that all receiving set owners shall pay fees of sufficient size to support broadcasting but will follow the novel but extremely successful plan now used in the Netherlands of asking for voluntary contributions.

There is one essential difference between the new arrangement which is proposed by the NBC and the system now in use in Holland. This small European country does not permit radio advertising yet the two broadcasting organizations report substantial profits over and above the cost of operation. The NBC on the contrary, tho claiming to be operating in the public interest, evidently proposes to force the listeners to pay for every program peculiarly prepared to serve the public interest.

Let no one be misled. The National Broadcasting Company has not decided to cancel its advertising contracts. As a matter of fact an official of the company recently stated that in his opinion there has been an increase rather than a decrease in the number of hours sold during the past year or so.

The reports of the change in policy arose as a result of the following letter sent to a select mailing list:

15 Broad Street, New York. April 3, 1933

Confidential

Dear —:

The Walter Damrosch Music Appreciation Hour, which is being heard each week by more than six million school children [*This is an extremely exaggerated estimate*] and two million adults over the largest regular radio hookup of any program, commercial or educational, faces abandonment after its final program of the present season, April 28.

The National Broadcasting Company, which has presented the Damrosch Hour for the last five years, at a cost of approximately \$100,000 a year, has found that it can no longer make this expenditure.

A group of music lovers who feel strongly that the Damrosch programs should continue, without any impairment in quality, have asked me to form a special Damrosch Hour Continuation Committee. To obtain representative opinion on the possibility of raising the funds necessary to provide the Damrosch Hour for three years, a few questions have been shaped. Your answers would greatly aid me in reaching a decision as to future plans for the Committee.

Please accept my personal appreciation of your kindness in answering these questions. Sincerely yours,

John W. Davis

- [1] Do you believe that the Damrosch Hour should be continued?
[2] Do you think many of your friends and associates would like to see the Damrosch Hour continued? [3] Do you favor the proposal that a special Damrosch Hour Continuation Committee sponsor an effort to raise a fund of \$300,000 to assure continuance for three years? [Any funds so raised would be turned over to the National Advisory Council on Radio in Education, a non-profit-making organization of which the eminent scientist, Dr. Robert A. Millikan, is president, to administer.] [4] Would you be willing to take part in raising the fund for continuance of the Damrosch Hour? [5] Can you recommend any organization in your locality that would lead and sponsor the project locally? If so, please provide name of person with whom we might communicate. [6] Do you believe that philanthropic foundations should contribute to a fund in behalf of the Damrosch Hour? [7] Would you be willing to contribute to the fund for continuing the Damrosch Hour? [8] Other remarks?



MARTIN HEGLAND, *director of radio station WCAL, head, department of religion, and college pastor, St. Olaf College, Northfield, Minnesota. A graduate of St. Olaf College, Dr. Hegland holds an M. A. degree from the University of Minnesota, and a Ph. D. from Columbia University. WCAL, which derives its support from the contributions of listeners, enables St. Olaf College to render a distinctive educational, cultural, and religious service to listeners in that area—large numbers of whom are of Norwegian descent.*

It has been evident for a long time that sooner or later the break would come. It was only a matter of time before a disgusted, intelligent, and discriminating radio audience would insist upon the maintenance of such current programs as are worth continuing; the presentation of a greater amount of high-grade microphone material; and the curtailment if not entire elimination of radio advertising. Conceding that the present haphazard plan will not continue long, NBC would now place the burden of providing *good programs* on the shoulders of the audience and at

the same time line its pockets from the programs of the advertisers given over the protests of the listeners.

It is significant that this movement to throw the support of the Damrosch programs upon the listeners should be headed by a man wellknown as one of the leading attorneys for the big power companies, which dominate radio broadcasting.

However, there is a brighter side to the picture. The demand for a congressional study of radio along the lines of the bill introduced by Congressman H. P. Fulmer of South Carolina is gaining ground. Such a thoroughgoing and impartial study would unearth many inconsistencies in the present type of radio operation in this country. It would furnish the foundation for a system of broadcasting in the United States which would avoid both the evils of government systems in certain other countries and of our commercialized American system. Conditions in America are unusually favorable for broadcasting. There is no reason why the United States should not have the best system in the world at the least cost to the individual.

Advertising Securities by Radio

MR. PRESIDENT, just a day or so ago, before the Committee on Banking and Currency, it was developed that Halsey Stuart & Co., one of the greatest houses of its kind, if not the greatest, in the United States, had hired a professor out of a university to talk over the radio to the people of the United States. I have heard him, and I suppose all senators have heard him, telling how to invest money. They call him "*the Old Counsellor*." He was a professor from a university. They paid him, I understand, \$50 a week. He did not prepare his addresses; Halsey Stuart prepared them. They got them up for him, and all he did was to read them, and that is one of the ways they operate. That looks a good deal like the methods the public utilities companies have used to control the public during all the years that have passed.

Here were men and women with some money, savings, perhaps the proceeds of a life-insurance policy to a widow from a dead husband, wanting to invest the proceeds, and they were talked to by "*Old Counsellor*," hired by Halsey Stuart & Co., paid by them, talking their words, not his, over the radio, giving this advice. They would naturally suppose he was a professor in a university, an economist, an honest man, and that he was giving his own ideas. When simmered down, the advice was that the securities they were advised to buy were securities which Halsey Stuart & Co. had for sale and which afterwards became practically worthless.—Senator George W. Norris of Nebraska, *Congressional Record*, February 23, 1933, p4928.

Utopian Radio

IT IS A STRIKING FACT that the radio should be such an abject failure in the one field where the greatest success was once prophesied—news broadcasting. One reason is that during much of the day, time on the air is completely sold to advertisers, so that it takes much effort and long advance notice to clear the airways. Yet the most important news, by definition, is that which is sudden and unexpected. Again, the broadcasters deliberately slight this function in the endeavor to keep the goodwill of the daily press and get its announcements of programs printed. The newspapers are already rather hostile to radio, which is an extremely important competitor for the advertiser's dollar. It is now apparent that on the basis of present inventions, radio will never be a substitute for the daily paper, which can be read at your convenience, with complete selectivity, at any rate of speed you wish, and can be filed for reference. In Utopia, of course, radio would be infinitely more useful than it is now. There would be about four stations, each of which would broadcast one type of material only, all day long—news from one, serious talks from another, light music from a third, good music from a fourth. But that is Utopia!—*The New Republic*, March 15, 1933.

THE COMMERCIAL MONOPOLY CHAINS, after the practise had been established by the educational stations in the various states, were obliged to make some such provision for the discussion of public questions by the national legislative body. In making such an arrangement one company selected an hour unfavorable for listening on the eastern seaboard which is the center of our population and turned over the responsibility for program making to one of the local Washington newspapers.

Opposes Radio Advertising

AT THE PRESENT TIME, I am opposed to radio advertising from two quite definite points of view. First, from the listener's, whose reaction to the program would naturally influence my second, the advertiser's point of view.

If I buy a wireless set, I pay an annual license fee to be entertained, not instructed as to what goods I ought to buy. Were a canvasser or a commercial traveler to force his way into my house and thrust his goods upon me, I should consider it an unwarrantable intrusion. But I consider it no worse than that I should be expected, when I switch on my radio receiver to hear the entertainment to which I am entitled, to have to listen to a similar salesmanship. The obvious argument is that I have no need to listen. I can switch off. But why should I? What have I bought a radio for? What do I pay a license fee for? Not to "switch-off" but to "switch-on," to whatever form of entertainment appeals to me.

Another small, but nevertheless irritating, detail—I do not wish to hear a program "by the courtesy of" anyone. I don't want it given me as a favor when I know very well it is my due.

With the listener holding this point of view, it is hardly to be expected that the advertiser's verdict will be a favorable one, as every listener is a potential customer.

The advertiser or the advertising agent, who if possible must be still more careful in choosing his media, has neither the guarantee that the sales talk, which follows the "sponsored program," will be listened to [it is more than likely that as soon as it begins, the listener will switch off], nor the knowledge that the people who do happen to be listening are the people to whom his product appeals, nor the assurance that even if they are, they are not being antagonized by the method of approach.—Sir Charles Higham in *British Broadcasting Corporation Year-Book*, 1933, p59-60.

PERSONALLY, I FEEL THAT RADIO is rich in possibilities as an educational instrument in the schoolroom. The greatest handicap to its usefulness is the possibility that the broadcaster, if he is not a thoro educator, may be satisfied to put on the air, for the schools, the kind of programs that he would prepare for adults. It is absolutely essential that the programs mesh into the curriculum of the schools.—W. W. Charters in *Education on the Air*, 1930, p134.

A COMMERCIAL BROADCASTER who recently sold his station and went to Europe to visit stations there writes:

"I listen-in all hours of the day and night and am more than pleased at the music one can hear. The best music seems to come from Holland, Poland, and Prague, but it's all so much better than the rotten 'jazz' and 'blah-blah' in the United States that there's no comparison."

Radio in the Wisconsin Legislature

HAROLD A. ENGEL

Station WHA, University of Wisconsin

WISCONSIN LAW-MAKERS are now using the state's radio stations to keep the citizens in close touch with legislative activities in Madison. Each day a broadcast direct from a studio in the capitol building features a message by a legislator who is prominent in the news of the day.

At the beginning of the present session every senator and assemblyman was invited to use the radio to keep his constituents informed of his activities and interests. He was asked to choose his own topics for discussion. So many have grasped the opportunity to extend their services to the people "back home" that it has been necessary to double the original time allotment for as much as a week at a time.

The "State Capitol" series was opened by Cornelius Young, speaker of the assembly at the age of twenty-five, who laid the groundwork for the talks to follow. Later broadcasts are featuring discussions of pending legislation, explanations of laws enacted, and weekly summaries of the activities of the legislature.

Each speaker is allowed a free rein; no censorship is suggested. Even in the most controversial of problems there have been no cases of indiscretions or ungentlemanly conduct. The solons have accepted the opportunity as a part of the plan to acquaint the citizens with the complex problems of this time of economic distress. Listeners, in turn, are eager to know what is being done in their behalf. A better understanding is the result.

Into the microphone the legislator speaks his mind. His voice is heard and he is understood as he intended. He welcomes the freedom from misinterpretations and distorted reports which have been known to come from the press, especially when the political affiliations of the speaker and the press do not coincide. The radio brings into the home the friendly warmth and assurance so vital to stability in turbulent times. It helps the legislator to maintain on the part of his constituents the confidence which elected him.

Important legislative events are put on the air as they occur. Since the first of the year the inauguration of the governor and other new state officials, the opening session of the legislature, and the much-awaited governor's budget message have been heard. Broadcasts of vital matters can be arranged on short notice thru the maintenance of a wire connection with the legislative chambers.

The Women's Legislative Council of Wisconsin finds it possible to extend the scope of its activities by using the WHA-WLBL hookup. Each week at a regular time it gives a summary and explanation of the more important developments at the capitol. Legislators themselves take part, broadcasting from the capitol studio. Matters of special interest to women are featured.

Continuing its program of political education, started during the election campaigns in the fall of 1932, a series of broadcasts has been arranged for candidates for the supreme court in the April election. Time was again distributed equitably

among the aspirants for office by the drawing of lots. *There is no charge to any speaker for the use of these radio facilities.* It is an educational project for the enlightenment of voters, and candidates are urged to use the time judiciously.

The state stations, WHA operated thru the University in Madison, and WLBL of the Department of Agriculture and Markets, are linked by wire and broadcast many important features jointly. More than 90 percent of the people of Wisconsin are within the service area of these two stations.

Wisconsin has begun to demonstrate a few of the ways in which the radio is a powerful force in the extension of opportunities to its citizens. Recognized as a leader among states in matters of politics and government, it continues to pioneer in the public interest. In the words of Governor Albert E. Schmedeman, "It is quite fitting that Wisconsin, the birthplace of WHA, the world's oldest educational broadcasting station, should take this position of leadership in the development of state-owned radio facilities."¹

PTA Writes Protest

AS THE GROUP OF PERSONS most interested in the welfare of children, the Rochester Central Council of Parent Teacher Associations wishes to call to your attention the undesirable features of your radio program coming at 8PM on Tuesdays and Wednesdays.

If ever children and young people should have high ideals held before them, it is now. Recreation they need, and wisecracks, and nonsense and fun; but never a portrayal of crime that will give them not only the idea itself, but all the lurid details of its execution as well. The radio voice has become a background against which a modern child can think and act, but let that background be decent and uplifting, rather than degrading. Eight-thirty is the average hour for bedtime for school children; does it seem fair to them that their last half hour before being sent to bed should be filled with the shrieks of murdered men and the wails of betrayed women? If you must have these things, let it be after ten o'clock when children are in bed, or during the morning when children are in school. If you persist in undesirable programs during the evening the result will be the turning off of all radio entertainment during the evening.

Intelligent parents are becoming so annoyed at the type of radio advertising that is emphasized daily from five to nine, resulting in urgent demands from the children to buy XYZ toothpaste and ABC cereal, etc., that an organized resistance is growing up; parents are steadfastly refusing to buy any product advertised over the radio by over-emotional and too highly stimulating appeals.

We sincerely hope that you will consider our protests in behalf of our children.

Very truly yours,

¹ Inaugural address celebrating linking of state stations by wire, January 21, 1933.

Who is to Blame?

SOME TIME AGO, following the sensational murder by a young schoolboy, one of our Chicago dailies carried an editorial laying the blame for such conditions on parents and teachers. Of course we are the custodians of children, but are we wholly responsible for their actions?

Often a broken home is responsible, because it creates an emotional unbalance in the child deprived of the love and security it needs for normal development. For instance, that particular boy was deprived of his mother in childhood and the evidence showed that he was "shifted from one relative to another" during his childhood when he needed love and security. Then too, there are people who should never be parents.

But how often the community is to blame for conditions it permits *outside* the home and school. This morning I read of a school boy who killed a policeman, and to my amazement the blame is put on the movies he saw just before committing the crime. The accusation was considered, seriously enough, for theater owners were actually called in. That boy did not see crime in his home, but *he was shown all kinds of crime in the movies, sponsored by the community.*

We are one of the most backward countries in the world regarding the safeguarding of our youth. Not even Turkey and Russia allow their children to witness films of crime.

And even our newspapers, do they set a good example? At the time of the murder mentioned above, I wanted to get my son's reaction to what he was reading in the paper that came to our home every day. I was amazed and oh, so pleased with his answer. He said he had not read any of the details. "For that matter," he added, "there is very little worthwhile to read in the paper."

Are you, Mr. Editor, pleased with that reaction from a fourteen-year-old boy?

Again, I noticed an article recently by the radio editor of the *Chicago Daily News*. He said: "Crime and horror have become a large part of broadcasting—and *mothers* don't like it. That stuff over-stimulates a child, and if improperly or poorly done, may give him the dangerous idea that the gun is the answer to life's problems and the laws of man and nature not important." That sounds as if mothers were on the job, and fighting the people who have charge of the recreational hours of youth. This brings vividly to my mind the fact that I called up this same newspaper one evening, protesting against a horrible crime story that they had just sponsored over the radio.

Perhaps someone else besides parents and teachers is responsible for the crimes of youth.—A Chicago Mother.

Group Listening

SO FAR AS IS KNOWN, some 168 listening groups have been formed in various parts of the country to follow the series of addresses on "God and the World thru Christian Eyes." The method of listening is varied. In some cases the groups hold their discussion immediately after hearing the broadcast; in others it is held after a day or two's postponement; while in yet other cases the actual listening is done individually, but the group meets for discussion during the subsequent week. Since some of the talks are closely packed with ideas and are not easy to absorb at first hearing, this latter method has something to recommend it. . . . In one case, at St. Cuthbert's Parish Church, one of the principal churches in Edinburgh, the average attendance at the group meetings has been 300. We believe that there are many listening groups of which no record has yet been received, and the British Broadcasting Corporation would be grateful if the organizers of any such groups not already in touch with a regional station would communicate with Broadcasting House.—*The Listener* [London], March 29, 1933, p483.

1933-34 Debate Topic

RESOLVED: *That the United States should adopt the essential features of the British system of radio control and operation.*—This statement has recently been adopted by the working committee of the Committee on Debate Materials and Interstate Cooperation of the National University Extension Association. It will therefore be the subject in the national contest and will be debated during the year 1933-34 by the majority of the high-school debating teams thruout the United States. In view of the increasing amount of dissatisfaction with the present American system, it is expected that the nationwide debate of this subject will bring out a great many facts with which few people are conversant.

THE MOST IMPORTANT THING in America is the youth of America. Don't help railroads and neglect boys and girls. Save the railroads; save the banks; save the insurance companies; take steps to save the building and loan associations; do anything to save the farmers, but always keep in mind the little generation. We can rebuild anything that is lost in America except the lapse of interrupted or denied education. Give attention to the one greatest need of our country—the need of education.—Aaron Sapiro, attorney-at-law, New York City.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:
Charles T. Corcoran, S. J., director, radio station WEW, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Long Beach Uses Radio

EDUCATIONAL RADIO BROADCASTS are supplementing classroom work in Long Beach, California, as a result of serious damage by earthquake to the city's school buildings. The broadcasting under the direction of the city board of education was suggested by C. C. Ockerman, principal of the Jefferson Junior High School, and H. S. Upjohn, superintendent of schools, and was organized by a committee headed by Emil Lange, director of curriculum and research, and by John L. Lounsbury, principal of the Long Beach Junior College. R. E. Oliver, head of the commercial department at Polytechnic High School, is in charge of broadcasts. These radio programs began April 1, 1933. Stations KGER and KFOX each donate a half hour daily and the local morning and afternoon newspapers print the lectures for the benefit of the general public.

While the schoolboard hopes to give education by radio a thoro test, possibly extending it to the elementary grades in lieu of home work, the programs now being given are intended for the pupils of the city's seven junior high schools and their parents. All schools are again in operation, but the condition of many buildings is such that half-day sessions are necessary, each child receiving four hours' instruction. An audience of three thousand junior high pupils is thus free to listen to the radio talks over KGER from 10:30 to 11AM, and an equal number to the program broadcast over KFOX from 2:30 to 3PM. The pupils listen in their homes or, if they have no radio, in the homes of friends or at KGER which has a large room available for this purpose.

Among the topics that have been broadcast are "The Growth of Our Number System," "Mathematics in Classroom vs. Mathematics in the Industrial World," "Romance of Mathematics," "Books as Friends," "Vocational Planning for Junior High-School Girls and Boys," "Current Events" which chiefly treated the administration of President Roosevelt, and "April in History" which in three broadcasts dealt with Jefferson, Monroe, and Grant whose birthdays fell within that month. Talks on music are planned.

To convey a more adequate impression of the Long Beach school broadcasts, let us select as representative, the morning program of April 18, 1933, given by KGER. The leading speaker was Maud E. Hayes, supervisor of homemaking education. Her subject was "Homemaking in the Long Beach Schools." The opening paragraph as it was given by radio outlines the nature of the talk: "It is the purpose of the

broadcast today to tell the parents of girls in junior high-school classes something about the homemaking work in Long Beach, and in later talks to suggest to the girls themselves some of the ways in which they can help at home by carrying out what has been discussed in class." After a general review of the need for such instruction in school, the speaker listed the points which the teachers were trying to emphasize in their work. These were:

[1] Encouraging positive health habits and attitudes.

[2] A working knowledge of processes carried on in the home and an interest in sharing them.

[3] A degree of skill and ability suitable to the age and needs of the girl.

[4] A wholesome attitude toward home and an appreciation of family relationships.

[5] The ability to save and spend wisely either personal allowances or earnings, and to understand and appreciate the financial conditions of the family.

[6] The power and will to use and enjoy leisure time with profit to self, to family, and to community.

This speaker also discussed the "7 B Course" which deals with food choice and preparation, food in relation to health, habits in eating, food values, and the like. The second speaker, Harry Stauffacher, principal of the John Dewey Junior High School, directed his talk mainly to boys.

His theme was "How to Choose a Job and How to Hold a Job." He especially stressed the need of thoro preparation, citing the examples of Colonel Lindbergh and Admiral Byrd.

Listening to these broadcasts is not compulsory and no reports are required. It is felt that a loss of spontaneity might result if there were any obligation to listen, and that what now is a pleasure would become just another task. If a pupil does hand in a written report of a broadcast it is of his own accord and these voluntary reports receive extra credit. The teachers, however, make inquiries in classrooms to ascertain how many listened and what they retained. These casual inquiries, it is found, stimulate interest and discussion. If a child does miss a broadcast he takes pains to listen to the next.

In general, the results have been gratifying. The children appreciate that this radio material is of an informal nature and this has aroused a new spirit. They realize that education is something they need to equip them for life and are striving to carry on and make good without supervision.



L. LONGSDORF, extension editor and radio program director of station KSAC, Kansas State College of Agriculture and Applied Science, Manhattan, Kansas. With a major in journalism, Mr. Longsdorf holds B.S. and M.S. degrees from the University of Wisconsin. He has held his present position since 1927 and during that time has made an outstanding contribution to the use of radio for the advancement of extension work.

More About Children's Programs

FOLK TALES about fire-breathing dragons, child-eating ogres, and bloody conflicts which served in ancient times to stimulate and energize flagging childish spirits are not needed in the modern high-speed world of children. Modern children are a constant prey to overintense living, whether from dodging streetcars and automobiles, from moving pictures, or from the constant pounding of a crowded community life, and they need to be protected from overstimulation. Many discriminating mothers who would not allow their children to go to a blood-curdling play or picture make no audible protest when the same kind of program invades the quiet of the home thru the radio.

Why should parents supinely permit a heavier load of terror to be thrown over their children's so-called quiet hour on the air? There is no more reason why we should allow our children to be frightened or their vocabulary degraded over the air than that we should allow undesirable members of the community to spend their days in our home. It is certainly in our own hands to manage, for nothing will so quickly reflect our disapproval as the fact that we do not listen.

A movement of protest against many children's programs has made itself felt during the past two years, becoming vocal in the last six months. There seems to be no radio station that has escaped accusations of terrifying children, of giving them nightmares, of teaching them vulgar language, and of filling the house with "advertising junk."

Advertising program directors are more eager than anyone else to please the buying public, but they have no reason to believe that we disapprove of a program if we allow our children to respond to it by sending wrappers or labels to prove that we buy the advertised product.

Parents who wish to improve the quality of the radio programs to which their children listen will find assistance in the following suggestions:

[1] Listen to the children's hour programs with the children.

[2] Find out why children like or dislike certain programs.

[3] Unite for conference with other parents in the community to evaluate programs for children.

[4] Write to the radio station commending approved programs.

[5] Write to the station protesting against objectionable programs, stating plainly what features are disapproved, either as to program content or advertising material sent on request of children.

[6] Choose with discretion programs suitable for child listeners and dial out those which are undesirable.—Mrs. B. F. Langworthy, first vicepresident of the National Congress of Parents and Teachers.

Advertisers Furnish Ideas

WITH NBC STILL GAGGING over its efforts to swallow up phonographs, music publishing, moving pictures, vaudeville, grand opera, and its last mouthful—Radio City, it has its jaws wide open to gulp down the press. But the press has proved too big a mouthful, so far, even tho President Aylesworth has threatened to run his own newspapers, if the press fails to do his bidding.

The press refuses to be the crackers and cheese to follow the gastronomical gulping of communications courses, flavored with the apple sauce of regulatory bodies. Furthermore, the press has now laid down the gauntlet to the radio stations in the matter of using news dispatches.

There is one other mouthful that has proved too big for these gigantic jaws to crunch, and that is the advertising agencies of the country. Had it not been for the ideas given to radio by these agencies, and those gently purloined from smaller stations, and defenseless but enthusiastic authors, radio programs today would be but little better than they were ten years ago. The communications trust has provided little, and paid for less that is unique and original. It would have been a poor feast indeed had it alone supplied the entertainment.

Many times during the writer's connection with the NBC frantic appeals have been placed on employees' desks for new ideas, from the group in charge of production at that time. An example of the length of reach of the octopus, was its vain efforts to gather certain wellknown features within its tentacles, after many efforts to duplicate them. Both resulted in law suits and similar complications before a more expedient procedure was adopted for the time being, and the inevitable patient waiting of the reptile resorted to.

The press and the advertising agencies of the country have been able to evade the jaws of the behemoth because their combined wealth in ideas, dollars, and political power was quite equal to that of even this gigantic combination.

Maybe its jaws and throat are now clogged with its indigestible gulps, and it is engaged now in watching the jaws of the Columbia System, which is *not* running along on borrowed capital, and is more likely to crunch down upon NBC than the heretofore expected opposite, so a Columbia executive informs us.

For the time being, then, the press may be expected to hold its own against the controllers of all other forms of air and wire communication and entertainment, until another form of attack is formulated, and a vulnerable spot detected.

A greater force of slippery opening finders for complete communications control exists at all offices of the trust, than ever were employed to furnish entertainment to the dear public.—Caleb O'Connor.

THE CENTRAL FLORIDA BRANCH of the American Association of University Women declares itself in favor of the principle of reserving by legislation or regulation adequate radio channels for educational purposes. The Association commends the National Committee on Education by Radio for its efforts to further education by means of radio.—Adopted at the April 1933, meeting of the Central Florida Branch of the American Association of University Women.

Shall Foundations Control Educational Radio?

SHALL EDUCATIONAL BROADCASTING be in the hands of privately appointed committees operating in New York on funds supplied by private foundations, working hand in glove with the commercial radio monopolies which are closely allied with the great power companies—such committees for example as the National Advisory Council on Radio in Education?

Has the United States reached its present educational development by placing the control of education in the hands of private selfish interests? We believe fundamentally that responsibility for educational matters is vested in the people and should be exercised on a state and local basis. Public education is the only adequate safeguard to the effective functioning of such a democracy as ours.

The present development of the radio art gives abundant assurance that broadcasting can be used as an effective aid to promote education. It is a powerful tool. We must take every precaution to safeguard the microphone from those who would use it to further their own interests and indoctrinate the citizenry. Foundations may be helpful in financing some of the preliminary experimentation, but are privately appointed committees the proper custodians of this great public interest? Do they not get their funds from foundations which have frequently opposed democratic education?

What better example could be found than the following statement from the annual report of the Carnegie Foundation for the Advancement of Teaching? This statement, reprinted in *The Index*, a publication of the New York Trust Company, on page 72 of its April 1933 issue, has been given the widest possible circulation by many other banks and big corporations in their desire to cripple schools.

The Foundation has continually called attention to the fact that the development of the tax-supported system of schools and colleges was growing at an accelerated rate, and that it was departing from the original sound program of public education—a simple and sincere system of schools—to include in its list of studies many vocational and cultural subjects far removed from the conception of education upon which our public-school system originally was founded. In the process not only has there been an enormous inflation in the list of subjects offered in the elementary and secondary schools, but new agencies, such as junior colleges, have added to the confusion and the mounting cost of tax-supported education. The organized agencies of public education have followed the example of industrial agencies—agriculture, manufacture, transportation. Along with over-production in agriculture and in manufacture there has been a comparable over-production in the products of the tax-supported system of education. The inflation has resulted in a multiplication of subjects taught, in costly and expensive buildings,

and in a vast increase in the number of those kept in school beyond the point where the school was fruitful, and inevitably there has come an unprecedented rise in the cost. In the case of one large community whose budget was recently examined the school system cost nearly sixty percent of the total municipal income, and at the rate of growth in expenditure that has held for the past ten years the entire income of the community will be absorbed, in another decade and a half, by the support of public education. And this is no unusual picture.

The total lack of understanding of the facts about public education and of its relation to the democratic system of life, which is revealed in the above statement by the Carnegie Foundation, has been characteristic of certain big banking and financial interests in their opposition to schools. It is the same old struggle of greed and autocracy on the one hand against democracy and opportunity on the other.

Can the schools be expected to cooperate with broadcasting enterprises in the hands of the enemies of free democratic education?

Sustaining Programs Best

NOW IF YOU WILL LOOK OVER any extensive list of radio programs you will make an interesting and disquieting discovery. It is that virtually every broadcast from which you derive æsthetic enjoyment, and to which you attribute genuine cultural value, is a sustaining program . . . every one of these comes to you, not out of the advertising appropriation of a commercial sponsor, but out of the pockets of the National or Columbia broadcasting companies. Out of all of the serious broadcasts on the air, the Philadelphia Orchestra series, under Stokowski, sponsored by the Philco Radio, is almost the only commercial broadcast that can be considered an absolutely first-rate artistic offering.—Deems Taylor, "Radio—A Brief for the Defense," *Harpers*, April 1933, p561.

Home Economics Broadcasts

THE UNITED STATES OFFICE OF EDUCATION is collaborating with the American Home Economics Association in making a survey of series of home economics broadcasts since September 1, 1932. The National Committee on Education by Radio is glad to lend its support to this worthwhile project and suggests to the readers of *Education by Radio* that they make every effort to cooperate.

WE RECOGNIZE THAT RADIO BROADCASTING offers a means of public, and especially of adult education which, in point of efficiency and scope, can be attained by perhaps no other agency; we approve the action of the United States Commissioner of Education in appointing a specialist in radio education on his staff; we commend the efforts now being made in this state to make radio broadcasting effective in education; and we urge all our representatives in Congress to give vigorous and unequivocal support to national legislation which will provide for public education its due share of broadcasting opportunity.—Resolution adopted by the Representative Assembly of the Washington Education Association, held at Tacoma on November 26, 1932.

False Advertising

AFTER THEIR EXPERIENCE with the "Old Counselor," part of a program of Halsey, Stuart & Co., which made paper profits of \$36,000,000 and was associated with the Insull companies, *radio listeners will not be quite so gullible in following the advice of an honest-sounding voice over the air.* Neither will radio chains be so likely to carry investment advertising without making a more careful investigation of its reliability.

The mere fact that a reputable chain broadcast the advice of the "Old Counselor" gave the impression of his responsibility. Mr. Stuart told the Senate committee that *M. H. Aylesworth, president of the National Broadcasting Co., worked out the investment program* and Halsey, Stuart sponsored it.

Also certain public officials, such as Representative McFadden, of Pennsylvania, *chairman of the House Banking Committee [! ! !],* who introduced the first program upon which the "Old Counselor" appeared will not be so quick to accept invitations of the kind in the future. Unquestionably the presence of men nationally known and respected on this program played an indirect part in giving the listeners confidence in the "Old Counselor."

Harold L. Stuart, president of Halsey, Stuart & Co., of Chicago, explained to the Senate committee that the purpose of the radio program was to "educate the public about investment topics." It surely educated some of the listeners in a way they probably will never forget.

Altogether the series gave a black eye to financial advertising of this type over the radio and leads up to the question of what steps are to be taken to protect the public against such misleading advice in the future. It seemed to be the general conclusion at the Capitol that *there should be something in the law to prevent any but the soundest of investment advertising over the radio in the future.*—Robert D. Heinl, in the *Washington Post*, February 20, 1933.

Worth Reading

READERS of *Education by Radio* who have not already done so, should read "The Tenth Generation" found in the May 1933 issue of the *Journal of the National Education Association*, page 139. This article written by Harry Stillwell Edwards focuses our attention in these difficult financial times on some facts which are of such vital importance as to challenge our consideration.

Radio in Political Education

THE OTHER SITUATION which I have in mind has to do with some recent studies of the radio as an instrument for the political education of adults. I was invited, as a psychologist, to measure the effectiveness of a group of lectures on unemployment. Before starting to work on my tests I asked a sponsor of the broadcasts what kind of effects they were seeking. Were they seeking to spread new information on political subjects? Well, that was one object. Another object seemed to be that of stirring up political interest, whatever side of the question the listeners might come to take. When we made our actual measurements of the effects of this particular series, we found that the speeches did increase the information of the listeners somewhat, but the nature of the increase was important. *Really novel ideas practically failed to carry over.* The large effect was in the increased popularity of ideas already very much in the air. The series also had an effect in increasing the consistency of such general attitudes as: "The federal government must act in the unemployment emergency." It should be clear that such results as these are not simply comments upon the efficiency of previously established educational policies. They push one into judgments of what those policies should be. They suggest the possibility that radio broadcasts should avoid the purpose of disseminating novel ideas—that perhaps such broadcasts should have the more modest aim of crystallizing and defining that which is already known, but known only vaguely.—Edward S. Robinson, Yale University, in "Psychology and Public Policy," *School and Society*, April 29, 1933, p542.

Canada and the United States

VARIETY, that peerless journal of the amusement world, recently made a careful poll of 150 cities in the United States and Canada as to the favorite radio program in each community. It was found that the three most popular entertainers, in the eyes of the Americans, were in descending order Eddie Cantor, Ed Wynn, and Jack Pearl. In Canada, according to *Variety's* listing, they were the New York Philharmonic Orchestra, the Philadelphia Orchestra, and the Metropolitan Opera Company. This must prove something; but on the whole we had better leave it to a Canadian to say just what.—Editorial in *The New Republic*, January 11, 1933, p227.

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- Charles T. Corcoran, S. J., director, radio station WEW, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
- Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
- J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
- Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
- John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
- Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
- James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
- H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
- Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Improve Radio Programs

AFTER A LONG STRUGGLE trying to improve the quality of moving pictures, parents in numerous homes have concluded that it is easier to find other types of recreation for children than to attempt to select suitable pictures from the mass of trash being spewed forth continually from the commercial studios.

A moving picture, once made, is comparatively permanent. After a number of showings, the various evaluating organizations can estimate its suitability for persons of various ages. Using the best of these reports, the intelligent parent can determine what moving pictures, if any, his children should see.

The radio is different. A single program is a transient thing, spoken over the air but once and then gone. Whether the effect is good or bad, once heard, its influence cannot be destroyed. The child does not have to go downtown and pay an admission, but in his home or perhaps in the confines of his own room, the radio program, without opportunity of preview or evaluation comes in to make an indelible impression on his plastic mind.

The radio constitutes a more difficult problem than that presented by children's reading. Radio programs bring a realism to youngsters that at the same age cannot be secured from reading. In fact long before a child can read, he can be intensely stimulated by a vicious radio program.

Parents do not have the opportunity in case of individual programs and seldom have the time in case of a series of programs to make a careful evaluation. In spite of this, the National Congress of Parents and Teachers and other organizations and individuals seeking an improvement in radio programs because of their injurious effect upon boys and girls, receive nothing but sneers from certain mouthpieces of commercial radio. Witness the following quotation taken from the "Behind the Mike with William Moyes" column of the *Portland Oregonian*, May 30, 1933, as a case in point:

Franklin Dunham, educational director for NBC, New York, who dropped in yesterday, brought one gem that interested this column. It was an answer to old hens who go around crying about children's programs on the radio ruining the young. Mr. Dunham puts it too nicely, so B. Mike, interpreter without portfolio, renders it thus: You don't let your kids read anything they want, do you? Well, it's the same with radio. You're supposed to teach them discrimination. If they don't exercise it themselves you're supposed to do it for them. The only place where a kid listens to whatever he dampleases is the unmanaged home. Unmanaged homes are places lacrimose old klucks neglect so they can shoot off their bazoos in public over the ee-vils of radio.

Advertisers responsible for most of the undesirable children's radio programs may take a measure of consolation from such articles as the above, but intelligent parents banded together in the various organizations giving study to radio problems will not be so easily satisfied.



CHARLES A. CULVER, professor of physics, Carleton College, and director of broadcasting station KFMX which recently left the air for financial reasons after ten years of operation. Professor Culver is a Fellow of the American Institute of Electrical Engineers, member of the Institute of Radio Engineers, served as a major in the Signal Corps, and holds a number of patents in the radio communication field.

It is a trite yet ever truthful saying that he who pays the fiddler, calls the tune. Where has it been shown to better advantage than in radio? Even the broadcasting officials of the chains or independent stations, high as their ideals may be, are powerless to regulate the content of programs given by advertisers. Perhaps the present American radio system can be modified to eliminate most of the present evils. This cannot be done by applying large quantities of whitewash. Right now representatives of the radio industry are busily writing articles for publication in various magazines in defense of American radio. A few readers may be fooled by the clever misrepresentation, but the bulk of the American public will resent this type of activity. They want the facts, not propaganda. They can tell from a casual listening to their own radios that something is radically wrong with the present system. Perhaps nothing can be done about it, but most of them feel that we should take the precautions of making a careful study before we blindly go farther in radio. An impartial Congressional study of radio similar to the Parliamentary study made for Canada by

Sir John Aird's Commission is the next logical step for the United States.

SOME AMERICAN FRIENDS living in Milan, Italy, report that they are absolutely reveling in the most gorgeous programs reaching them from every part of Europe even tho they have only a cheap receiving set. Europe has a wide choice and selection of national programs whereas in the United States we have no selectivity at all, but must content ourselves with the same character of commercialized tripe being broadcast from 400 stations at the same time.—An American radio listener.

NEVER IN THE HISTORY of the nation has there been such a bold and brazen attempt to seize control of the means of communication and to dominate public opinion as is now going on in the field of radio broadcasting.—Representative Frank R. Reid, Illinois.

Radio Education in Australia

DURING MARCH 1933, at the invitation of the Australian Broadcasting Commission, the minister for education cooperated in the formation of an advisory council to deal with educational broadcasts. The chairman is A. W. Hicks, M.C., M.A., assistant director and assistant undersecretary for education, and the secretary, E. A. Riley, M.A., formerly inspector of schools.

The council divided itself into two committees, one to deal with educational broadcasts for adults and one to concern itself with school broadcasts. The latter elected J. G. McKenzie, B.A., B.Ec., assistant chief inspector of schools, as chairman, and the general secretary as its secretary.

Two types of school broadcasts have been decided on. From noon till 12:20PM they will be suitable for children between the ages of 10 and 12 years, while the interests of students from 12 to 15 years of age will be catered to on four afternoons [Monday, Tuesday, Thursday, and Friday] from 3 to 3:30PM. On Wednesday afternoons from 3 to 3:30PM it is proposed to have a broadcast especially for pupils of the correspondence school. Subcommittees have been formed to draw up programs and select broadcasters for each of the subjects, which include English, history, geography, music for both groups, with French and science in addition for the seniors, and nature study and health talks for the juniors. A handbook, giving the programs, with notes, illustrations, and suggestions, will be issued to teachers, so that the young people may be prepared to receive the full advantage from the broadcasts.

A technical subcommittee is also at work seeking full information as to the type of reception that is available in various localities thruout the state with a given type of receiver. It is hoped to epitomize this information on a map of New South Wales, so that each school may know whether it can expect A class reception [guaranteed under all normal conditions] or B class reception, that is, a reasonable expectation of satisfactory reception, or whether it lies in a "dead spot" where there is no reasonable prospect of satisfactory reception.—*The Education Gazette*, New South Wales, May 1, 1933, p78.

Baker Replaces Young

ONE OF THE MANY difficult and important problems facing the United States today is that of removing radio from the domination of the Power Trust.

When on November 21, 1932, the federal court in Wilmington, Delaware, decreed that there must be a complete separation of interests between Radio Corporation of America and General Electric Company, Owen D. Young was ordered to sever his relationship with either RCA or GE. He accordingly resigned as director and chairman of the executive committee of RCA and all of its subsidiaries. This action by the court it was hoped would destroy monopoly in the radio field.

It now appears that the Power Trust interests have found a way out. By bringing Newton D. Baker, one of the country's leading power trust attorneys, into the directorate in the place of Owen D. Young, they have continued the connection in fact if not in name.

Lauds Radio Committee

THE NATIONAL COMMITTEE ON EDUCATION BY RADIO proposes to find the rightful place of radio in the general scheme of teaching.

Good! And at the same time, the Committee should make an attempt to find the rightful place of radio in the general scheme of our entire cultural and economic system.

Radio, as now handled, has many faults.

Chief among these are propaganda [as pointed out by the National Committee] and inaccuracy, as evidenced by the foolish and harmful reports broadcast during the recent California earthquakes.

Under the present system of commercialized programs the individual or company that purchases "time" on the air from the big chains can broadcast any sort of program which seems desirable.

If they choose to make it a program of propaganda—there is no one to stop them, for they have bought the time and it is theirs.

That fact, in and of itself, is a big drawback to education by radio.

As to inaccuracies by radio announcers, they are so commonplace as to be hardly worth comment.

We mention the recent California 'quakes, however, and state as one California newspaper did:

"The radio station that broadcast 'wild' accounts of a gigantic tidal wave that swept in from the sea, destroying towns and drowning thousands of people, gave the whole radio structure a 'black eye' that will remain for a long, long time. Inaccurate, sensational statements of this nature do serious harm."

Boxing enthusiasts who followed the Schmeling-Sharkey heavyweight match, were to some extent astounded.

Radio accounts of the fight had led all listeners to believe that Schmeling had won by a wide margin.

Merely another example of the helter-skelter and altogether questionable methods of today's radio broadcasting.

The ultimate solution seems to rest in government control.

England and some other countries, operate the radio as a government institution.

Educational and entertainment programs are put on without the endless interruption of: "Drink Whatis coffee" or "use this or that soap or smoke this or that cigar."

If handled properly, radio may serve humankind in many ways—

If handled improperly, it may prove to be a curse.

Right or wrong, each and every program put on the air is teaching something to millions of "listeners" every day.

The National Committee has the laudable ambition to make these teachings right and proper, rather than the reverse, as is the general rule today.—Editorial, *Meridian*, Mississippi, *Star*, May 2, 1933.

I BELIEVE that [elementary and secondary school] programs will have to be worked out for areas smaller than the nation, limited within a time belt, limited eventually to states, altho I do not have conclusive evidence to support such a belief.—W. W. Charters in *Education on the Air*, 1930, p129.

The Canadian Radio Plan

THE NEW CANADIAN PLAN of radio broadcasting had its origin in the appointment of the Royal Commission on Radio Broadcasting which was constituted "to examine into the broadcasting situation in the Dominion of Canada and to make recommendations to the government as to the future administration, management, control, and financing thereof."¹ The report of this commission known as the Aird Report, since Sir John Aird, president of the Canadian Bank of Commerce, was the commission's chairman, was made public on September 11, 1929.

With the facts in hand and wellcirculated thruout Canada, a special committee of the Canadian House of Commons was appointed on March 2, 1932 "[1] to consider the report of the Royal Commission on Radio Broadcasting dated the 11th day of September, 1929, and, commonly known as the Aird Report, [2] to advise and recommend a complete technical scheme for radio broadcasting in Canada, so designed as to ensure from Canadian sources as complete and satisfactory a service as the present development of radio science will permit, and [3] to investigate and report upon the most satisfactory agency for carrying out such a scheme, with power to the said committee to send for persons and papers and to examine witnesses, and to report from time to time to this House."²

After careful study the committee brought in a report recommending the nationalization of Canadian broadcasting, making radio selfsustaining, and vesting the business of broadcasting in an adequately paid commission of three members. This report was concurred in by the House of Commons on May 11, 1932.

Considerable preliminary work fell to the Canadian Radio Broadcasting Commission following its appointment. However, an example of the scope of the work and the essentials of Canadian radio under the new plan can be gained from the following paragraphs taken from the commission's *Rules and Regulations* issued April 1, 1933.³

3. All broadcasting in Canada shall be under the supervision of the Canadian Radio Broadcasting Commission. For the purpose of supervising radio broadcasting, the Dominion of Canada is divided into the following regions:

[a] The Maritime Provinces. This includes the provinces of New Brunswick, Nova Scotia, and Prince Edward Island.

¹ Royal Commission on Radio Broadcasting. *Report*. F. A. Acland, Ottawa, 1929, p5.

² House of Commons. Special Committee on Radio Broadcasting, No. 17. F. A. Acland, Ottawa, 1932. piii.

³ Canadian Radio Broadcasting Commission. *Rules and Regulations*. The Commission, Ottawa, 1933. 19p.

[b] Province of Quebec.

[c] Province of Ontario.

[d] The Western Provinces. This includes the provinces of Manitoba, Saskatchewan, and Alberta.

[e] Province of British Columbia.

4. The supervision of programs with regard to advertising contents, mechanical reproductions, quality, and all other matters covered by these regulations, shall be carried out by the regional directors of the Canadian Radio Broadcasting Commission, in collaboration with the assistant commissioners of each of the provinces within the respective regions.

89. In drawing up daily schedules Canadian broadcasting stations shall not exceed the following percentages for the several classes of program material mentioned:

Programs imported from foreign countries—40 percent.

A program of foreign origin which advertises goods manufactured in Canada, and names the address in this country where such goods are produced and distributed, shall be deemed a Canadian program.

90. No broadcasting station may broadcast any speech, printed matter, program, or advertising matter containing abusive or defamatory statements with regard to individuals or institutions, or statements or suggestions contrary to the express purpose of any existing legislation; as for example, the Patent Medicine Act or any regulations promulgated thereunder.

91. The commission reserves the right to prohibit the broadcasting of any matter until the continuity or record or transcription or both have been submitted to the commission for examination and have been approved by them.

92. Broadcasting stations in Canada shall not mention or suggest prices in connection with any advertising programs or announcements transmitted by the said stations.

99. Except where special permission has been given by the commission, the amount of advertising matter of all kinds contained in programs broadcast from Canadian stations shall not exceed 5 percent of the time of any program period, for example—in a quarter hour program, forty-five seconds only may be given up to advertising matter.

100. No station shall broadcast advertising spot announcements between the hours of 7:30PM and 11PM. No advertising spot announcement shall exceed one hundred words. Spot announcements shall not total more than three minutes in any one hour.

Death of Pioneer

THE FIRST EDUCATION DIRECTOR of the British Broadcasting Corporation, J. C. Stobart, passed away the early part of May at the close of a career devoted to educational work. His service with the BBC which began in 1925 consisted in the building up of the education department, the launching of school broadcasting, the introduction in the evening program of educational talks suitable for adults, and the supervision of the religious programs.

WE BELIEVE THAT RADIO BROADCASTING has potential values for education, culture, and entertainment, far in excess of those at present realized. We wish to commend the many programs of merit now being broadcast and to give credit to all those who have worked for program improvement. In view of the distinctly unhealthy reactions produced in boys and girls by some of our present radio programs, we urge that individuals and organizations responsible for such programs take immediate steps to make their content conform to generally accepted standards in the field of child development; and further that all parent-teacher units use every available means to secure such improvement at the earliest possible moment.—Resolution adopted by the National Congress of Parents and Teachers, Seattle, Washington, May 26, 1933.

Proposes Autocratic Radio Group Do They Get What They Want?

LEVERING TYSON, director of the National Advisory Council on Radio in Education, in his annual report for 1933 proposes the formation of a national radio institute to produce and support broadcasting programs in the United States. Quoting from page 21 of Dr. Tyson's report one finds his proposal for

... the formation of a National Radio Institute, entirely apart from any organization now in the educational broadcasting field but anticipating the cooperation of all, with the sole purpose of raising funds for devising and producing under its auspices programs of generally accepted excellence.

... there is nothing in this proposal directly or by implication, that the broadcasting industry should, even if it wanted to, be relieved of any of the financial responsibility for the many meritorious programs it has to its credit or that it will wish to organize in the future. This proposal merely accepts the challenge which the industry has held out repeatedly to the educators of the country.

... [The institute would] devise and produce programs in subjects of general importance and interest, such as public health, literature and the arts, science, home economics, agriculture, government, history and economics, labor, and international relations, for both school and adult audiences.

... its management would be vested in fifteen governors, men and women from all parts of the country who are nationally recognized for their ability and public spirit.

There is no doubt as to the desirability of a change in the present system of broadcasting, but would it be an improvement to place the responsibility of producing programs in self-appointed organizations? Since the United States still retains its faith in democratic government and democratic institutions, would it not be a better plan to entrust the control of radio to the duly selected representatives of the people?

Radio Question Popular

THE 1933-34 NATIONAL DEBATE QUESTION has already proved to be the most popular question yet selected, according to T. M. Beard of the University of Oklahoma, chairman of the committee on debate materials and interstate cooperation of the National University Extension Association. The 1933-34 question, *Resolved that the United States should adopt the essential features of the British system of radio control and operation*, will be used by 1500 colleges and 6000 high schools in 33 states. Mr. Beard estimates that at least two and one-half million people will hear the debates on the radio question during the coming year.

DO LISTENERS GET the radio programs they prefer? Clifford Kirkpatrick, associate professor of sociology, University of Minnesota, in a recent publication¹ concludes they do not.

Thru the use of a combined telephone interview and questionnaire study, Dr. Kirkpatrick made a detailed investigation of the radio audience in Minneapolis, Minnesota. His study concerned itself with such questions as [1] the volume of radio listening, [2] the trends of radio listening, [3] program preferences, [4] reactions to advertising, [5] influence of the radio on recreation outside the home, [6] selection of propaganda, [7] listener's reaction to the broadcasting source, [8] selection of programs with the aid of printed announcements, and [9] broadcasting content and suggestions for improvement.

In his investigation, Dr. Kirkpatrick found that the program preferences of listeners ranked as follows: [1] news and information, [2] classical music, [3] popular music, including jazz, [4] dramatic programs, [5] sports, [6] religious and inspirational talks, and [7] political speeches.

An analysis was made of the actual programs given over the four Minneapolis broadcasting frequencies. The composite Minneapolis radio program consists of 48.4 percent popular music, 13.9 percent direct advertising, 13.4 percent classical music, 6.7 percent educational programs, 6.2 percent drama, 3.9 percent sports, 3.6 percent station or chain announcements, 2.2 percent pressure appeals or propaganda talks, and 1.5 percent religious talks.

This study gives further verification to the impression held by many that in spite of an avowed desire to please *their* listeners, the commercial broadcasters have not measured up to the public interest, convenience, and necessity clause of the Radio Act. They either have paid too much attention to "fan mail" in building their programs, or those upon whom the responsibility falls do not have sufficient educational and cultural background to build the best types of radio programs, or else our noble experiment in attempting to develop a system of radio supported entirely by advertising is a failure.

JUST THINK, we breathe the very air thru which some of these radio programs come.—*Memphis [Mo.] Democrat.*

¹ Kirkpatrick, Clifford. *Report of a Research into the Attitudes and Habits of Radio Listeners.* Webb Book Publishing Company, St. Paul, 1933. 63p.

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The Case Against Chain Ownership¹

TRACY F. TYLER

Secretary and Research Director, National Committee on Education by Radio

THE ISSUE TO BE DECIDED HERE TODAY is whether the Federal Radio Commission shall approve the transfer of the lease of station WMAL from the M. A. Leese Radio Corporation to the National Broadcasting Company. It is not a question of whether programs of the so-called blue network shall be available to the citizens of Washington and vicinity.

I want to state in the beginning that in intervening in this case the National Committee on Education by Radio holds no brief against programs of the National Broadcasting Company, its officials, or those of station WMAL. The Committee's interest is not confined to this particular case which is purely local, but is concerned with the general principles involved.

The National Committee on Education by Radio contends that it is contrary to the public interest, convenience, and necessity for the Federal Radio Commission to approve the transfer of this lease from the M. A. Leese Radio Corporation to the National Broadcasting Company for the following reasons:

[1] *The best of these blue network programs can be brot into Washington in a better way without the necessity of transferring the lease to the National Broadcasting Company.*

There are two ways by which a city may receive programs from a network. The first is thru the plan proposed in the present case: namely, by the leasing of a station by the network itself. The second is thru the affiliation of a station with the network. It is this latter method which should be adopted in the present instance if the broadcast of blue network programs is essential to the citizens of Washington and vicinity.

I am inclined to agree with the attitude of the editor of the *Washington Daily News* when he made the following comment in the January 16, 1933 issue:

... the move marks another step in the monopolizing of the air by networks. NBC insisted on a straight five-year lease, giving complete control of WMAL to a national company. NBC might have given the same programs to WMAL under a type of contract it uses in other cities which would leave the management in local hands.

[2] *The programs of a station owned or operated by a chain company will reflect the social standards of the city in which the headquarters of the chain is located, rather than those of the local community.*



GARLAND POWELL, since 1929 director of state and university radio station WRUF, Gainesville, Florida. Major Powell studied law at the University of Maryland, was admitted to the Maryland Bar in 1916, and as commander of the 22nd U. S. Aerial Squadron went thru five defenses on the Western Front in 1918. Prior to entering the radio field he was, for four years, national director of Americanism for the American Legion.

This is one of the most important bases of objection to chain ownership of stations. Whether the headquarters of the company owning the station happens to be New York, Chicago, Detroit, Cleveland, San Francisco, or any other city, the pro-

gram standards, especially in the entertainment field, will be determined in that particular city and passed on to every community in the country. As a consequence, social standards of New York and Chicago, rather than of each local community, will be reflected in the radio programs. A remark recently attributed to a Southern Congressman might be pertinent to this point, when he stated that he had observed that the citizens of many southern communities were already "becoming like a bunch of damn Yankees." The social standards of a community should be allowed to develop out of the life of the community itself. Not only do the standards vary in sections of the country but in the states and even in the various cities, towns, and communities within a state. This is not to be taken as a criticism against all chain programs but merely to call attention to the fact that the final decision as to the broadcast of the program should rest with the station owners in the particular city rather than with persons located in New York.

[3] *It will create a greater amount of unemployment, and will greatly reduce the needs for, and the development of local talent.*

The usual practise is for a chain owned or operated station to use as many hours as possible which originate at the key station. This is an economical procedure since it reduces the costs for talent and at the same time makes it possible to sell a greater number of stations to an advertiser. But it does reduce the opportunity for participation on the part of many talented individuals. This decreased demand for talent will affect not only unpaid individuals or groups participating on behalf of community organizations or institutions, but also paid talent—especially orchestra members and other musicians essential to the conduct of a local station.

[4] *It will decrease the opportunity for educational institutions and community organizations to prepare and present radio programs of peculiarly local interest.*

It is difficult to arrange many educational programs originating in the locality of a chain controled station. In a city such as Washington there are numerous colleges, universities, schools,

¹ Statement before the Federal Radio Commission, Washington, D. C., February 15, 1933.

community organizations and the like, which can contribute many valuable educational programs during a year's time. However, the opportunity for finding time for such programs is very much reduced when the station is controlled directly from New York. If George Washington University desires to broadcast a half-hour program on a particular night, it would be necessary for its officials to check with New York and they might then find it impossible to make a satisfactory arrangement due to the fact that some chain program for which the company was to receive money had the right-of-way.

[5] *It will result in a tremendous decrease in the amount of purely local material broadcast and a corresponding increase in chain programs emanating largely from New York, and may even cause the station to be largely a repeater station.*

This can probably be demonstrated best by the figures presented by the Federal Radio Commission in answer to the Couzens-Dill Resolution.² We find there a comparison between the chain and purely local service given by two different types of stations: [1] those owned, controlled, and/or operated by the National Broadcasting Company and [2] those affiliated with the National Broadcasting Company.

The Commission found that the former class of stations devoted three times the amount of facilities to chain programs as it did to programs having peculiarly local interest [31.0 units as compared with 10.75 units], while in the case of the latter type of stations there was a fairly even division [66.511 units as compared with 63.68 units].

Of even more significance to this particular case is the practice of the present red network outlet of the National Broadcasting Company in Washington, as shown on page 66 of the same report.² We find there, according to the figures of the Commission, that station WRC which is owned by the National Broadcasting Company devoted more than ten times the amount of facilities to chain programs as to those of peculiarly local interest [.52 units as compared with .05 units].

² Federal Radio Commission, *Commercial Radio Advertising*. Senate Document 137, 72nd Congress, first session, p66-67.

[6] *It may serve to decrease the local popularity of WMAQ.*

The Commission will recall what happened to WMAQ, Chicago, when it was taken over and operated by the National Broadcasting Company. The third Price-Waterhouse audit³ shows a consistent decrease in popularity of WMAQ as determined by the answers given to the question, "What station do you listen to most?" The first audit, made in October 1930 when WMAQ was an independent station operated by the *Chicago Daily News*, revealed that 31.8 percent of the persons from Chicago returning questionnaires preferred WMAQ. The control of the station was subsequently transferred to the National Broadcasting Company, and by March 1932, when the third audit was made, only 19.4 percent of the individuals returning questionnaires indicated a preference for WMAQ. This is a decrease of nearly two-fifths.

[7] *It will serve to increase the already disproportionate assignment of facilities to the two large competing chain organizations.*

Those of us who have been observing the trend of events in radio believe that by its actions the Federal Radio Commission gives tacit approval to the establishment of two competing monopolistic organizations in the field of radio: namely, the National Broadcasting Company and the Columbia Broadcasting System, which are comparable to the two competing organizations in the telegraph field, the Western Union and the Postal Telegraph Company. It would seem that their intent was to preserve competition thru the establishment of these two nationwide companies. The principal difficulty with this comparison between radio and telegraph service is the natural limitations of frequencies for broadcast use. Whereas the telegraph companies are common carriers and must accept all messages presented to them in proper form and can increase their facilities at will to accommodate an increase in business, the limited number of possible radio stations makes it necessary

³ Columbia Broadcasting System, *The Third Study of Radio Network Popularity Based on a Nation-Wide Audit Conducted by Price, Waterhouse and Company, Public Accountants*. Columbia Broadcasting System, New York, 1932, p23.

LANGUAGE IS THE FUNDAMENTAL SOCIAL INSTITUTION. Communication of ideas and emotions makes possible the reciprocal influences without which collective deliberation and rational action are impossible. The most rudimentary organization of society is unthinkable without it. "Communication makes possible public opinion, which, when [scientifically] organized, is democracy." Obviously, therefore, the vehicles of language and communication are the most vital nerves or mechanisms of society. Who commands this machinery, commands all. . . . Domination of public opinion is achieved by our economic overlords thru their control of the traffic in what the people see, hear, say, and think. This manipulation of the vision, hearing, voice, and expression of the people must be terminated. Orderly and progressive change will come, or disorderly change will come. It is a matter of expansive or explosive evolution, ballots or bullets, brains or bombs. Change is inevitable. . . . Yet there prevails deliberate, determined effort completely to suck into the vortex of private commercialism the radio, the press, the motion picture and talkie, the school, the drama, television, concert, phonograph, and other potent means of culture. . . . An honest study of the situation will confirm the belief, we feel positive, that *only thru the complete nationalization of radio can freedom of communication be actually obtained in the field of the wireless*. And nationalization must be predicated upon the assumption of ownership of machines for use, in other realms than communication. Under the present system of property and profit for power, the people face liberty in no direction. The guiding principle, nevertheless, if broadcasting is to be for the people and not the people for the broadcaster, must be ownership of the media—the vehicles—of communication.—From *Abstract of Proceedings*, Christian Social Action Movement, Stockton, California, May 9-12, 1932, p27.

to allow the station management to be final arbiter as to what programs it will present.

If it is the intention of the Federal Radio Commission to continue to build up this dual monopoly of radio facilities until all of the broadcasting stations in the country are under the control of one or the other of these two companies, thereby establishing a private censorship over this important means for the dissemination of information, then the transfer of this lease would be in line with such policy. If it is the desire of the Federal Radio Commission to maintain independent stations controlled in the various localities, presenting programs peculiarly suited to community needs, then this transfer should be denied.

It is a matter of common knowledge that the North American Radio Conference which will be held in Mexico this summer will of necessity be forced to allocate some of the frequencies now used for broadcasting in the United States to one or more of the other North American countries. Various estimates have been placed upon the number of frequencies that will be lost to the United States in this re-allocation. Where will these frequencies be secured? It is unlikely that they will be taken from stations which are under the control of one of the two great chains, but more probably from the small, independent stations scattered thruout the country. If such is the case, a tremendous increase will result in the already too large percentage of frequencies controlled by these two chain companies.

[8] *Public interest will be served best if chain companies are not permitted to own, operate, or control stations but are limited to providing programs of national interest and importance.*

A station owned, operated, or controlled by a chain company takes such programs as the management of the chain directs. This is usually determined by the financial advantage which will result from a particular broadcast.

If chains were not permitted to own stations but simply arranged programs to be used by stations affiliated with the networks, two factors would determine the use of a chain program by a particular broadcasting station: [1] the real merit of the program and the suitability for the community in which the station is located; [2] the financial arrangements connected with the use of the program. If it is an advertising program, does the chain pay the station a sufficient amount or if it is a sustaining program, does the chain charge a reasonable price for the use of the program?

[9] *Each of the two chain companies already either owns or controls a Washington outlet, the Columbia Broadcasting System, WJSV, and the National Broadcasting Company, WRC.*

If the National Broadcasting Company is permitted to lease WMAL, a single 100-watt station will furnish the only purely Washington service, whereas the total power of the chain assignments will be 11,000 watts.

A New BBC Director

READERS OF THIS COLUMN will not have forgotten the name of J. C. Stobart, who died recently after filling with distinction the post of director of the religious work for the BBC. His successor is to be the Rev. F. A. Iremonger. A better choice could not have been made. Mr. Iremonger has many gifts to bring to his office. He is a scholar, a journalist, a parson with experience both in the city and in the country; and he has the gift of a sympathetic understanding of the many-sided religious life of his countrymen. He has been head of Oxford House in the East end, editor of the *Guardian*, and latterly vicar of Vernham Dean near Andover. He has been a careful student not without a keen critical ear of the BBC; he will carry forward the high ideals of Stobart, but I should be surprised if he does not show his own freshness of mind in the use of this instrument of education, of which we know as yet very little. There is no more important office than this into which Mr. Iremonger will enter almost at once, and his many friends will look with confidence to this new chapter in his life.—*Christian Century*, June 21, 1933.

British are Satisfied

CRITICS OF THIS SYSTEM are fond of asserting that the British programs are dull and uninteresting, that they are planned by individuals who decide what the people ought to enjoy instead of giving them what they want to enjoy. The people, they say, have no voice in the planning of their programs. But, if the listeners do not approve of the programs, they can disconnect their receiving sets, and refuse to pay the tax. The fact that the number of set owners paying this tax has increased in spite of the prolonged depression in England seems to be an effectual refutation to this criticism.—H. L. Ewbank in "Radio's Future," *Ohio Wesleyan Magazine*, March 1933, p94.

Advertising Drivel

WE SHARE WITH OUR EDITOR his aversion to the advertisers over the radio who grade their programs not to the army intellect, estimated by wartime experts to average that of a twelve-year-old child, but to the mental receptivity of those who would have to be thoroly educated to gain the status of an idiot. Hence, the announcer must spell out even the simplest of words, and indulge in other tricks calculated to impress those of sub-school age. No wonder the really intelligent listener is nauseated.—R. W. R., editor of "Short Takes" column in the *Worthington*, Minnesota, *Times*.

WHEREAS RADIO AND TELEVISION as media for the advancement of education and culture are destined to become increasingly valuable: *Be it resolved* that this Association in convention assembled urge state divisions and local branches to be alert to conserve in every feasible manner these agents for the purposes of education and culture, and to protect them and the public from undesirable development and exploitation.—Resolution adopted at the biennial convention of the American Association of University Women, Minneapolis, Minnesota, May 17-20, 1933.

Consumer Education and Defense

A NUMBER OF CAREFUL STUDENTS of the social and economic life of the United States have continually pointed out the crying need for consumer education.

In an article entitled "The Education of the Forgotten Man," appearing in the October 1932 issue of the *Journal of Adult Education*, Robert S. Lynd makes a strong case for making available adequate information about the products used in the American home. A few quotations from Dr. Lynd's article are indicative of his point of view:

... If the automobile industry guessed badly in the 1920's, the result in the 1930's is an intensified campaign directed at the consumer in which even the President of the United States is drafted to make a public statement urging the public to buy new cars.

... In the summer of 1931 the United States Public Health Service ventured a radio broadcast earnestly advising people to eat less meat in hot weather. In response to a torrent of protest from the meat industry, the Treasury Department, under which the Public Health Service operates, immediately ordered all broadcasts by the service to be submitted to the Treasury Department for censorship. . . .

Under existing pure food and drug laws, only the grossest abuses of those laws are caught, and the administrative machinery is admittedly inadequate to cope with the situation. Washington can proceed against misleading advertising statements on bottles, cartons, or in enclosed circulars, but it has no power over advertisers' claims, however misleading, when they are made thru the medium of the radio or newspapers. . . .

... A rigid rule thruout all federal departments forbids the imparting to the public of the names of the brands that are proved by the government tests to be the best.

... Impelled from within by the need for security in the most emotionally insecure culture in which any recent generation of Americans has lived, beset on every hand by a public philosophy that puts the health of business ahead of the quality of living, uneducated in the backward art of spending to live, the consumer faces a trying situation. . . .

We need to be educated as to what constitutes an adequate test of a consumer commodity. What, for instance, is the mail order company's test of a mattress by dropping a log on it worth? What do tests by such agencies as Good Housekeeping Institute signify? Recent developments in the merchandising field suggest that we are in for an era of vigorously exploited pseudo-tests.

We need to be taught to ask the federal government why the consumer is the man nobody knows in Washington.

Congress cannot longer delay passing adequate legislation to protect the public against fraudulent advertising. Unprincipled advertisers, and radio station owners, finding it difficult to keep out of bankruptcy under the *American System* of broadcasting, have filled the air with false and misleading advertisements. Thru the present effective radio censorship by private interests, the public is denied the chance to hear the truth about countless radio advertised articles that no one would buy if the real facts were known.

Extend the Broadcast Band?

DATA HITHERTO PRESENTED to the Committee Preparing for the North American Radio Conference appears to have been chiefly of a technical nature, bearing on the question of how necessary it may be to bring certain additional channels within the broadcast band, in order that all broadcast stations now operating may continue to be heard. Without questioning any of the engineering data submitted, we desire merely to point out that the primary question is rather, how necessary is it, in the public interest, that all these stations should continue to be heard at all? *No sane man would assert that a community which can tune in six stations is necessarily being better served with broadcasting than one which can tune in only three. All depends on the programs.* And if it be claimed by anyone that program service is likely to be just as good on each station, no matter how many additional ones are licensed to operate in the same territory, then that is a claim which we desire here to deny most emphatically.—Harris K. Randall, executive director, American Radio Audience League, in a communication dated June 9, 1933 to the Committee Preparing for the North American Radio Conference.

Indecent Radio Songs

THE PREDICTION that the mothers of the nation would unite in protest against "indecent" songs on the radio, as some of them already have united against the broadcasting of "lurid" bedtime stories, was made yesterday morning by the Rev. Dr. Minot Simons in his sermon in All Souls' Unitarian Church, Eightieth Street and Lexington Avenue.

"One of these days," he said, "I expect to see these mothers rise up against the indecent songs which are coming into their homes over the radio. Some of these songs are obscene. There is almost no limit to their immoral suggestiveness. They are adding one more to the demoralizing influences bombarding the youth of today. The broadcasting companies would much better wake themselves up to this abuse before the general public wakes them up."—*New York Times*, March 6, 1933.

NORWAY HAS TAKEN OVER all broadcasting stations and levies a tax of \$3.50 on each radio set to maintain the system. We may have to follow suit. They used to broadcast programs "thru the courtesy of the advertiser." Now it's thru the courtesy of the listener.—A. G. Erickson, *Springfield* [Minnesota] *Advance Press*.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:
Charles T. Corcoran, S. J., director, radio station WEW, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Wisconsin's Struggle to Prevent Complete Commercial Control of Radio Broadcasting

A THREATENING SITUATION presents itself to the state of Wisconsin at the present time. Thru the full daytime operation of its two state-owned radio broadcasting stations, the state is pioneering in the discovery and development of the civic and social possibilities of radio. These two stations are the 1-kilowatt university station WHA located at Madison and the 2-kilowatt station WLBL of the department of agriculture and markets at Stevens Point near the center of the state. These transmitters are connected by leased broadcasting circuits and all parts of the state save the extreme northwest and certain small pocketed regions receive with fair volume the programs originating in the state departments at the capitol and in the departments of the university. The continuance of this development is threatened by an application to the Federal Radio Commission advertised in the *Capital Times* and the *Wisconsin State Journal* of June 22. This is an application filed June 16 by the Badger Broadcasting Company, the stock of which is owned, 67 percent by the *Capital Times*, former sole owner of the Madison station WIBA, and 18 percent by the *Wisconsin State Journal*.

In this application, the owners of WIBA request to be assigned one-half time operation on the 720 kilocycle frequency with a power of 25 kilowatts so that WIBA and the *Chicago Tribune* station WGN will have equal broadcasting privileges on the 720 kilocycle channel. *The applicant also requests the elimination of the two state stations WHA and WLBL.*

The granting of the application as it stands would, of course, mean the non-renewal of the licenses of WHA and WLBL and the scrapping of the state's radio plant and service. The threat is not that the Federal Radio Commission will fail to continue the licenses of the two state stations. One of the most vital questions confronting both the Federal Radio Commission and the Congress is this: *How can the entire monopolization of the radio broadcasting facilities of the nation by private interests, to the exclusion of public enterprise, be prevented?* The service to public enterprise rendered by Wisconsin's state stations is unique and is being followed with much nationwide interest. It promises to make such a contribution to the solution of this vital question that there need not be the slightest fear

that the Federal Radio Commission will deny to the state the right to continue the operation of its stations.

The threat in the filing of WIBA's application is this. It has been filed at a strategic time. The day of adjournment of the 1933 session of the Wisconsin legislature approaches and there is still pending the bill carrying the appropriation for the operation of station WHA for the coming biennium. The operating expense is small, 0.6 of one cent per citizen per year, 0.6 of a stick of chewing gum per citizen per year. It is in large part an employment expense for the salaries of the transmitter and studio operators, announcers, and program director, since the state stations find it unnecessary to pay for the educational, informational, and musical programs. But expressed in dollars, the \$18,000 per annum looms large to a legislature and to the new administration confronted with the budget problems of today.

The application challenges the principle expressed in these words by former Secretary of Commerce Hoover:

Radio communication is not to be considered as merely a business carried on for private gain, for private advertisement, or for entertainment of the curious. It is a public concern impressed with a public trust and to be considered primarily from the standpoint of public interest to the same extent and upon the same general principles as our other public utilities.

It remains to be seen whether the filing of the WIBA application will result in the selling of the state's birthright for a mess of pottage. The birthright is the state's *right*, at its own expense, to be free and unhampered in discovering, developing, and using the resources of the radio in the interests of the commonwealth. The mess of pottage is the permission to use, with no direct expense to the state, such hours on the commercial station as the owners may see fit to grant, for the broadcasting of programs of the type and in the fields which the owners and their supporters, the advertisers, may see fit to approve.

This is not the first attempt to hamper or hamstring the state in the development of its radio resources. Light is cast on the situation, both state and national, by the following brief history and statement of costs.

Wisconsin state stations pioneered—The state of Wisconsin has pioneered in the use of the radio to serve the public interests and enterprises of the commonwealth as contrasted



T. M. BEARD, director of radio station WNAD and of the department of town and country service of the extension division of the University of Oklahoma, and executive secretary of the Association of College and University Broadcasting Stations. Mr. Beard is chairman of the committee on debate materials and interstate cooperation of the National University Extension Association under whose auspices the radio question is to be debated during 1933-34.

with private interests. Its university station WHA started telephone broadcasts in the fall of 1920, the same fall in which the first privately-owned telephone station, KDKA, started its broadcasts. For the decade following 1920, the annual budgets for the operation of WHA were extremely meager, and the construction and continued operation of WHA were possible only because of the vision, devotion, and determination of the late Earle M. Terry, his student assistants and operators, and those members of the faculty and community who furnished the programs. WHA is heralded as the world's first educational radio station.

The radio broadcasting station WLBL of the department of agriculture and markets was first licensed for the broadcasting of market and agricultural information in 1922. The transmitter was originally located at Waupaca but in 1924 was moved to Stevens Point.

Neither of these state stations has ever sold time for advertising, yet both have pioneered in a number of state services.

Under the Kohler and La Follette administrations—The two state stations WHA and WLBL are limited to operation during daylight hours. The development of these stations and the state service they render, to such a high plane that the state might obtain the license to a cleared high-powered channel to which Wisconsin is entitled under the Radio Act, was strongly fostered during the administrations of Governors Kohler and La Follette.

As the first step toward obtaining a cleared channel station for serving the public interests of the state of Wisconsin, the regents of the university and the commissioners of the department of agriculture and markets in January 1930, authorized consolidation of the two stations into a single higher-powered station to be located as centrally as the operating funds would permit. The regents voted funds to construct a 5-kilowatt station provided other state departments using the radio facilities to broadcast educational and informational material would join in meeting the greater operating expenses of a higher-powered rurally-located transmitter. In consultation with Governor Kohler and the budget director the following departments pledged funds for the operating budget:

University of Wisconsin
Department of Agriculture and Markets
State Board of Health
State Department of Education
State Highway Commission
Conservation Commission

Accordingly, in April 1930, Governor Kohler signed a joint application from the regents and the commissioners of the department of agriculture and markets to the Federal Radio Commission for a license to consolidate the two state stations WHA and WLBL into a single 5-kilowatt station to be located on the state farm at Hancock, some 70 miles north of Madison and 25 miles south of Stevens Point.

While negotiations were pending with the Radio Commission in Washington, the editor of the *Capital Times*, which at that time owned and operated the Madison station WIBA, called up the chairman of the Wisconsin congressional representatives in Washington opposing the granting of the license.

The congressional representative of the Stevens Point district saw members of the Federal Radio Commission and

opposed the granting of a license for the consolidated station for any location save Stevens Point. To eliminate the political opposition from Stevens Point, the pledge of \$2500 additional operating funds per annum was obtained and the application was amended to locate the station at Stevens Point instead of Hancock.

Partly as a result of this opposition, the Federal Radio Commission held the state's application under advisement from April until June and then set the date for a formal hearing for November 1930; and finally in June 1931, some fourteen months after the filing of the joint application, it denied the application. The strongest ground for the denial of the application was that the applicants [for lack of funds] had not made full use of the facilities already granted by the Commission.

While the application was pending before the Federal Radio Commission, Governor La Follette succeeded Governor Kohler, and in the preparation of the university budget, which was submitted to the legislature in January 1931, provision for the operation of radio station WHA was omitted from the university budget with the definite understanding that a separate bill carrying an appropriation would make provision for the operating expense of the prospective consolidated 5-kilowatt state station. The legislature adjourned before the Commission reached its adverse decision, with the result that the regents of the university found it necessary to continue the operation of WHA during the greater part of the fiscal year 1931-32 from the "Regents Unassigned" fund.

At this point the Federal Radio Commission issued several new general orders requiring among other things more continuous operation of its licensees. This made it necessary to remove the transmitter of WHA from its location on the top of the physics building on the university campus to a rural location to avoid interference with the electrical researches carried on in that building.

When the situation was presented to the emergency board consisting of Governor La Follette and the Chairmen Mueller and Beggs of the finance committees of the senate and house, the board released moneys appropriated by the legislature of 1927 for radio towers, provided funds to move the transmitter to a rural location and to increase its power from 500 watts to 1000 watts, and also provided funds for the operation of the rebuilt station WHA during the fiscal year 1932-33.

As a result of this support, the state of Wisconsin possesses in WHA, a 1-kilowatt radio station equal to any 1-kilowatt transmitter in the state, built at a cost to the state of \$15,000. This is only 40 percent of the cost of a 1-kilowatt transmitter as given in the "Report of the Advisory Committee on Engineering Developments of the National Advisory Council on Radio in Education."

At about this same time plans to add additional stories to the Hotel Whiting in Stevens Point made it necessary to move the towers and transmitter of WLBL from the roof of this hotel. As a further step in the building up of the state's radio facilities, Governor La Follette approved plans by the commissioners of the department of agriculture and markets to rebuild this transmitter for the increased power of two kilowatts on a rural location, and to provide it with leased wire

connections to the studios in Madison so that the programs originating at the university and the departments and commissions at the capitol might be received thruout the state. For the past six months the 1-kilowatt station WHA at Madison and the 2-kilowatt station WLBL have been connected by leased wires, and, as previously stated, all parts of the state save the extreme northwest and certain small pocketed regions have been able to receive the state sponsored programs with fair volume.

Costs and examples of service rendered—The appropriation bill whose passage is jeopardized by the WIBA application and the representations of the commercial stations carries an appropriation of \$18,000 per annum for the operation of WHA. This covers the entire budget for operating and maintaining the 1-kilowatt transmitter of WHA and the studios at the capitol and university. It includes all wages and salaries for program director, operators, announcers, and other assistants. To meet the federal requirements, the station broadcasts nine hours per day. The computed cost at the lowest quoted card rate of leasing this amount of time from the 1-kilowatt Madison station WIBA, which has a smaller service area than WHA, is \$200,880.

During the last primary and election campaign in Wisconsin, those entrusted with developing the policy of the two state stations, in conference with the campaign managers of all parties having a place on the ballots, reached an understanding by which the facilities of the stations were made available without charge at noon and near sunset for a period of 30 days before the primary and 30 days before the November election to the candidates for state offices or other speakers designated by the parties. The time thus used for political broadcasts from the WHA transmitter if paid for at the card rate of WIBA would have cost \$5160. This pioneer experiment is the most significant step which has been taken to solve the problem of excessive use of money in political campaigns.

The following is a partial list of the agencies which have participated in the WHA broadcasts during the past year:

- University of Wisconsin
- Madison Public Schools
- Wisconsin State Medical Society
- Wisconsin State Dental Society
- Wisconsin Historical Society
- U. S. Forest Products Laboratory
- Wisconsin 4-H Clubs
- Future Farmers of America
- Women's Legislative Council
- Wisconsin Parent-Teacher Association
- Wisconsin Library Association
- Friends of our Native Landscape
- Wisconsin Humane Society
- Wisconsin Council of Agriculture
- Wisconsin State Bee Keepers Association
- National Cheese Producers Federation
- Wisconsin Cranberry Growers Association
- Door County Fruit Growers Union
- Wisconsin State Horticultural Society
- Wisconsin Live Stock Breeders Association

State Departments:

- Highway Department
- Health Department
- Conservation Department
- Public Instruction
- Agriculture and Markets
- Bureau of Personnel
- Insurance Commission
- Industrial Commission
- Public Service Commission
- Board of Control
- Tax Commission
- Normal School Regents

Radio stewardship—Thru the radio the state can serve its citizens whenever the need arises. Wisconsin has been faithful in its stewardship and is continually improving its radio service. The state broadcasting stations in Wisconsin are being used:

[1] To serve the agricultural interests of the state by furnishing technical and market information.

[2] To serve the households of the state by furnishing technical counsel on matters of health and conduct of the home.

[3] To serve the public schools of the state by supplementing their educational methods and materials. [During the winter of 1932-33, more than 23,000 children were reported listening in classrooms each week.]

[4] To serve public interests and public enterprise by providing them with radio facilities as good as the commercial stations have placed at the disposal of private interests and private enterprise.

[5] To serve the interests of an informed public opinion by providing a state-wide forum for the pro-and-con type of discussion of labor problems, of economic principles and problems, of the problems of taxation and regulation, and of the many other problems of public policy.

Monopolization of the nation's broadcasting quota—The percentage of the nation's quota of radio broadcasting facilities which is in the control of institutions or corporations whose primary interest in the radio is in using it for the purposes described above is becoming vanishingly small. A study printed in *Education by Radio* showed the distribution in the fall of 1931 to be as follows:

	Quota Units	Percent
NBC and its affiliated stations.....	184	43
CBS and its affiliated stations.....	108	25
All educational stations.....	26	6
All other broadcasters.....	112	26
	430	100

A survey of the facilities of the 71 land-grant colleges and state universities of the nation in the spring of 1932 showed that the quota units assigned to these institutions amounted to only 3.5 percent of the national quota. This had fallen to 1.8 percent by 1933. He who runs may read. *The nation's limited and invaluable radio resources are almost, but not quite, 99.44 percent purely under the control of commercial interests for the extraction of private profit.*

It is this situation which has led the groups represented on the National Committee on Education by Radio to watch with so much interest the substantial evidence of the growing appreciation by previous state administrations in Wisconsin of the part which radio can play in the growth and development of the commonwealth. These groups are:

- National Education Association
- National Catholic Educational Association
- National Association of State University Presidents
- National Council of State Superintendents
- American Council on Education
- National University Extension Association
- The Jesuit Educational Association
- Association of College and University Broadcasting Stations
- Association of Land-Grant Colleges and Universities

To these associations, the relinquishment of the state's radio rights as an economy measure by the new and sorely tried legislature would be a blow.

It is not a choice between paying or not paying for radio service. It is the choice between paying for radio service directly [1.5 cent per citizen per year for the operation of the state chain] and then controlling the service, or paying thru the noose of private commercial censorship and taking what the advertisers choose to give.

British Adult Education

LISTENERS HAVE BEEN HEARD to express the opinion that it might be difficult in the future to maintain the high standard set by last winter's "Changing World" program of talks, in providing stimulating and controversial subjects for treatment in broadcast talks; but such doubts will surely be set at rest when particulars of the new series of talks arranged for the first three months of the New Year—which were approved in principle at last week's meeting of the Central Council for Broadcast Adult Education—are published. We are promised, indeed, a bold treatment of some of the most fundamental topics of discussion and controversy of the present day. For example, we are to have on Sundays a series of talks surveying the whole problem of "A Future Life." The method of treatment is to be partly historical and partly analytical. The first six talks will review the gradual evolution thru the ages of man's conception of life after death. Then will follow six individual "Points of View," in which the agnostic and the sceptic will come to the microphone as well as the representatives of positive belief, both in its Christian and non-Christian forms. Other red-letter days for the listener who delights in controversy will be Wednesdays, which are to be occupied by an examination of modern ideas about the state, the individual, and the social groups which lie midway between the two. Here, again, the method of treatment to be followed is to be also partly historical and partly analytical. Six informative talks on the history and development of the organization of society, given by an eminent political scientist, will be followed by a symposium of six debates or discussions in which individual speakers will put forward their own theses as to the best basis for society and will answer pertinent questions addressed to them by critics. Since this symposium is to include speakers who will put forward expositions of Fascism, Communism, Imperialism, internationalism, and constitutional government, it is likely to be extremely illuminating and thot-provoking for the listener who has not made up his mind which, if any, of these theories command his allegiance. But these two courses of talks by no means exhaust the stimulating fare which we are promised after Christmas. For instance, twelve talks are to be given on "Makers of the Modern World," among whom are likely to figure such centers of controversy as St. Thomas Aquinas, Luther, Darwin, Karl Marx, and Nietzsche. Each of these great men will be expounded by a speaker who is in sympathy with the ideas which he represents. Finally, we are to be offered also a series on "The Application of Psychology and

Biology to Social Life" which raises as many burning questions as any economic or political subject. Under this heading will probably come such topics as the psychology of the sexes and of religion, problems of race and eugenics, and the connection between biology and politics. On the face of it, it appears as tho there ought to be a rich crop of wireless discussion groups in the early part of next year, for never yet have such groups had a better opportunity of suiting their needs or a wider choice of subject and speaker—*The Listener*, British Broadcasting Corporation, October 26, 1932, p584.

Radio Listeners Interest

AN INVENTIVE RADIO LISTENER has fitted up for his own use a device which permits him to cut off the receiver, no matter in what part of the house he may be, whenever the announcer begins the advertising.

This listener has simply carried to a little greater length the action of countless thousands of set owners who by habit now either cut off the set entirely or detune it during the period when the announcer is extolling the merits of coffee, breakfast food, gasoline, patent medicines, cigarettes and such like.

Unfair tho it would be to program sponsors, a perfected device to take the advertising completely out of radio would undoubtedly find a big market in the United States today.

It is a fact which radio executives would do well to face that while millions of persons are listening to their programs infinitely fewer set owners are hearing the oftentimes offensively lengthy advertising spiels.

It is noteworthy that Americans who have studied European radio programs invariably make favorable comment on the widespread absence of the advertising tie-up which features the system as employed in the United States. While few go so far as to recommend seriously the complete abandonment of the American plan, there is almost universal agreement that radical changes must come in the length of time allowed for advertising in proportion to entertainment rendered, as well as in the character of the announcements.

Observers have made the significant comment that, apparently, the poorer our programs in entertainment value, the greater is the proportion of time devoted to sheer and blatant advertising. *Such programs of course represent an absolute waste of money insofar as the advertiser is concerned, because listener interest is at an irreducible minimum.*

It is recalled that the presentation of a large and splendid symphony orchestra was accompanied by the simple announcement, at very infrequent intervals, of the name of the sponsoring company. Needless to say, such a program gained a tremendous audience and one wholly sympathetic to the advertiser.

None will gainsay the justice of giving favor to the company or individual sponsoring a wholesome period of radio entertainment. But companies or individuals should recognize that in overdoing the advertising tie-up they defeat their own and definitely reduce listener interest.

It can be revived only by a reversal of policy.—Editorial in *Christian Science Monitor*, December 5, 1932.

Educational Broadcasting Station Succumbs to Commercial Attack

TRACY F. TYLER

Secretary and Research Director, National Committee on Education by Radio

ANOTHER EDUCATIONAL BROADCASTING STATION, wearied and financially exhausted from repeated attacks by commercial interests, finally discontinued broadcasting on August first. The station, WCAJ, owned by Nebraska Wesleyan University, Lincoln, Nebraska, was one of the pioneer radio stations of the country, having begun operation in October 1920. Its director was J. C. Jensen, professor of physics, and well-known authority in radio-engineering and scientific circles. He was appointed a member of the Federal Radio Commission by President Hoover but the appointment was never acted upon by the Senate. Even spokesmen for our present commercialized radio practise admired his ability and his fighting spirit. For example, Thomas Stevenson, editor of *Broadcast Reporter*, in speaking of the Hoover appointment said:¹

To the everlasting credit of Herbert Hoover, Professor John C. Jensen of Nebraska Wesleyan University has been nominated to the Radio Commission to succeed General Charles McK. Saltzman, who resigned. Altho Jensen probably will not get the job because of the determination of the Senate Democrats to prevent the confirmation of all Hoover appointments, it was a good non-political selection. Jensen has that understanding of fundamental engineering problems which is essential to good service.

Early history—When the Federal Radio Commission took office in March 1927, WCAJ together with seventeen other stations was assigned to a frequency of 1080 kilocycles. About May first of that year in the reallocation WCAJ was put on the same frequency with a station at Tulsa, Oklahoma, but with no requirement for time division. The Oklahoma station would not compromise; hence there was heterodyning for two months and then WCAJ was shifted to 590 kilocycles and allotted one-seventh of the time. This plan worked out quite satisfactorily until February 28, 1930 when WOW, the station with which it divided time on the 590 kilocycle frequency, asked for full time. On April 11, the Federal Radio Commission designated the case for hearing. After three months of negotiations in an attempt to solve the difficulty without a hearing WCAJ officials were compelled to come to Washington on September 10, 11, and 12, and spend considerable money to defend the station.

It was not until February 7, 1931 that Examiner Elmer W.

Pratt handed in his report which recommended the granting of WOW's application. In view of this adverse decision the educational station was forced to incur the additional expense of filing exceptions to the examiner's report.



J. W. STAFFORD, instructor in electrical engineering and manager radio station WBAA, Purdue University, Lafayette, Indiana. Captain Stafford received the degree of Bachelor of Science in Electrical Engineering in 1924 and of Electrical Engineer in 1928, both from Purdue. His radio experience began as an amateur in 1908. During the War he was assigned to the Signal Corps, and attached to the U. S. Radio School, College Park, Maryland. He now holds a captain's commission in the signal reserve corps, and is a member of the Institute of Radio Engineers, of the executive committee of the Indianapolis-Lafayette Section of the American Institute of Electrical Engineers, and of the Reserve Officers Association.

Fortunately for Nebraska Wesleyan University, the Federal Radio Commission [Commissioner Lafount dissenting] reversed its examiner and on May 22, 1931 handed down a decision denying the application of WOW. However, the attack on the educational institution was not yet over. WOW had still another legal device to use in causing further annoyance to WCAJ and thru its attorneys on June 10 it gave notice of appeal to the Court of Appeals of the District of Columbia.

Education wins—After considerable delay, WOW's case came before the Court of Appeals on February 1, 1932. The Court handed down its decision on February 29, upholding the Federal Radio Commission and denying the application of WOW to secure the facilities of educational radio station WCAJ.

Plain justice surely would demand that after such a lengthy battle for its life with WOW, interspersed with a long controversy with the Federal Radio Commission even to maintain its power of 500 watts, WCAJ should be left alone to continue its educational work. That this work was of high quality is testified to by Charles W. Taylor, state superintendent of public instruction, when he said in an affidavit:²

I have listened very carefully to programs going out over station WCAJ. I want to commend you for the fine quality and educational usefulness of these programs . . . In a very

short time the commercial interests will have crowded the educational interests off the air. This should be considered contrary to the general welfare of the country at large. . . . It is hoped that educators and those interested in education will speedily arouse themselves to the need of protecting educational interests in this matter. . . . It seems to me that your evening programs are particularly valuable for the reason that they give you an opportunity to carry educational training and messages to the adult population who are unable either to go to school in the daytime or possibly listen in on the radio.

The new attack—Yet on May 8, 1933, WOW again filed application for WCAJ's facilities and on May 23, the Commission set the case for hearing. To fight the case would have

¹ *Broadcast Reporter*, February 15, 1933, p3.

² Taylor, Charles W. Statement on file with National Committee on Education by Radio.

Educational Broadcasting Being Extended in Europe

AT THE BEGINNING OF JUNE the Geneva office of the International Broadcasting Union received a letter from America from a quarter specially interested in the educational possibilities of broadcasting, asking whether it was true that the various European broadcasting organizations were experiencing difficulties in financing educational broadcasting.

A special inquiry made by the office shows that *not only have the European broadcasters no financial difficulties in this respect but that despite economies which presentday conditions may compel in other phases of broadcasting activity, plans are actually afoot for further extensions of the practise of broadcasting to schools.*

Definitely negative replies to the questions, whether difficulties were being experienced in the financing of broadcasting and whether there was any intention to discontinue educative broadcasting, have been received from the broadcasting organizations of Austria, Belgium, Czechoslovakia, Danzig, Denmark, the French State Broadcasting stations, Germany, Great Britain, Holland [VARA], Norway, Sweden, Switzerland, and Yugoslavia.

In addition the Czechoslovakian broadcasting organization asserts that the broadcasts made especially to schools in its country, which are becoming more and more perfect technically, are now attracting official attention and establishing themselves as an essential complement to the school curriculum. School broadcasting in Czechoslovakia is regarded not only as an important form of public service but also as valuable propaganda for broadcasting itself among the younger generation.

In Sweden, the school broadcasts [which are constantly developing] are regarded as the most important part of the broadcasting service. In Switzerland where, until now, the school broadcasts have been both local and experimental, the results have been so satisfactory that next season they are to be extended to all parts of the Confederation. The expenses will be defrayed for next season, as during the experimental period, from the general budget of the Swiss Broadcasting Society.

It is possible that the American rumor has arisen from the fact that in certain countries the school authorities are finding difficulty in getting loans for the purchase of receivers from local public and private funds. This is not a new problem. It has always existed.

Thanks, however, to various ingenious plans which have been developed under the stimulating influence of school broadcasting these difficulties are invariably overcome.—A. R. Burrows, secretary general, International Broadcasting Union.

MANAGERS OF RADIO TRANSMITTING STATIONS in Brazil complain that the police have censored even children's bedtime stories. Parents in the United States, listening to some of the "thrillers" that come in on their radios along about Johnny's bedtime, may be pardoned if they sympathize with the Brazilian censorship.—Editorial, *Christian Science Monitor*, July 17, 1933.

involved much time and several thousands of dollars of expense. If the case was won again by WCAJ, the rules of the Commission would permit WOW to repeat the attack in a short time. The United States is now in the midst of a financial crisis. Education, especially private, has been sorely pressed for funds to carry on its worthwhile service. Representatives of WOW finally convinced the university authorities that the best plan would be to sell the station. In spite of the value of the 590 kilocycle assignment, WOW closed a deal by paying even less than the value of the broadcasting equipment for WCAJ's rights on the air.

The case is now closed. The Federal Radio Commission will be able to say about it as about many of the others that WCAJ was not forced off the air, but voluntarily assigned its license to WOW. It used this type of analysis in trying to defend itself in response to Senate Resolution No. 129, 72nd Congress 1st Session. The Commission in answer to the question, "Since education is a public service paid for by the taxes of the people, and therefore the people have a right to have complete control of all the facilities of public education, what recognition has the Commission given to the application of public educational institutions?" said:³

In the period from February 23, 1927, to January 1, 1932, the Commission granted radio station licenses to 95 educational institutions, 51 of which have been classified as public educational institutions, and 44 as private educational institutions.

As will be seen in the following tabular statements, 44 of these stations were in operation as of January 1, 1932; the licenses of 23 had been assigned voluntarily at the request of the educational institution to a person or corporation engaged in commercial enterprise; 18 had been deleted by reason of voluntary abandonment; and 10 had been deleted for cause.

What of the future?—Yet the drama uncovered by even a short trip behind the scenes gives indisputable evidence to the claim that *educational broadcasting stations in the United States are gradually being forced from the air by commercial interests.* Had they been protected by legislation or Commission regulations, probably most of them still would be serving their constituents. *How long are the American people going to tolerate the practise of putting commerce ahead of unselfish informational, educational, and cultural service?*

DON'T EXPECT MUCH FAN MAIL these days unless you're giving something away. Readers don't write congratulatory notes about your newspaper and magazine advertisements, do they?—J. T. W. Martin in "Some Things I've Learned from Nine Years of Radio." *Broadcast Reporter*, June 15, 1933, p10.

ALLEN RAYMOND, at present on the staff of the *New York Herald-Tribune* and former London correspondent of the *New York Times*, has prepared a stimulating and enlightening series of articles touching the present American broadcasting practise. The three articles are entitled, "The Coming Fight Over News," "Static Ahead!" and "The Follies of Radio," and are found in the June, July, and August 1933 issues of the *New Outlook*. A veteran newspaper reporter, Mr. Raymond will be remembered as the author of "What Is Technocracy?"

³ Federal Radio Commission. *Commercial Radio Advertising*. United States Government Printing Office, Washington, D. C., 1932, p50.

Farm and Home Broadcasting

ANDREW W. HOPKINS¹ AND K. M. GAPEN²

EDUCATIONAL INSTITUTIONS with agricultural colleges and experiment stations are in a strategic position to give service to the farmers and homemakers of their respective states. This possible service is unique in every way. It is a service that is impossible for commercial institutions to give.

Practical ways of solving problems of farmers and homemakers are continually being worked out at these institutions. Experimenters and extension workers are diligently seeking to secure and to disseminate accurate and up-to-date information which will help make farming more profitable and rural living more enjoyable. That is one of the first tasks of such state institutions.

For a period of more than seven and one-half years, WHA, the first educational radio station in America, has been giving this farm and home radio service to Wisconsin taxpayers. WHA has been broadcasting scheduled programs of a general nature since 1920.

Unfortunately the facilities of the station have been greatly limited. The lack of sufficient power to reach a large majority of the Wisconsin public has handicapped and restricted its potential service possibilities. Lack of night-time broadcasting authority has also restricted the service which the Wisconsin College of Agriculture could and would offer to the public. It is the desire of the agricultural college at the University of Wisconsin to more efficiently and effectively reach a larger number of Wisconsin citizens.

During the years since that station has been in existence it has been giving day by day and week by week a service of exceedingly important information which would be difficult to duplicate. On one program it may have an economist of national reputation, speaking upon the "Farmers' Way Out" of the present situation thru the reduction of taxes, thru individual and collective effort, thru a lowered cost of production, and thru the widening of markets for the products of the farm. On another program it may be a specialist in land use, showing the possibilities of using land for other than agricultural purposes—recreation, forestry, and game production. And at another time a scientist may be suggesting to farmers of that state, thru information and encouragement, ways of using

legumes in order to grow the home supply of feed and forage and cut the farmers' feed bill by millions.

Farmers of the state may be expending large sums of money for expensive mineral mixtures which they do not need in the rations of their animals. Along come the chemists, speaking thru the microphone to the farmers of the state, and help them to save hundreds of thousands of dollars. In the fields of human nutrition and child care, there are similar opportunities which investigators are using to broadcast information which will be of untold benefit to the listening audience. And so we might go on enumerating the many ways and many subjects in and upon which that station is serving and servicing the farmers and homemakers of that state.

There has been worked out, and there is being worked out at that and other experiment stations of this country, vast stores of information which can be made quickly available over the air to the farmers and homemakers of the respective states. This information should go to these people without bias or prejudice of any character. Such institutions exist for the people, and not for any particular group which may be commercially interested in the broadcasting of only such information as may be to their temporary advantage.

Information on farm and home subjects needs to be broadcast in an interesting and easy-to-listen-to manner. Methods of presentation are important. Here are some of the ways in which WHA is, and has been for several years, broadcasting farm and home information effectively. The dialog, interview, question and answer by one man, narrative, dramatized, and anecdote types of radio presentation are being used effectively in addition to the regular straight talk method.

A questionnaire sent to the recipients of the farm and home programs asking vital questions about the programs and the desires of the listeners along program lines, brot out two salient facts—[1] that WHA farm and home programs have a large audience; [2] that the farm and home programs are being appreciated.

Those arranging WHA farm and home radio programs have found that the various parts of the program must be short—five to seven minute talks are long enough. There should be more and shorter items on farm and home broadcasts. Sincere variety is needed.

¹ Extension editor, College of Agriculture, University of Wisconsin.

² Radio editor, College of Agriculture, University of Wisconsin.

WHEREAS RADIO BROADCASTING is the only means whereby the citizens in general may hear the officials of our communities, our state, our nation and other nations, and the leaders in all fields of learning, business, and the professions, and *Whereas*, Radio economically increases the effectiveness of our schools, colleges, and organizations, making education and culture more easily available to children and adults. *Resolved*: That the Association of Boards of Education of Ohio approves the action of educators and broadcasters of Ohio and the National Committee on Education by Radio in organizing the Ohio Radio Education Association for the purpose of developing cooperation, encouraging educational and cultural broadcasting, and stimulating the interest of listeners.—Adopted at the annual meeting held in Columbus, Ohio, May 5, 1933.

Politics on British Air

A GREAT DEAL OF MISINFORMATION has been spread as to the British system of radio broadcasting. This has been particularly true in references to provision for political discussion. *The Listener*, an official publication of the British Broadcasting Corporation devoted to adult education, gives the following information in an editorial in its August 2, 1933 issue:

The late evening talks promise to provoke interest, enthusiasm, and disagreement. On Mondays will be political talks—absolutely free and uncensored. The speakers will presumably deal with points raised by their opponents in previous weeks, but *they will be given a free choice of subjects and allowed to say exactly what they wish.* Among the members of the different political parties who have agreed to speak are the Prime Minister, Mr. Lansbury, Mr. Baldwin, Sir Stafford Cripps, Mr. J. H. Thomas, Mr. Arthur Greenwood, and Sir Herbert Samuel. On Wednesdays and Fridays, Mr. Howard Marshall and Mr. S. P. B. Mais are to undertake two series of the kind in which they have proved themselves so successful. "Vanishing England" is the title of Mr. Marshall's—arranged in consultation with the Council for the Preservation of Rural England, the National Trust, and the National Housing and Town-Planning Council. It will deal with such things as desecration of beauty spots, litter, ribbon development, bungalowoid growths and so on; we fervently hope that Mr. Marshall will manage to bring home to individual listeners the horrors of the countryside as well as he lately brot home to them the horrors of the slums.

Debate Handbooks in Demand

MORE COPIES of the 1933-34 official debate handbook have been ordered than in any year since the work has been organized under the auspices of the National University Extension Association; according to T. M. Beard, chairman of the committee on debate materials and interstate cooperation. The official debate topic this coming year is, "Resolved that the United States Should Adopt the Essential Features of the British System of Radio Control and Operation." Bower Aly and Gerald D. Shively of the University of Missouri are editors of the handbook. Delivery of the orders will be about September 1.

WHILE MANY WILL ENJOY a bit of music with a picnic meal or some vocal companionship on an otherwise lonely drive, there are others to whom one of the attractions of a car is the escape it offers from the blaring jazz and soap salesmanship of the radio at home. If these seekers after outdoor quiet are to be continually smitten with billboards on the ear as well as the eye, neither motoring nor radio will profit greatly by their custom.—Editorial, *Christian Science Monitor*, August 10, 1933.

Is This Free Speech?

A MEMBER OF THE FEDERAL RADIO COMMISSION, Mr. James H. Hanley, is widely reported as saying that preachers who venture to argue against the repeal of the Eighteenth Amendment in sermons over the radio should be cut off from the air, and could be cut off under a strict interpretation of the law. We do not know on just what paragraph of the law Mr. Hanley relies to authorize the withdrawal of broadcasting rights. It is true that the law gives large discretionary powers to the Federal Radio Commission, and it is also true that the Commission sometimes uses these powers with very little discretion, as in the case of the withdrawal of the license from the station used by Reverend Bob Shuler in Los Angeles for alleged reasons which were contradicted by the Commission's own investigator. Perhaps Mr. Hanley means that a strict interpretation of the law would give the Commission power to bar from the air anyone who has the temerity to oppose any policy favored by the administration. Or perhaps it seems to him to fall within the Commission's function to censor sermons and see to it that preachers stick to "the simple gospel" and do not trespass upon any field related to social ethics. Whatever the ground of Mr. Hanley's suggestion, it has not been well received. Even so wet a paper as the *Chicago Tribune* protests editorially against such a policy of autocratic governmental control over opinions and the agencies thru which they are disseminated. If our government, thru the Federal Radio Commission or any other part of its machinery, undertakes to tell the preachers what they shall preach and to warn the church away from every area which is touched by laws, there will be little to choose between such a regime and that which is now operative in Germany.—Editorial in the *Christian Century*, August 9, 1933, p1005.

ACCORDING TO THE NATURE OF THE CASE, radio education is not a matter that can be left entirely with commercial stations. A program of education requires definite planning and permanency of arrangement. There must be a long-time view of certain problems. Such permanency of arrangement is not possible except in those states where the public owns the station and in whose interest it is operated and controled. The National Committee on Education by Radio believes in such national legislation as will protect the states in the programs of radio education which their people desire and are willing to support.—Coltrane, Eugene J. "Radio: An Instrument of Education in Modern Life." *North Carolina Teacher*, April 1933, p309.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:
Charles T. Corcoran, S. J., director, radio station WEW, St. Louis University, St. Louis, Missouri, The Jesuit Educational Association.
Arthur G. Crane, president, the University of Wyoming, Laramie, Wyoming, National Association of State Universities.
J. O. Keller, head of engineering extension, Pennsylvania State College, State College, Pa., National University Extension Association.
Charles N. Lischka, 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.
John Henry MacCracken, vicechairman, 744 Jackson Place, Washington, D. C., American Council on Education.
Joy Elmer Morgan, chairman, 1201 Sixteenth Street, Northwest, Washington, D. C., National Education Association.
James N. Rule, state superintendent of public instruction, Harrisburg, Pennsylvania, National Council of State Superintendents.
H. Umberger, Kansas State College of Agriculture, Manhattan, Kansas, Association of Land-Grant Colleges and Universities.
Jos. F. Wright, director, radio station WILL, Univ. of Illinois, Urbana, Ill., Association of College and Univ. Broadcasting Stations.
Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library or to a friend. Education by radio is a pioneering movement. These bulletins are, therefore, valuable. Earlier numbers will be supplied free on request while the supply lasts. Radio is an extension of the home. Let's keep it clean and free.

Conference Increases International Difficulties

ARMSTRONG PERRY

Director of the Service Bureau of the National Committee on Education by Radio

NO BROADCASTING STATION in the United States has any protection against interference from any other country except Canada. That was the situation at the end of the Mexico City conference, held July 10 to August 9, 1933.

The danger was great before. It is greater now. Latin Americans have seen the United States boldly maintain her right to use as many channels as she wants. They maintain that they have the same right.

Canada based her national system on the minimum needs for service to the listener—not the advertiser—and long ago she voluntarily limited herself to a reasonable number of channels. Like Canada, the Latin American countries consider public service the major function of broadcasting. They protect their publicly-owned stations. They will not let rampant commercialism monopolize the air. They are ready to answer the bombardment of advertising from American stations with programs from more powerful stations.

Commercialism overreached—

Every dollar invested in American broadcasting is in jeopardy as a result of an overreaching by greedy commercialism. The American delegation unsuccessfully tried to defend an indefensible position forced upon it by the same commercial group that has demanded uncontrolled censorship of everything broadcast;

denied the right of governments to control education by radio; attempted to take channels away from the navy, army, shipping, and aviation; interfered with the service of government laboratories necessary to the defense of the country; and fought the idea that it should pay for the public radio facilities which it uses for its own purposes.

The representative of a radio trade association stated, in defense of the American position, that if the other countries were granted all that they asked, the United States would have had only one clear channel. On the other hand, if the United States broadcasters had been granted all they wanted, nine other countries never would have had one clear channel among them. The failure to work out a continental allocation on the basis of service to listeners has caused the loss of all clear channels to all countries. Any American station, at any moment, may encounter a powerful interfering wave from some country that refused to sign away its birthright. This wave may cut down or destroy the station's coverage, stop its revenue. Plans are underway in Latin America for the erection of stations so powerful that they will be heard thruout

the greater part of the continent and will interfere with reception everywhere. American stations could shoot back at them, but while our stations were doing a thousand dollars' worth of damage in Latin America their stations could do a million dollars' worth here.



W. I. GRIFFITH, director of radio station WOI, Iowa State College, Ames, Iowa. Under his competent direction this noncommercial station has become not only one of the most powerful but also one of the most effective of the educational stations. It is an additional tribute to Professor Griffith that WOI is rated as one of the most popular of all the Iowa stations.

Latin Americans offer cooperation—The conference opened with the Latin American countries willing and anxious to cooperate in working out a scientific allocation for the whole continent, based on service to the citizens of all the countries. They recognized the fact that there are not enough radio channels to satisfy the demands of all who wish to exploit the listeners. They were willing to negotiate on the basis of minimum needs. The conference closed with the United States standing alone, her one ally having withdrawn to a neutral position. The demands of her delegation were considered entirely unreasonable, out of harmony with recently expressed desires of President Roosevelt for friendly trade relations, and contrary to the attitude of the American people.

An outside story—This is an outside story of the conference. Only officials of the participating governments were permitted to attend its sessions. Some of the statements are unofficial but all are believed to be substantially correct, since the report was submitted to all governmental delegations for cor-

rections, yet no inaccuracies have been reported.

Representatives of commercial radio concerns and of the National Committee on Education by Radio had been invited by the United States Department of State to attend the meetings preparatory to the conference. At the suggestion of a government official our Committee had provided the services of Commander T. A. M. Craven, who served with distinction thru the long series of preparatory meetings. These representatives were referred to as "outsiders." It was not until after the "outsiders" had purchased their railroad and pullman tickets that they were notified that the Mexican government deemed it inadvisable for anyone except government officials to attend. There is evidence that the Mexican government yielded, somewhat tardily, to the point of view of the United States government in this matter. The "outsiders," altho not invited, went on to Mexico City. On invitation, they attended the opening session of the conference, but were dismissed after the response to the address of welcome and were outside the rest of the time.

Nations participating—Of the 16 national governments, dominions, colonies, and possessions in North and Central America and the West Indies, only Canada, Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and the United States participated. The United States delegation represented Alaska, Puerto Rico, the Virgin Islands, and the Canal Zone, as well as the mother country. The Dominican Republic, Haiti, and Jamaica were not represented. Newfoundland and Nova Scotia did not send delegates, their interests being in the hands of the Canadians.

An American representative of a company associated with the Radio Corporation of America came to the conference as an official delegate of one of the countries. After unsuccessfully trying to secure control of three national votes by telling how much he disliked American greed, he became affected by the altitude and was unable to attend any more meetings.

After the committees had solved a few technical matters about which there was little disagreement, the rumors indicated that difficulties had been encountered. The big question was the allocation of broadcasting channels to the participating countries.

The United States, by an agreement made with Canada long before the conference, without consulting the other countries concerned, limited herself to the use of 90 broadcasting channels. Canada limited herself to 18 channels. All the other countries, being bound by no agreement, retained the right to use the entire 96 channels in the broadcast band. Fifteen of the 50 Mexican stations were wedged between frequencies used by the United States and Canada. The rest are squarely in channels used by these and other countries. At least two stations which had been forced off the air in the United States by legal procedure had made long-term contracts with the Mexican government and established high-power transmitters close to the American border. Headed by a former vice-president of the United States, one of these had a staff of observers estimated at from eleven to fourteen in Mexico City during the conference. It was the belief of some that the main objective of the conference, from the point of view of the United States, was to eliminate this station.

The Central Americans learned, early in the conference, that representatives of the United States were holding secret meetings with representatives of Mexico. The object of these meetings, it developed, was to bring Mexico and the United States into agreement on a plan which would exclude the other Latin American countries from having any share in the allocation of cleared channels. Just as the United States and Canada divided the channels, ignoring the rights of Latin America, the United States had been trying to bring Mexico into the deal [because Mexico had become troublesome as her broadcasting developed] and was ignoring the rights of the rest.

United States proposal—The United States, it was reported, proposed: [1] that broadcasting stations be limited to the amount of power needed for national coverage—one kilowatt in the case of small countries—that no channels be open for international service; [2] that stations be permitted to broadcast only in the official languages of their respective countries; [3] that no one who had been refused a station

license in one country be granted a license in another country without the consent of the country which had refused a license.

From the moment that these proposals were made it was safe to predict that there would be no agreement unless they were modified. It was not believed that the United States would abide by any restrictions on power or languages. The arguments centered on the number of channels that the United States would be willing to surrender. Someone pointed out, it is believed, that New York City was served by 34 stations and that in numerous other cities there were many more stations than were required to meet the needs of the listeners.

Costa Rica first—Costa Rica was the first country to list her requirements. She not only wanted channels enough for national coverage but advocated the principle that every country should have a number of clear channels for international programs proportionate to her commercial and educational needs. She pointed proudly to the fact that Costa Rica, with half a million inhabitants, has 2700 schools and only 150 soldiers in her army. She has not had one revolution during the past 65 years, which accounts for the fact that the Carnegie Association decided to build the Central American Peace Palace at Cartago.

Widening the broadcast band—The question of widening the broadcast band by including frequencies below and above the present limits is believed to have been discussed, but no agreement was reached. American broadcasters and the Radio Manufacturers' Association are known to favor the use of frequencies between 160 and 220 kilocycles. American manufacturers are interested in the fact that the estimated cost of new apparatus to enable American listeners to hear programs on these low frequencies would be about half a billion dollars. Army, navy, shipowners, and aviation interests of the United States are opposed to the allocation of these frequencies for broadcasting because, they say, that would displace necessary mobile services which cannot be accommodated elsewhere without prohibitive expense or loss of efficiency.

Use of broadcasting—Altho not scheduled for discussion the question of the purposes for which broadcasting stations were used did come up, it is reported. Latin American countries declared that they needed channels and stations to use in making education and culture more easily available to their people. Mexico and Guatemala, among other countries, have stations operated by their national departments of education exclusively for educational and cultural purposes. At least one other country has plans for a high-power station for educational purposes.

Reach Central America—It is reported that an engineer in the American delegation tried to justify the limitation of power in other countries by stating that stations in the United States were not heard in Central America. This statement, unfortunately, created a most unfavorable impression. The delegates of these Central American countries hear United States stations regularly. Also they knew that the Federal Radio Commission had authorized the erection of a 500-kilowatt station and they assumed that the \$400,000 investment in this station was not made exclusively to give engineers an opportunity to experiment between midnight and morning

with amounts of power which were never to be put to practical use. In short, the Latin Americans concluded that the United States wanted to retain possession of its neighbors' air but was unwilling to give neighboring countries an opportunity to reach American ears.

How shall an allotment of North American broadcast channels be made? If divided equally among the 16 countries and other large political units, there would be six channels for each. If divided on the basis of area, the United States, including Alaska, Puerto Rico, the Virgin Islands, and the Canal Zone would have 40.1302 channels. If divided on the basis of population we would have 72.2848 channels. The United States now has 79 channels, plus 11 shared with Canada.

Canada appears to be satisfied with the 18 channels she now uses. If the channels were divided on the basis of area she, with Newfoundland and Nova Scotia, would receive 41.2961. If divided on the basis of population they would receive 6.1889. Basing her national system on service to listeners rather than service to advertisers, Canada does not use as many channels as might be required under our broadcasting practise.

Chain announcement wrecks proposal—At the very time when the United States delegates were arguing for limiting each country to the use of its own official language, an American chain released an announcement of ambitious plans for broadcasting to all parts of North and South America in the official languages of all the countries on both continents. Some Latin Americans concluded that the American radio delegation, while officially representing the American government, actually represented only the point of view of a certain American commercial group, a point of view with which Latin America could not agree.

In justice the Latin Americans cannot be criticized if they use channels, even the best ones, claimed by Canada and the United States. All channels clearly belong to any sovereign

country within its own territory. Canada and the United States left no channels open for the other countries and it is not known that they make any serious effort to keep their waves at home.

A false accusation—Two representatives of the broadcasting industry accused the representative of the National Committee of "dealing with the enemy" because, in performing his routine duties, he mailed to the delegates who had not seen it before, certain information on the financial results of broadcasting in various countries which had been published in the United States in 1932. What these gentlemen particularly objected to was information concerning the United States which one of them himself had prepared and published in an official document of the United States Senate, and testimony given at a public hearing by an official of his own organization. They said the data were out of date and inaccurate, but when they were invited to provide more recent or more accurate information for circulation to the same delegates, they said it was not available and that they would not give it to the delegates if they had it. This raises two fundamental questions: [1] Should any country in North or Central America or the West Indies be looked upon as an enemy of the United States? [2] Do the Latin Americans have rights equal to those of the United States?

There seem to be urgent reasons why commercial broadcasters in the United States ignore and try to suppress the fact that broadcasters in many countries with sound systems enjoy assured incomes and profits, guaranteed for periods of twenty to thirty years, while every American broadcaster continually faces the possibility of being put out of business by some covetous American competitor or by a foreign station.

In spite of failure to solve the extremely important problems referred to, the conference made some valuable contributions to North American radio. A reasonable share of credit for these accomplishments is due the American delegation.

Broadcasting in the United States

HAROLD A. LAFOUNT

Member of the Federal Radio Commission

UNDER THE RADIO ACT OF 1927, as amended, the United States government retains control over all forms of radio transmissions and communications within this country and its possessions. That Act provided for the creation of the Federal Radio Commission, which is charged with the responsibility of administering it.

By international agreement frequencies are allocated to different services—broadcast, ship, coastal, fixed, point-to-point, amateurs, aviation, and the like. The band between 550 and 1500 kilocycles is designated as the broadcasting band for use in the United States, and covers the frequencies indicated upon the dial of an average receivingset. It is the use of these frequencies that I shall particularly refer to here. We should bear in mind, however, the fact that the President, in an Executive Order, selected a few hundred frequencies for the use of the army, navy, and other departments of the government. All facilities not so allocated by the President come

under the supervision of the Federal Radio Commission. That body licensed, as of June 30, 1932, 34,741 stations, 606 of which were broadcasting stations. Licenses issued for the operation of these stations are for different periods of time varying from ninety days to three years. In the case of broadcasting stations the term is six months. Under no circumstances does the government make permanent grants.

The Act requires that the operation of broadcasting stations must be in the public interest, convenience, and necessity. Consequently, applications for renewal licenses are very carefully scrutinized and are often designated for hearings before the Commission when it is not satisfied they are operating in the public interest.

The Commission may also revoke any existing license for cause, providing, however, it does not act in an arbitrary or capricious manner. The courts have sustained the Commission's decisions that licensees have no vested rights in the

air. The Act denies the Commission any power of censorship. It is, however, duty bound to take into consideration programs or service previously rendered in considering applications for renewal of licenses.

Service to the listeners is the paramount consideration. That service has gradually developed from crude phonograph records and speeches to programs covering the whole gamut of human knowledge and human emotions. The evolution of radio broadcasting in the United States is one of the outstanding marvels of this wonderful age. Program directors vie with each other in providing interesting, instructive, and varied programs. Hundreds of intelligent persons are devoting all their time and talents to the study of the needs and requirements, the whims and fancies of various communities, providing the listeners with valuable information and worthwhile entertainment. An opportunity for expression is provided to every reputable and substantial class or group. Earnest efforts are made to give the people what they want and not what some one in authority may think is good for them.

National unity has been promoted, musical culture and appreciation widely extended, messages of men and women of outstanding achievements and mentality are now heard by millions thru the networks, geographical provincialism is being banished rapidly, thus preventing the disintegration of our vast population into classes.

Common sources of entertainment, common economic interests, common ideals, problems, and dangers constitute bonds for making our people homogeneous.

This new means for nationwide communication is proving a valuable adjunct to the government at this critical, changing era, informing the people concerning the economic readjustments being made designed to restore prosperity.

Our plan has developed, in all citizens, a deeper consciousness of the functions of our national government and the manifold and complex problems confronting it.

Educational programs are provided daily on many stations. Special efforts are made by the Commission to provide radio facilities for educational institutions. Emphasis is put on agricultural programs by many stations which are designed to aid farmers in rural sections.

The late Edwin A. Alderman, president of the University of Virginia, in an official report on the American system of radio broadcasting said:

Already many of the problems have been solved. Entertainers have achieved fame and fortune by furnishing amusement for millions of homes. Great musicians, freed at last from the limitations of the concert stage, have found in radio a national Peoples' Theater, and the works of immortals belong no longer to the few.

Government officials, statesmen, and political candidates now can and do address the whole people directly. The church has carried its message of faith far beyond its own doors. A death blow has been dealt to isolation and exclusiveness—whether geographical, cultural, or social.

Dr. Alderman added that if one evaluates current programs "it is surprising to find how many of them possess real educational merit."

The President's Research Committee on Social Trends [which served under President Hoover] composed of noted economists and sociologists, after an exhaustive study of the use of radio in America, found 150 different ways in which

it has contributed to the progress of the nation and the social habits of the people, adding much to their comfort and happiness.

In creating the Radio Act, Congress, in effect, ordained that the operation of radio stations would entail no expense to listeners, that no taxes should be imposed on the listening public for the support of stations or their programs. Proposals for taxing receiving sets, made during the debates on the proposed law, met with strong opposition from the general public.

The phenomenal growth of American broadcasting and of the radio audience in this country is tangible evidence of the soundness of our system. It is estimated that we have an audience comprising more than seventeen million radio families, representing 45 percent of all the radio families in the world and constituting a higher per capita set-ownership than that of any nation except the small country of Denmark. This, I believe, would not be so unless our system were fundamentally sound.

Six years after private enterprise had developed the radio broadcasting industry, the soundness of the system was recognized by Congress when it formulated and passed the Radio Act of 1927. At that time, as today, Congress had the power to create any system of broadcasting which it saw fit to bring into being. Congress, however, chose to continue the system of broadcasting already established.

Advertising furnishes the needed revenue just as it supports our magazines and newspapers.

Radio broadcasting in this country has been criticized because of this method of support. Personally, I see no objection to this plan providing the advertising is carefully regulated and intelligently presented. Advertising itself is a constructive force.

It would require vast sums to provide radio service to the American people under any other system which might be devised. Under the present plan, according to a recent survey made by the Commission to supply data for the United States Senate, it was disclosed that the investment of stations as of December 31, 1931, totaled approximately forty-eight million dollars. Since then considerable sums have been added.

That survey also shows that in 1931 the gross receipts of all radio broadcasting stations amounted to \$77,758,049; gross expenditures to \$77,995,405, which included \$20,159,656 for talent and programs; \$16,884,437 for regular employees; \$4,725,168 for equipment; and \$36,226,144 for miscellaneous.

All except forty of the stations in the United States are privately owned and operated, the exception being stations owned directly or indirectly by states and municipalities. About two hundred stations buy part of their programs from companies engaged in chain broadcasting. These stations are for the most part independently owned and operated, and join the network at intervals to obtain programs of national interest. The chains also provide highclass programs to many rural communities lacking talent.

IT IS NOW WOSU since the Ohio State University recently secured permission from the Federal Radio Commission to change the call letters of its publicly-owned non-commercial radio station. The station formerly used the letters WEOO.

The Drug and Beauty Racket

ONE OF THE MOST SERIOUS INDICTMENTS of our present American radio practise is the increased business it brings to companies selling harmful cosmetics and quack cures. Radio is not the only medium thru which such products are brought to the attention of the public. Radio, however, not only adds the force of vocal persuasion in appealing to the average citizen, but with marked effectiveness reaches the illiterate, the near illiterate, and the person who reads few, if any, newspapers and periodicals. Receipts from the sale of radio time for advertising drugs and toilet goods during the lean month of July 1933 were \$789,334 according to *Broadcasting*.¹ This represents more than one-fifth of the receipts for all radio advertising in the United States for that month.

The Committee on the Costs of Medical Care found that the people of the United States annually spend \$525,000,000 for self-medication and only about one-third as much [\$190,000,000] for prescriptions or purchases made with the direct advice of medical practitioners.²

Health authorities, sociologists, economists, and others who have carefully studied the problem of false and misleading advertising have suggested that in the absence of adequate legislation the schools should be called upon to give instruction along this line. In a recent article Irving S. Ross points out:³

Millions of consumers' dollars are wasted, their shelves are filled with useless antiseptics, harmful breakfast foods, and dangerous tooth-pastes. . . . Government regulation has been admittedly inadequate due mostly to lack of funds. . . . Obviously the school must fill this gap by providing unbiased information; no other institution can do it. No reputable manufacturer could object to that. He should welcome it. . . . In these times of hard-pressed consumer dollars there can be no quibbling about the necessity of such instruction. . . . We must replace the radio crooners, the ad-men, and the high-pressure salesmen. Yes, it's high time we fired Amos 'n Andy!

President Roosevelt promises us a "new deal" in this "false advertising racket." At his direction, assistant secretary of agriculture, Rexford G. Tugwell, has prepared a bill which is now pending in both House and Senate. It is predicted that hearings on the bill will begin early in December. The adminis-

tration's proposed measure would preserve the good features of the antiquated food and drug act of 1906, and according to the *Washington Star* of August 27, would provide, in addition, the following:

[1] Cosmetics would be brought within scope of the statute.

[2] Mechanical devices intended for curative purposes and devices and preparations intended to bring about changes in the structure of the body would be included also.

[3] False advertising of foods, drugs, and cosmetics would be prohibited.

[4] Definitely informative labeling would be required.

[5] A drug which is, or may be, dangerous to health under the conditions of use prescribed in its labeling would be classed as adulterated.

[6] The promulgation of definitions and standards for foods, which will have the effect and force of law, would be authorized.

[7] The prohibition of added poisons in foods or the establishment of sale tolerances therefor would be provided for.

[8] The operation of factories under federal permit would be authorized where protection of the public health could not be otherwise effected.

[9] More effective methods for the control of false labeling and advertising of drug products would be provided.

[10] More severe penalties, as well as injunctions in the case of repeated offenses, would be prescribed.

In defending the proposed legislation as it affects radio, Dr. Tugwell makes the following comments:⁴

Frankly, modern advertising of foods, drugs, and cosmetics does not always merit public confidence. . . . The standards of radio advertising in this field are no higher or lower than those of other advertising media. . . . Even if every broadcaster and publisher in the United States conscientiously tried to accept only

truthful advertising in this field, he would not possess the scientific evidence on which to make a decision. . . . Just now consumers have lost faith in a great deal of advertising, and it is going to take a severe jolt of some sort to restore it. . . . It is a primary function of government to provide effective consumer protection. . . . The Department of Agriculture has received abundant evidence that the public wants false and misleading advertising cleaned out of the press and off the air. . . . Radio may discover special reasons for wanting the pending bill passed. Radio, now subject to federal control, is called upon to serve the public interest, convenience, and necessity. It is conceivable that a widespread consumer demand for control of advertising might result, at least temporarily, in restrictions being imposed solely on radio by the licensing authority. Competitively, this would place radio at a disadvantage. It would be more in the public interest, and more to the interest of radio, to have a single, reasonable set of standards applicable to all.

Forward-looking legislation of this sort will have its opponents. Enormous profits are being made thru the sale of poisonous toothpastes, hair removers, and eye-lash dyes; alleged

⁴ Tugwell, Rexford G. "How Food and Drugs Bill Would Affect Radio." *Broadcasting*, 5:5, September 15, 1933.

¹ Codel, Martin. "Monthly Guide to Broadcasting Business." *Broadcasting*, 5:17, October 1, 1933.

² The Committee on the Costs of Medical Care. *The Costs of Medicines; The Manufacture and Distribution of Drugs and Medicines in the United States and the Services of Pharmacy in Medical Care*. University of Chicago Press, 1932, 268p.

³ Ross, Irving S. "Let's Fire Amos 'n Andy." *Secondary Education*, 2:90-91, September 1933.

ALL POINTS OF VIEW concerning radio control policy are being presented in *Education by Radio*. In this issue, p50, will be found the point of view of the National Advisory Council on Radio in Education. The position of the Federal Radio Commission was presented in the September issue. Others are to follow.

cures for diabetes, arthritis, tuberculosis, overweight, and high blood pressure; and unnecessary, if not harmful, mouth-washes and health giving crystals. A recent book devoted to an exposure of these "rackets" will give a wealth of evidence for those who desire to secure the facts in the case.⁵ Already the powerful manufacturers and distributors of the products which will be affected by the bill have begun lobbying against it. No doubt some of the short-sighted broadcasting stations fearful of losing a large slice of advertising revenue will lend

their opposition. On the other hand consumers, as of one accord, will give the bill enthusiastic support because of the protection it will give them.

The removal from the air of false health and drug advertising will be a step forward in the improvement of American radio practise. It should be the beginning of a careful scrutiny in this country of many other indefensible types of radio advertising such as financial, liquor, narcotic, and the like. More power to the President and his advisers in their fight!

Program Experimentation of the Council

Levering Tyson

Director of the National Advisory Council on Radio in Education

THE EDUCATIONAL BROADCASTING SITUATION presents at least three distinct aspects, Dr. William John Cooper, then commissioner of education, stated in effect several years ago: first, there is the necessity for developing worthy programs and bringing them to the microphone; second, the broadcasting of such programs; and third, the measuring of the reception and effectiveness of instruction.

Commissioner Cooper pointed out that the United States Office of Education has a definite interest in the last mentioned; the commercial companies and college stations thruout the country seemed to be concerned chiefly with the second; and until the National Advisory Council on Radio in Education was organized no one had attempted to deal satisfactorily with the first aspect. The Council, among other purposes which are possible under its charter, has undertaken since then not only to collect and study programs regardless of their source, but also to devise means for more effective programs, and to compare progress in education by radio in this country with educational broadcasting abroad. As yet no one is prepared or competent to say whether or not this will eventually force the Council to discuss the mechanisms necessary for educational broadcasting and whether their ownership should be in commercial hands, in the hands of educational institutions, or in the hands of non-profit cooperative federations, or perhaps in all. However in its experimental work with educational programs on a national basis the Council in the brief period of two years has accumulated some little experience. The National Committee on Education by Radio has requested the director of the Council to outline that experience for the readers of *Education by Radio*. In view of the forthcoming debates all over the country on the relative merits of the British and American systems of broadcasting this experience is outlined below, with the British system in the mental background, so to speak.

In America the only facilities available for presenting educational programs for nationwide consumption are the national networks of the Columbia Broadcasting System and the National Broadcasting Company. Both had stated publicly that when a thoroly representative group of educators devised programs their network facilities would be made available without charge.

The following series of experimental programs were organized, and beginning with the fall of 1931 were broadcast under Council auspices, utilizing in every case a coast-to-coast network of one or both of these organizations:

Aspects of the depression—A series on important economic questions broadcast over 57 NBC stations from October 17, 1931 to May 31, 1932 [32 weeks].

⁵ Kallet, Arthur, and Schlink, F. J. *100,000,000 Guinea Pigs, Dangers in Everyday Foods, Drugs, and Cosmetics*, New York: Vanguard Press, 1932.

Labor and the nation—A series on the development of American labor broadcast over 47 CBS stations from May 1, 1932 to July 3, 1932 [10 weeks]. This series was resumed for 10 weeks over 48 CBS stations from September 4, 1932 [the day before Labor Day] to November 5, 1932.

You and your government—A series of impartial, nonpartisan broadcasts on government over 45 NBC stations from April 5, 1932 to July 5, 1932 [14 weeks]. This series was resumed over the NBC network beginning September 6, 1932 and has continued without interruption since.

Psychology today—A series of recent developments in psychological research broadcast over 57 NBC stations from October 17, 1931 to May 21, 1932 [32 weeks].

Vocational guidance—A series indicating the necessity for direction in choosing a vocation broadcast over 60 CBS stations from February 18, 1932 to April 24, 1932 [eight programs including ten addresses and six dramatizations].

Radio's past and future—An address by Dr. Robert A. Millikan, president of the Council, broadcast over the combined NBC and CBS coast-to-coast networks May 22, 1931. The President of the United States, speaking from the Cabinet Room in the White House, introduced Dr. Millikan.

American education past and future—An address by Dr. John Dewey on an NBC network October 25, 1931.

The economic world today—A series of roundtable discussions on current economic questions by prominent economists, newspaper correspondents, and others conversant with national economic problems broadcast over an NBC network beginning November 12, 1932 and continuing thru June 10, 1933.

The lawyer and the public—A series of fifteen radio programs by leading members of the legal profession, dealing with the lawyer's part in legal reform and in legislation, and with his relations to the court and to the layman broadcast over 70 CBS stations from February 12, 1933 to May 21, 1933.

The expanding universe—On invitation of the Council, Sir Arthur Eddington, world-famous astro-physicist, delivered a series of three radio addresses on "The Expanding Universe" on September 8, 15, and 22, 1932. The programs were carried over an NBC network.

America and the world situation—On January 23, 1933, by special arrangements with the Council, Dr. Robert A. Millikan organized a convocation in the Pasadena, California, Civic Auditorium, at which he, Dr. Albert Einstein, Mr. Henry M. Robinson, and Professor William B. Munro spoke. This program was carried over an NBC network.

The production and distribution of these programs has given Council officials some insight into the broad general problem of educational broadcasting on a national scale. On the basis of this experience a comprehensive and systematic series of experiments could well be organized, the results of which could be taken as an index of what might be done in this country. There are a great many students of this problem who believe that some such experimentation is necessary immediately, without any relation to the future American radio structure.

Program content—Subjectmatter for broadcasts which are broadly educational in character is unlimited. The Council decided to limit its program experimentation to fields of immediate public interest. The first step was to assemble abso-

lutely competent and representative individuals who could plan programs that would be thoroly comprehensive and useful from the subjectmatter standpoint. In the case of economics, for example, the American Economics Association, the National Bureau of Economic Research, and the Brookings Institution were each invited to select two individuals for this purpose. To this committee of six individuals was turned over the entire responsibility for the organization and presentation of the subjectmatter of the proposed series in economics, the committee choosing its own chairman, adopting its own procedure and thereafter being entirely independent. The same general procedure was adopted and has been followed in the case of all other committees.

The Council *per se* produces no programs. Those listed earlier were the result of this activity. Upwards of a dozen such committees have been organized and have proposed programs. Other committees are planned or being formed.

From the Council's experience this method for radio presentation of the most advanced thought in a given field is entirely practical. It corresponds to the methods followed in foreign countries, of course allowing for basic differences in responsibility which exist where education is definitely under government control. In America these committees have had a free hand.

Important as some such organization is under any system of broadcasting, it is only the first step. The employment of effective technics before the microphone is just as important as the adequate organization of material to be broadcast. The Council has found that there are relatively few experienced broadcasters in the academic world in this country. Apparently it will be necessary for us to attempt for some time the discovery of individuals who can qualify both in knowledge of subjectmatter and microphone technic.

In foreign countries, notably England, the demands of technic are readily recognized and opportunity is afforded to educational broadcasters to discover and develop this ability. Thus far the Council's experimentation in this field has consisted largely in trying out the relative effectiveness of various types of programs—that is, the dialog, roundtable, or general discussion, in contrast to the "straight talk." We are led to the inevitable conclusion that the microphone personality of the "performer" is the important factor. It is to be deplored that with the enormous amount of broadcasting in this country in the past decade so little scientific study has been made of the radio talk as a program device.

In many foreign countries, particularly in Britain, after program content is determined upon, broadcasters step in to assist in this matter of technic. In America we have not utilized the experience of broadcasters to as much an extent as our resources would allow. In addition, educators abroad are responsible for more of the merchandising work of a program than they are in this country. For example, the 1933 BBC

Year-Book stated: "The Council [that is the Central Council for Broadcast Adult Education] advises as to program content and speakers, but *its chief work* lies in the organization of the listening end, in particular the study-groups which are springing up in all parts of the country."

In the Council's experience there has been absolutely no attempt by the broadcasters to control subjectmatter or suggest what should or should not be put on the air. There are on record lurid instances of "censorship" of programs as practised by commercial broadcasters. There has not been a single instance where this has ever been attempted in respect to our programs. There was one very heated argument *between the Council's office and one of our own committees* over a question of good taste, but the broadcasting company had no relation to this argument or any knowledge of it.

Merchandising—From the outset the Council has recognized the relatively easy task of assembling speakers and putting them before the microphone. However, this was not interpreted as real *educational broadcasting*. It has been believed from the start that to be truly educational a program must, first, have an audience assembled for it ready and qualified to appreciate what comes to it; second, that audience must be held and must be stimulated to follow up the broadcast with existing devices for that purpose, or additional devices must be created. In all its program activities the Council has attempted to "merchandise its wares."

The absence of any listing of "educational" programs available to the American radio audience has been keenly felt. It has been necessary to provide printed notices containing information about Council programs and to distribute these very generally thruout the country. Every dignified publicity mechanism has been used. The assistance of organizations and influential individuals interested in the subjectmatter of each program has been secured. The United States Office of Education has been of great help. Provision has been made for reprinting all Council programs at cost for the use of anyone who wants them. Plans for the ultimate electrical transcription of all programs have been made. The organization of discussion groups under competent leadership and direction is an essential and our relatively meager experience indicates great potential developments. Reading lists prepared under expert and practical guidance of librarians who come in constant contact with the demands of the general public are an important feature of every broadcast. Wherever possible the use of exhibits in libraries and museums is desirable.

There is nothing new in all this except that in America under whatever system of broadcasting we operate or will operate, some such organization work is necessary. The expense of this organization work is enormous and will always be an important factor to be considered under any system.

Finance—As soon as Council committees had recommended programs and had organized them for the air, both networks

WHEREAS, THE WISCONSIN LEGISLATURE is mindful of the activities of the state-owned radio stations, WHA and WLBL, in taking to the people noncommercial broadcasts of a high class; and *Whereas*, it recognizes the service rendered to the citizenry in making these radio facilities available to all legislators for uncensored discussion on matters of public concern; therefore, be it *Resolved by the Assembly, the Senate concurring*: That the legislature hereby expresses its appreciation and approval of the operation and use of the state-owned radio stations in the interests of the people, thru the dissemination of information from the educational, governmental, agricultural, and other service agencies of this state. *Be it further Resolved*, That properly attested copies of this resolution be transmitted to the managers of radio stations WHA and WLBL.—*Joint Resolution Number 178A*, adopted July 21, 1933 by the Wisconsin legislature.

made time available. There has never been any question about payment for these network facilities and no program recommended by the Council has ever been refused time.

The costs of broadcasting programs of this type are by no means confined to the cost of facilities. Under any system of broadcasting the enormous costs for providing adequate programs must be met. In the experience of the Council the most important elements in these costs aside from the question of facilities are concerned with the proper organization of the program itself and the adequate merchandising of it after it is organized. Experimentation with programs on a paid and volunteer basis has confirmed the belief of the Council that in general those who participate in a program should be paid a fee. Thru the employment of available supplementary devices and existing correlating agencies it is possible to thoroly merchandise a program for a reasonable sum, but there is little chance of the sale of enough printed copies of the program to pay for the support of other program expenses.

Our experience in this respect seems to coincide with experience of the British, altho the analogy is not quite fair because the BBC has a rather elaborate publications program in which the publication of talks pamphlets constitutes only a small part. Other publications include the *Radio Times* which is primarily a program-listing weekly; *World Radio* containing notices of foreign programs and comment thereon; and *The Listener* which is a high-class weekly review. All these magazines carry a large amount of advertising and considerable revenue is derived therefrom. The talks pamphlets themselves and the pamphlets for distribution to schools contain advertisements which also are productive of revenue. The advertising in the radio periodicals is general in character. The advertising in the talks pamphlets is directly related to the subjectmatter.

In general the Council's experience has indicated that not enough consideration has been paid to the basic economic problem of securing sufficient money to broadcast representative educational programs adequately.

Facilities—As indicated earlier, every request made by the Council to the national networks for time has been granted. The approximate hours selected for programs, the length of the programs, and the duration of the series, were recommended by Council committees—and not, as has been frequently stated elsewhere, taken by the Council as largess from the broadcasting companies.

The problem of securing desirable time does not present any difficulties so far as the national networks themselves are concerned. In the Council's experience the difficulty arises with the member stations on the network. In every program issued under Council auspices we have had a desirable nationwide coast-to-coast network. There have been difficulties with individual stations which could not be resolved because of local commitments, not always commercial contracts. A sustaining program for local consumption which has been maintained by a member station over a long period of years with an enthusiastic following, will occasionally block an outlet for a Council program in a strategic locality. Our experience has been that

the officials of the networks are ready and anxious to make good their public statements with respect to programs that are devised and produced under thoroly representative auspices; that station managers generally adopt the same attitude; but that local considerations, both commercial and otherwise, have to be taken into account.

The question of desirable time is a difficult one in itself and is made more so when organizing a program for national consumption by differences in the various time zones across the American continent. This difficulty will be present under any system of broadcasting in this country. The habits of the listening audience in America are not definitely determined by any means. Evening time is thought most desirable for programs of an educational character. The hours after 6PM are thought to be most valuable commercially. The Council's experience would seem to indicate that a comprehensive editorial policy for all broadcasting, which would be extremely difficult if not impossible to secure because of time changes and because of the network complexities in this country, might throw some light on this problem. The British Broadcasting Corporation talks program for the fall of 1933 utilizes 10:45 to 11AM six days a week, 10:50 to 11:20AM two days a week, 3:15 to 3:35PM two days a week, 6:50 to 7:05PM two days a week, 6:50 to 7:10PM one day a week, 6:30 to 6:45PM one day a week, 6:50 to 7:20PM [for language courses] two days a week, 7:05 to 7:25PM three days a week, 7:10 to 7:25PM one day a week, 7:30 to 8PM five days a week, 8:30 to 9PM one day a week, and various late evening periods five days a week. On Sundays there are programs from 2:40 to 3PM, 7 to 7:30PM, and 8:15 to 8:45PM. It will be noted that practically all these programs fall before 8 o'clock in the evening. In a given week all these programs constitute thirty-four separate items involving eleven and one-quarter hours; prior to 8PM twenty-seven items involving nine hours; after 8PM seven items involving two and one-quarter hours. Of all these only nine items, involving four and one-quarter hours weekly, are arranged under the auspices of the Central Council for Broadcast Adult Education; the other items such as news reel, foreign affairs, sports talks, the theater and the cinema, new books, and traveler's tales, are arranged wholly by the broadcasters.

The schools program is fifteen minutes each morning and approximately an hour and one-quarter each afternoon for pupils of all ages.

The importance of regularity and compactness is apparent in the British system. It would seem to be possible in America to organize regularity of broadcasting but because of political and geographical considerations the compactness is and will eternally be absent, thus making practically impossible a determination of what is desirable time.

The production of programs is only one Council activity but an extremely important one. The experience above outlined is relatively meager but its value lies in the fact that it constitutes the only attempt that has been made in America to produce programs of this type on a national basis. From it deductions can be made as to problems that will arise under any system of broadcasting in this country.

E DUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee are: Charles T. Corcoran, S. J.; Arthur G. Crane; J. O. Keller; Charles N. Lischka; John Henry MacCracken, vicechairman; James N. Rule; H. Umberger; Jos. F. Wright; and Joy Elmer Morgan, chairman.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library. Education by radio is a pioneering movement. These bulletins are, therefore, valuable.

Radio Debate Creates Interest

LETTERS POURING INTO THE OFFICES of the National Committee on Education by Radio, the United States Office of Education, and numerous other public and private agencies indicate the keen interest which the 1933 debate question on radio ownership and control is arousing. These letters come not only from highschool and college students and members of the faculties of educational institutions but from business men, housewives, and other public-spirited and thoughtful citizens. For example, in referring to the radio question a prominent Boston business man wrote:

I hope and trust that the young men and young women who this year are debating on this matter will bear in mind that uncontrolled radio broadcasting will mean the ruin of the intellectual life of America, for radio is turning upon the public as a Frankenstein returning to terrorize the people who made it.¹

One of the principal difficulties with radio broadcasting today is that the control of its programs rests with the "advertising crowd." Referring to the basis on which the whole modern advertising structure rests, a recent writer states:

Some years ago an ingenious practical joker proposed to the Associated Advertising Clubs of the World the slogan, "Truth in Advertising." . . . Advertising men—like a crowd of hypnotists solemnly putting themselves to sleep by their own passes—have not only adopted the slogan, but, by a natural process of rationalization, have come to believe that it is actually true. . . . To this day most advertising men, victims of their own technic, swear that they speak the truth, the whole truth, and nothing but the truth—dashing off preposterous imperatives and monstrous superlatives with the air of Moses bringing down tablets from the Mount.²

Some people wonder why radio is so severely criticized because it gives time to sales talks when similar criticism is not heaped on newspapers or periodicals. To understand this let us contrast the two media.

I have in my hand a copy of the *New Outlook* for July 1933. A full-page advertisement of Listerine Shaving Cream appears on page 1; a stimulating article on the radio entitled "Static Ahead!" by Allen Raymond begins on page 17. If I am interested in shaving cream I can read the page devoted to the former; if I want a better understanding of radio's problems I can read the latter. I do not have to peruse one in order to secure benefit from the other. If I choose to devote a few minutes to the radio article, I am not annoyed with paragraphs describing the shaving cream, scattered here and there thruout the story. I am sure that the radio article was not sponsored by the advertiser who purchased page 1 or by any other. An advertiser's task is completed when he buys a particular space, and delivers his message in his own way.

¹ The original of the letter written November 3, 1933 is in the files of the Committee.

² Knowlton, Don. "Truth in Advertising." *Atlantic Monthly* 151:403, April 1933.

If I talk with the editor, Alfred E. Smith, I will find that *the determination of which articles shall appear in his magazine is in the hands of the editorial department and not of the business office or individual advertisers.* Furthermore, I find a fairly definite segregation of the advertising, leaving the best parts of the publication for the editorials and feature articles.



CHARLES A. ROBINSON, S.J., *Saint Louis University, Saint Louis, Missouri, new member of the National Committee on Education by Radio succeeding Charles T. Corcoran, S.J.* Father Robinson has had wide experience as a student, teacher, and administrator not only in the United States, but in Canada, Austria, Holland, and Japan. After the war he was the Jesuit representative before the Interallied Commission, carried relief to the Jesuits in Japan at the time of the 1923 earthquake, and had charge of arrangements for the National Catholic Educational Association convention in Chicago in 1928. One of the original members of the Committee, Father Robinson returns after two years devoted to other fields of educational endeavor.

These are a few of the things which distinguish the magazine from commercial radio as found in the United States. They lead to such questions as: Why should radio's editorial page be cluttered up with cheap advertising? Why should the front cover be used to advertise harmful drugs or cosmetics? Why should advertisements of tobacco, liquor, or investments usurp the space which otherwise might be devoted to feature articles? Why is radio advertising permitted in the evening? Why not classify and group all sales talks together and entirely separate them from the education, culture, and entertainment, so as once and for all to eliminate the present control over programs by advertisers and advertising agencies?

Many additional reasons can be found for the criticism of advertising over the radio and its acceptance in other media, but a new one appears as a result of a recently completed study at the University of North Carolina. Henry N. DeWick found among other things that "Auditory presentation of advertising copy is distinctly superior to visual presentation when the problem involved is to recall the contents of the advertisements or the products and their trade names, after a delay of from five days to five months." In other words, persons not interested in the advertising chatter

[and how many are?] find the sales talks running thru their minds, try as they will to dismiss them.

One of the rapidly increasing number of critics of American radio, a philosopher and student of public affairs, says

The radio in America has been allowed to gravitate to almost exclusive control by big business interests. It is viewed by them as a new and profitable vein of advertising revenue. The absurdities and banalities which such control and such a purpose have turned loose on millions of radio listeners almost beggar description. These are fundamental and obvious facts; only a blind optimist would deny, or dispute, or justify them. They call for swift and farreaching reconstructive effort by the public. In the present state of public confusion, such efforts will probably not be immediately forthcoming.³

The "money changers" and their spokesmen minimize the educational value of radio. They draw attention to its use in many homes purely as an entertainment device. In many parts of our country, on many broadcasting stations, and cer-

³ Woelfel, Norman. *Molders of the American Mind.* New York: Columbia University Press, 1933. p38-9.

tainly at many of the best hours of the day, the listener uses his radio set for entertainment for the perfectly obvious reason that no other type of program is available. Professor C. C. Cunningham of Northwestern University has well said

So far as education is concerned, American radio is a university in which the curriculum is drawn up by the business office with the expert advice of the head janitor.⁴

What radio must have is freedom. An educational activity cannot function properly, if at all, when subordinated to the censorship of business interests. It is all very well to magnify the dangers of beaureaucracy under a plan of government radio control. The extent of government censorship depends upon the sentiment in the country, not upon who owns the radio. We have even less freedom on the radio in the United States than exists in England. In addition to the private censorship frequently and effectively applied, our system, where "rugged individualism" is supposed to rule, is even subjected to government pressure. The President of the United States, or any other important federal official, may have the use of any broadcasting chain without cost, at any time he wants it, but as radio is now administered, no one who desires to criticize the government will be allowed time on the chains unless he holds a position which carries with it some influence over the license which the broadcasters hold. As Professor E. C. Buehler of the University of Kansas recently stated

there is no absolute freedom over the air at any time, and under any leadership it will suppress as much criticism of itself as it can. For example, in the present circumstances, General Johnson has demanded as much time on the national hookups as possible. If we had absolute freedom of the air, opponents of the NRA should be allowed an equal amount of time.⁵

Another factor involved in changing some of the fundamental features of the American radio practise is the matter of cost. It is not surprising that the selfish interests should use inflated cost figures. One representative of the "commercial crowd," for example, estimates that to adopt a radio plan similar to that of the British would involve an initial capital cost of \$278,000,000 plus an annual cost of \$145,000,000 for providing three national programs to every listener in the United States. Whether or not three national programs for the United States are necessary is certainly open to debate. Moreover an American plan using the essential features of the British system should cost no more, in all probability much less, than the present wasteful haphazard practise. According to the figures of the Federal Radio Commission the total physical assets of American broadcasting including technical equipment, real estate, furniture, and fixtures but excluding goodwill, total \$30,578,680.31.⁶ Gross receipts for one year of individual stations aggregated \$38,461,302.41 and of chain companies, \$39,296,746.36 according to the same report.⁷ From these amounts the entire support of the present American broadcasting practise has been derived. The reason receipts are given rather than expenditures is because the report of expenditures submitted to the Federal Radio Commission shows too much trick bookkeeping. For example, after listing the usual expenditures for programs, employees, line charges, equipment, replacement, and the like, CBS lumps more than 50 percent of its annual outlay under the heading of "other expenditures" while NBC places more than 40 percent under this same classification.⁸

⁴ In a debate on the question of radio control over NBC and CBS networks, November 1, 1933.

⁵ NBC and CBS network debate, op. cit.

⁶ Federal Radio Commission. *Commercial Radio Advertising*. Senate Document 137. Washington: Government Printing Office, 1932. p43.

⁷ Ibid p43-4. ⁸ Ibid p50.

Public Versus Private Operation

THE RATES TO BE CHARGED for electric service recently announced by the authorities for the government-owned project at Muscle Shoals illustrate in a most striking manner the very great advantages of municipal and public ownership.

These rates are the lowest in the country except, of course, of some of the municipally-owned plants. The ordinary domestic user will pay only \$1.50 per month, whereas under private ownership the cost is two and in some cases three times as much.

The following table shows the cost of current for small users of 50 kilowatts per month, which is sufficient to supply a minimum number of electric lights, and enough additional power to operate an electric iron, a toaster, coffee percolator, and other modest uses at the Muscle Shoals rates as compared to rates under private ownership elsewhere.

Cost of 50 Kilowatts Per Month—Domestic

Muscle Shoals	\$1.50	St. Louis	\$2.05
New York City	4.94	Knoxville	4.57
Chicago	2.95	District of Columbia	1.95
Atlanta	3.50	Alabama	2.58
Denver	3.60		

Heretofore this current, which has cost the government plant at Muscle Shoals 1½ mill per kilowatt hour to produce, has been sold to the Alabama Power Company at 2 mills [$\frac{1}{5}$ of a cent] per kilowatt hour. And the Alabama Power Company has been selling the current to the ultimate consumer at as high as 16 cents. The average domestic rate was 5.56 cents.

Many municipal plants in the United States have rates almost, and in some cases, quite as low as those mentioned above for the Muscle Shoals project. For example, the Cleveland municipal plant has been furnishing electricity at a maximum rate of 3 cents per kilowatt hour from the beginning. Virginia, Minnesota, has perhaps the lowest maximum rate of any municipal plant in the country, 2 cents.

Tacoma, Washington, also has a very low domestic rate, altho somewhat higher than the Muscle Shoals rate mentioned above. Los Angeles; Jamestown, New York; and Kansas City, Missouri are other municipal plants having particularly low rates.—Carl D. Thompson. "How Public Ownership Reduces Rates." *Journal of the National Education Association* 22:213, November 1933.

Denmark Satisfied with Governmental Control

GOVERNMENTAL CONTROL over radio-broadcasting operations in Denmark, which ranks first among nations in the number of receivingsets in proportion to population, is said to be giving complete satisfaction. Furthermore the control system is selfsupporting financially, says the Department of Commerce.

Danish broadcast programs are controlled by a supervisory board of fifteen members which accepts suggestions from civic organizations which have been formed for the purpose of seeking an improvement in radio programs.

Receivingsets are licensed at about \$1.75 a year and the broadcasting monopoly receives the entire sum. In most European countries the government levies a tax on receivingsets.

There is about one receivingset for each seven persons in Denmark, while in the United States the estimate is one set for eight and a third persons.—*United States News*, July 15-22, 1933.

American Broadcasting Results in Losses

BROADCASTING AS CARRIED ON in the United States is not resulting in profits, one gathers from a perusal of the testimony presented in the NRA hearings. John W. Guider, special counsel for the National Association of Broadcasters, testified that

The only available statistics indicate that the [radio-broadcasting] industry as a whole has not as yet operated at a profit.¹ . . . Altho there has been a general drop in advertising revenue thruout the entire [radio-broadcasting] industry in 1933, it is to be remembered that local broadcasting business has been particularly poor due to the generally depressed retail trade conditions in the country.²

In addition to the testimony given by their legal representative, the National Association of Broadcasters in a prepared memorandum entitled "Economics of American Broadcasting" included the following significant material:

In 1931 according to the Federal Radio Commission, total station expenditures exceeded total station revenues by \$237,356. Since there is a duplication of more than \$7,000,000 in the revenue figure, it is probable that the deficit of the industry as a whole, was somewhat greater than the aforementioned amount.

During the past 18 months radio-broadcast-advertising revenues have suffered serious declines. Network revenues for the first seven months of 1933 are approximately 33 percent below those of 1932. It is quite certain that there has been at least a similar decline in the individual station field as a whole, though figures are not available on this point.³

How times have changed! It was only a few weeks ago that *Broadcasting*, the official organ of commercial radio in the United States, made a vehement attack on one of the members of the staff of the National Committee on Education by Radio for distributing this same information to delegates in Mexico City.⁴ It will be interesting to note whether this trade organ makes a similar attack on Attorney Guider and the officials of the National Association of Broadcasters for their recent testimony before the NRA.

False Radio Advertising Opposed

BECAUSE MANY CONSUMERS are influenced in their choices of consumer goods and services by broadcast statements regarding the values of these goods and services, we [The American Home Economics Association] recommend that the following paragraph be added to Article VI—Trade Practises, of the Proposed Code of Fair Competition for the Radio Broadcasting Industry:

No broadcaster or network shall knowingly permit the broadcasting of any false representations regarding goods or services or any representations which may by ambiguity or inference mislead the hearer regarding the value of such goods or services.

It is a matter of common knowledge that such false or misleading statements are often heard on the air. Some merely claim higher quality than the product and its price warrant, and thus affect only the pocket-book. Others recommend the use of beauty preparations which contain ingredients injurious to the user. Still others make false claims for the nutritional or curative values of foods and drugs and are thus

¹ John W. Guider in *NRA Proposed Code of Fair Competition for the Radio Broadcasting Industry*, p10.

² *Ibid* p12.

³ *Ibid* p193-4.

⁴ "Failure in Mexico." Editorial in *Broadcasting* 5:18, August 15, 1933.

dangerous to health. From many possible illustrations we cite one broadcast in a popular series which did both. It said of a certain medicinal product, "After using ——— for ten days you are going to get a new slant on life. . . . It will correct faulty elimination, liver and kidney troubles, arthritis, indigestion, rheumatism, and acidosis. . . . You can regain your health, but not if you delay."

Of this product the U. S. Food and Drug Administration said: "The truth is that if you are suffering from these diseases and delay rational treatment to try out ——— you may never regain your health." It proceeded to cite the nature of the physical harm which might result from following the practises recommended by the advertiser and to expose the fraud perpetrated on the public by the sale under a new name of a product long familiar to the public at a price almost four times that of the product under its old name.

It is our belief that *the broadcasting of such false or misleading advertising is rapidly destroying the faith of the public in all radio advertising* and this is doing the broadcasting industry more harm than good. It is weakening the confidence of the public in similar goods and services not so advertised, thus lessening the value of broadcasting as an advertising medium for honest products.—Alice L. Edwards in *NRA Proposed Code of Fair Competition for the Radio Broadcasting Industry*, p161-163.

College Work by Radio

WISCONSIN HAS BEEN one of the few farsighted states in radio development. This progressive commonwealth owns and operates two broadcasting stations for the education of the people. As a consequence, thousands of boys and girls in farm and city homes on October 2, began attending a new kind of school.

The new kind of school is the Wisconsin College of the Air which is being broadcast between 1 and 1:30PM each school day for a period of thirty weeks by the two state radio stations, WHA at Madison and WLBL at Stevens Point. The project is designed to extend educational opportunities to the young people of the state, particularly those in rural areas, between the ages of 14 and 20 years.

Five courses are being offered this year as follows: *Mondays*—farm life and living; *Tuesdays*—enjoying your leisure; *Wednesdays*—you and your home; *Thursdays*—the world about you; and *Fridays*—social problems of today.

Enrolment in the courses, open to all, is free to Wisconsin residents. Study outlines are provided in connection with each course. By passing a satisfactory examination upon completion of the radio lessons, a student will be given a certificate of achievement.

Cooperating in the planning and presentation of the Wisconsin College of the Air are the following agencies: state board of vocational education, state department of public instruction, Wisconsin teachers association, university extension division, Wisconsin college of agriculture, university school of education, Wisconsin press association, and state-owned radio stations WHA and WLBL.

LIKE THE FILM, the radio broadcast is capable of exercising so great an influence for good or bad that it is little short of a crime to allow it to be debased, and it is the duty of every good citizen to see that it is an influence for good.—A. T. Wilgress, legislative librarian, Province of Ontario.

National Radio Popular in Canada¹

I AM GLAD OF THE OPPORTUNITY afforded by your letter this morning to let you know what the situation is in regard to the rumor in the United States about payment of receivers' license fees. I may tell you in general terms that there is no foundation for the rumor. Upon receiving your letter I communicated with the branch of the service responsible for collecting the fees. I learned that last year fees were collected from 98 percent of the people who, according to the census, owned receivingsets, and the collection officials anticipate that this year's results will not fall far short of last year's.

The collection year corresponds to our fiscal year which expires March 31st, so that there are still five months of the present year to run. Collections have been a little slow for the first seven months but there have been other causes than any dissatisfaction on the part of Canadian listeners with the Commission's broadcasting service. Hard times have supplied one cause and I may tell you that some people who just could not afford to pay have been treated leniently. Then at Windsor, Ontario, there have been a couple of test cases in the courts in which a contention that the owner of a receiving-set need not pay the fee because it could not be proved that he operated the set has been upheld. These court decisions have had wide publicity and have encouraged a number of people to postpone payment. The decisions will be appealed and if that course fails, the Act, of course, can be amended.

Some months ago there was considerable agitation in some districts, particularly in Toronto and in the West, against the Commission's service, largely against the broadcasting of French programs. This has pretty well died down and within the last few weeks the Commission's service has been coming in for a great deal of commendation and is quite clearly pleasing large numbers of people especially in the West and in the Maritimes where previously radio service had been anything but adequate. This improved sentiment, one would think, should assist in the collection of license fees.

I can assure you that there is no question of our system breaking down from the cause you suggest or any other. My own observation is that national radio has been gaining in favor rapidly in recent weeks.—E. C. Buchanan, director of public relations, Canadian Radio Broadcasting Commission, Ottawa, November 3, 1933.

University President Condemns Radio

IN THE PRESENT SCRAMBLE for bread on one hand and the craving for "circus" entertainment on the other, the mass of American people are sinking to the level of the Romans of Nero's day and are losing their taste for the fine things of life, it was declared yesterday at the Northeastern Ohio Teachers Association convention.

¹ Rumors traceable to commercialized radio² interests in the United States had hinted that the Canadian radio system was in danger of breaking down because of the dissatisfaction of listeners over the payment of license fees. The National Committee on Education by Radio wrote to the Canadian Radio Broadcasting Commission, asking for the facts in the case. This article contains the text of the letter received in reply.

It is up to schoolmen to counteract the subversive influence of the radio, the movies, and the cheap magazines, President A. H. Upham of Miami University told a superintendents and board members meeting, in likening the present temper of the populace to the "bread and circus" desires of the Romans under Nero.

"The Neros of this country think that the worse shape the populace is in, the worse kind of entertainment they want," he said. "You only have to go to a movie or look at a movie magazine to realize the depraved taste of many. A radio magazine asked its readers to pick the greatest crooner—think of that. Now they are getting up an all-American jazz band.

"With bread the great essential want on one end of the scale and craving for the circus kind of entertainment on the other, the danger is we will forget the precious things in between—the splendid, enduring values of life, self-denial, service, taste for literature and art."—*Cleveland Plain Dealer*, October 28, 1933.

Power Increase Granted to WILL

THE UNIVERSITY OF ILLINOIS was granted authority to increase the daytime power of its radio-broadcasting station WILL from 500 watts to one kilowatt in a decision rendered by the Federal Radio Commission on October 20, 1933. In rendering its decision concerning WILL, which at present is broadcasting nineteen hours per week, the Commission concluded:

The privilege of operating WILL this limited time enables the University of Illinois to render a distinctive broadcast service of particular value and interest to residents of the state, and the proposed increase in power would tend to improve and enlarge this service.

This public broadcasting station supported by and ready to serve the people of the state of Illinois is still permitted only 250 watts night power. The Federal Radio Commission should next assign to the state of Illinois for use by WILL a frequency which would permit higher nighttime power. Thru this means a greater proportion of the population of the state could be brought into closer contact with the educational plant of the university, the assets of which amount to approximately twenty-nine million dollars.

Listener Has Invested Most Money

THE MANUFACTURE AND SALE of radio receivingsets during the last decade has marked the most extraordinary development known to modern business and placed this business as sixth in the industries of the nation. Beginning in a small way, with perhaps an annual sale of \$2,000,000 worth of sets scattered rather sparsely over the country, the growth has been so tremendous that on December 31, 1929, the total money value in terms of sets, parts, and accessories sold during the preceding ten years amounted in round figures, to \$3,500,000,000.—Frank A. Arnold. *Broadcast Advertising*. New York: John Wiley & Sons, 1933. p45.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee are: Arthur G. Crane; J. O. Keller; Charles N. Lischka; John Henry MacCracken, vice-chairman; Charles A. Robinson, S. J., James N. Rule; H. Umberger; Jos. F. Wright; and Joy Elmer Morgan, chairman.

Everyone who receives a copy of this bulletin is invited to send in suggestions and comments. Save the bulletins for reference or pass them on to your local library. Education by radio is a pioneering movement. These bulletins are, therefore, valuable.

Radio in Canada and in England

THE ENORMOUS GULF which separates a commercial radio system from a planned system designed to serve public welfare can be understood best by a consideration of purposes and objectives. Canada, having decided recently to copy certain essential elements of the British system, is an example of a country which realizes the need of careful direction in respect to so vital a medium of mass communication as the radio. The following three statements, the first by E. A. Weir, director of programs of the Canadian Radio Broadcasting Commission, the second from the official report of the British Broadcasting Corporation, and the third from *The Listener*, may prove helpful.

The Canadian viewpoint—What is the prime purpose of radio, the most potential of all the arts since the invention of printing? On the answer to that question depends one's outlook on the whole subject of broadcasting and the form of organization best designed to make the most of it as a national asset.

Briefly there are two schools of thought, first, that which holds that *radio exists primarily as an advertising medium*—as something to push the sale of goods; to increase the turnover of every sort of product from toothpaste to gasoline, cigars to ginger-ale, and perfumes to quack remedies. Indeed, sometimes we get letters from ladies who wish to advertise for husbands, tho they are never prepared to pay much for them. That is, broadly speaking, the school of thought which has so far dominated broadcasting thruout North America, and as we all know, radio has proven a tremendously effective medium for that purpose.

The second school of thought maintains that the prime purpose of radio is something quite different from the merchandising of goods—that *it is primarily a great entertainment and educational medium*, falling far short of its proper use at the present time. This second school is divided into a variety of groups. Some want musical entertainment almost entirely, and within that group we have the devotees of jazz, of the symphony, of musical comedy, of chamber music, or other forms. Others prefer a substantial part of their entertainment in the form of programs more definitely educational in character, and so there are all classes between. Some do not object to a little advertising, if they are assured good entertainment, but the increasing tide of dissatisfaction provoked as a result of the lengths to which some advertisers go in their efforts to force sales threatens to seriously impair the efficiency of radio even as an advertising medium. In Canada this has resulted in action to limit advertising to 5 percent of the program time.

Tho the latter school of thought is closer to the truth, it does not fully express the real purpose of radio. *To me the prime purpose of this great medium of thought-communication*

is to assist in developing to the highest degree the latent possibilities of the talent lying undeveloped or semi-developed in our cosmopolitan population. It is not merely a question of whether we shall have good programs or poor programs—whether we shall increase the turnover of our industries and add so many millions to our trade balance, but whether the inherent genius of the scattered population that we are trying to mould into one united people shall have opportunity to express itself.

A problem of great magnitude lies before the Canadian Radio Broadcasting Commission. Those who carry the responsibility for the future development of radio in Canada bear a responsibility second to none in the Dominion. They are dealing with cultural and spiritual values. They are providing the opportunities for selfexpression for the finest tempers among our people, for that side of Canadian life which will be our permanent measuring stick among the nations of the world.¹

A British retort—In a recent address which attracted considerable notice, the American publicist and broadcaster, William Hard, propounded the intriguing paradox that the effect of “governmental” broadcasting as practised in Europe is to advance culture but not civics, while American “free” broadcasting is advancing civics but not culture. When allowance is made for the over-sharpness of the generalization, the proposition as stated would be very difficult to confute. But the facts might equally well be stated in another way, that the freedom of America is failing to rise to a cultural opportunity that the governments of the Old World have been socially-minded enough to seize, and that the higher the cultural level of the governed is the less

they are likely to be successfully “doped” by the governors. Still other interpretations could be suggested, but common to all of them is the fact that the standpoint of a government towards broadcasting is fixed by its standpoint towards its people. This is the root of the matter, and the forms of constitution, administration, and finance, important as they are, are derivatives. The question “Whither broadcasting?” therefore can only be answered by posing another question “Whither society?” and it is best, here, to leave it at that.²

British model recommended to Canada—Adaptation of the British model to suit the distinctive needs and conditions of Canada is the basis of the recommendations made by Mr. Gladstone Murray in his report to Mr. R. B. Bennett on the organization of Canadian broadcasting. “Experience elsewhere,” he points out, “has proved the folly of trying to make



CARL MENZER, since 1923 director-announcer of radio station WSUI, and associate in the department of electrical engineering, State University of Iowa, Iowa City, Iowa. Graduating from the State University of Iowa in 1921 with the degree of Bachelor of Science in Engineering, he received his Master of Science degree in 1922, and the professional degree of Electrical Engineer in 1924. Mr. Menzer is not only a skilled program director, but has had twenty years technical radio experience including constructing and operating of transmitters and receivers, and as radio operator on lake steamers, designing engineer for a radio manufacturer, teacher of electrical engineering, radio, and communications, and research worker in radio, television, and related fields.

¹ Abstract of an address before the Fourth Annual Institute for Education by Radio, Ohio State University, May 5, 1933, by E. A. Weir, director of programs, Canadian Radio Broadcasting Commission. *Education on the Air*, 1933, p37-48.

² British Broadcasting Corporation. *Yearbook*, 1933, p317.

broadcasting administration a department of state. *The arguments against this are as decisive as are the arguments against leaving broadcasting entirely in the hands of private commercial interests.*" The constitution of Canadian broadcasting, however, should not be a mere copy of some other constitution. The BBC may indeed serve as a model, but Canadian broadcasting should develop on its own distinctive lines, availing itself of the best experience of the rest of the world. For instance, "in Great Britain the distinction between general legislative functions of the board of governors and the particular administrative functions of the executive is established *de facto* but not *de jure*. If Canada makes the distinction *de jure* as well, then there is a guarantee of continuity which does not yet exist in Great Britain."

The financial basis which Mr. Murray proposes for Canadian broadcasting is rather different from that which is familiar to us in Britain. It envisages a combination of license revenue with a limited revenue from advertisement—a halfway house between the British and the American systems; but not more than 5 percent of the program period would be allocated to direct advertisement, and another 5 percent to indirect advertisement. Mr. Murray's plan includes many features designed to safeguard Canadian broadcasting from trouble arising from provincial and geographical difficulties, as well as from racial, linguistic, religious, and political misunderstanding. He lays considerable stress upon the need for creating machinery which will insure that the Canadian Radio Broadcasting Commission keeps closely in touch with the principal trends of public opinion and takes full account of the views of listeners. The creation of advisory committees, the development of a strong public relations department, and the effective management of press publicity are all recommendations based upon the experience of British broadcasting. Careful preparation in advance of each new step is necessary if public good-will and understanding are to accompany each new development of the broadcasting service. On the program side immediate but cautious advance is advised, to be followed by more ambitious improvements later on as circumstances permit.

In the fields of specialist broadcasting, in music, the drama, the lighter forms of entertainment, religion, politics, and education, paths may be opened up similar to those which have proved so acceptable in Great Britain. But Canada cannot expect fully-grown radio drama, a national symphony orchestra, nondenominational religious services, or elaborate educational broadcasts to spring suddenly into being. Modest beginnings must be made, and again and again in his report Mr. Murray emphasizes the prime importance of "the unflinching recognition of the priority of entertainment values in all departments of program work." One of the most significant of his recommendations is concerned with the need for good announcing, a need which applies particularly in the delivery of news bulletins. "There is herein," says Mr. Murray, "a great opportunity to set a new standard for the North American continent. Announcing for the Commission should be a model of

diction, arrangement, and good taste. It is possible to create a tradition of enunciation without imposing a uniform dialect"; and he rightly adds that such good announcing would not only add to the prestige and popularity of the Canadian Commission, but would "convey a sense of repose which is not as evident as it should be either in Canada or the United States."³

Kaddery Leaves Oregon

WALLACE L. KADDERLY has recently assumed his duties in San Francisco as western program director of the United States Department of Agriculture. In his new position Mr. Kaddery will have charge of the western farm and home hour, a regular program given over a chain including the following NBC stations: KFI, KGO, KGW, KFSD, KOMO, KHQ, KGIR, KGHL, KTAR, and KDYL.

Mr. Kaddery since 1925 has been program director and manager of KOAC, state-owned radio-broadcasting station at Corvallis, Oregon. Under his management KOAC became one of the outstanding noncommercial broadcasting stations in the country. Previously he had served the agricultural extension service as assistant county agent, farm management specialist, assistant county agent leader, and head of the department of information.

Aid to Debaters

A PAMPHLET entitled *American Broadcasting* should be in the hands of all high-school and college students debating the radio control question this year. This pamphlet of twenty pages contains an analytical study of one day's output of 206 commercial radio stations including program content and advertising interruptions.

It appears from the study that the American system, under which the broadcasting service is supported wholly thru the sale of advertising time, is an unsatisfactory makeshift and that a fundamental change is inevitable if radio is to render the nation the service which the listeners want and to which they are entitled.

American Broadcasting is published by and can be secured free from the *Ventura Free Press*, Ventura, California.

Comparison of Advertising Receipts

THE GROSS RECEIPTS for advertising in four different media during two recent months of 1933 are given in the November 10, 1933, issue of the *Heiml Radio Business Letter*. The figures which were secured from the statistical bureau of the National Association of Broadcasters are as follows:

Medium	August	September
Radio broadcasting	\$3,693,247	\$3,949,341
National magazines	6,644,831	7,942,886
Newspapers	37,790,096	38,371,622
National farm papers	236,505	373,134
Totals	\$48,364,679	\$50,636,983

³ *The Listener* [London], August 30, 1933, p304.

WE BELIEVE THAT RADIO BROADCASTING has potential values for education, culture, and entertainment, far in excess of those at present realized in the United States. In view of the distinctly unhealthy reactions produced in boys and girls by many of our present radio programs, we urge that individuals and organizations responsible for such programs take immediate steps to make their content conform to generally accepted standards in the field of child development; and further that all parent-teacher units use every available means to secure such improvement at the earliest possible moment.—Resolution adopted by the New Jersey Congress of Parents and Teachers, November 3, 1933.

University of Kentucky Listening Centers

THIRTEEN LISTENING CENTERS are making available radio programs of the University of Kentucky to hundreds of persons in the creek valleys and coves of eastern Kentucky. These under-privileged people, many of whom previously had never heard a radio program, are now brought into closer touch with the outside world.

The university provided the radio sets which were placed in community centers, schools, and in one case a general store. A competent director operates each radio set on a definite schedule. Each center must be open to the public and in full operation to receive all University of Kentucky radio programs, with the exception of those occurring late at night. No other programs are specifically designated, but a sincere effort is made to have the radio tuned to worthwhile material at all times. Monthly reports sent in from each center give, not only the total number of listeners to each day's university program, but constructive criticism of it as well.

The centers now in operation are located at Cow Creek, Owsley county; Gander, Letcher county; Boly, Vest, and Pippapass, Knott county; Hyden and Wooton, Leslie county; Davella, Martin county; Williba, Lee county; Bonanza, McDowell, and Langley, Floyd county; and Morris Fork, Breathitt county. Four other centers for which aerials and grounds already have been installed will soon be opened.

Radio in the Soviet Union

DURING THE FIRST FIVE-YEAR PLAN the entire radio system of the Soviet Union was thoroly reconstructed and extended. The following table shows the number of stations, their power, and also the number of receiving points in the USSR:

	1928	1929	1930	1931	1932
Number of stations . .	23	41	53	57	66
Power of the stations [kilowatts] . .	126	218	395	902	1,702
Number of receiving points	350,000	555,000	1,200,000	2,000,000	2,800,000

In the last five years the number of radio stations has increased almost three times, their power thirteen and a half times, and the number of receiving points eight times. This has caused a considerable increase in the number of radio listeners, which, in 1932, was estimated to be between ten and twelve million. This figure is based on the fact that usually every receiving point is used by a family of several persons and that many sets are collectively used in workers' clubs, village reading-rooms, army barracks, and communal living quarters.

Every nationality in the Soviet Union may have programs broadcast in its own language. Fifty different languages are used in broadcasting.

The system of local broadcasting points, organized in large industrial enterprises and many *sovhozes* and *kolhozes* is widely developed. These points function almost entirely independently, organizing radio-newspapers and concerts. These local stations also frequently relay the programs of the cen-

tral stations, or send their programs thru them. On October 1, 1928, there were 27 local stations, on January 1, 1931, there were 962, and at the end of 1932 approximately 3000.

The special radio broadcasting of correspondence school courses has also developed to a large degree. *During the first five-year plan 125,000 radio study points were formed*, making it possible for many thousand workers and collective members to take correspondence work by radio.

The ultra high-frequency system has also highly developed, increasing some twenty times and allowing for sending and receiving programs from the district; regional, and republic centers of the most outlying spots in the Urals, Yakutia, Kazakstan, and other distant places. The *rayon*¹ receiving system has grown from 150 to 2500 units, facilitating transmission to the *rayons*.

Ten large radio telegraph centers have been organized in Moscow, Tashkent, Alma Ata, Khabarovsk, Irkutsk, Novosibirsk, Sverdlovsk, Leningrad, Tiflis, and Baku. All these centers are connected with Moscow and their own *rayons*.

Eighty-three new transmitters of 372 kilowatt power, 350 short-wave transmitters for outside *rayon* connection, and 250,000 new radio points are planned. Sport arenas are having radio connections installed. The plan for 1933 foresees the receiving of Moscow programs by all regional, district, and republican centers and the sending of their own local programs by these centers to the *rayons*.—*Soviet Union Review*, October 1933, p214-15.

Radio and English

RADIO SHOULD EXERT A POWERFUL INFLUENCE on our speech and tastes. But who is there to guide the listener thru the maze of programs? Here is a place where the English teacher can help. She can help to set standards for the appreciation of radio programs.

It is well for teachers to know the havoc the Amos 'n' Andy program is creating in the English language. Once I presented a list of words to college students and asked them whether they had ever heard the words before and whether they had used them. There was a tendency on the part of those who listened to Amos and Andy most frequently to define all words in the Amos and Andy sense.

The function of radio is to enliven and stimulate, not to teach. Teaching is the job of the classroom teacher. Radio must give us plays, readings, information. But the plays, readings, and information should be complete in themselves, should constitute an artistic unit.

The contributions which the radio can make to English teaching are these: it can serve to illustrate various phases of instruction by presenting readings, plays, examples of speech; it can help the teacher cover a subject extensively; it can show the teacher new or varied methods of teaching, permitting her to observe her pupils' reactions to these methods.

The English teacher can contribute to radio by bringing her pupils to critical appreciation of values in some pro-

¹ A Soviet Union political subdivision similar to the county in the United States.

WHEREAS THE RADIO is primarily an instrument of popular education and culture, be it resolved that we urge the Congress of the United States to make provision for a scientific and comprehensive study of the whole field of radio to the end that a system of radio broadcasting suited to national ideals and the needs of the people may be developed.—Resolution adopted by the Iowa Congress of Parents and Teachers, October 27, 1933.

grams and hazards to taste in others; she can show pupils what radio programs mean in terms of their speech, word choice, and phrasing, and, most important, their preference for literary and social values. Thru the pupils, she will reach the parents, and thru both, the broadcaster. The influence of the English teacher is of great significance.—Abstract of an address by F. H. Lumley, Ohio State University, before the National Council of Teachers of English, December 1, 1933.

Canada Provides Free Service

THE EXCESSIVE COSTS for telephone lines used for broadcasting purposes in the United States have been attacked by both commercial and educational groups and by Congressional leaders. Costs to states and educational institutions are particularly burdensome since under the American broadcasting practise an educational station makes its contribution to public welfare without any corresponding revenue return, while a commercial one merely adds the wire toll item to its charge for advertising time.

In Canada the facilities of the Alberta government telephones enable the University of Alberta radio station CKUA to form a network with two other stations, CFAC and CJOC, without cost except for overtime service of linemen on Sundays which amounts to five or six dollars per month.

What a blessing such an arrangement in the United States would be to the state network in Wisconsin, WHA and WLBL; to Oregon's state station KOAC; the state stations KSAC and KFKU in Kansas, and WOI and WSUI, in Iowa; and to the many other public radio services now rendered at a cost of thousands of dollars annually for wire tolls.

New Radio Course in Utah

AFIELD COURSE in classroom organization and management, consisting of twenty-five half-hour lectures by Dr. L. John Nuttall, Jr., superintendent of the Salt Lake City schools, is being given by radio each Thursday at 10PM over station KSL. The series began on September 28 and with the omission of one week in November, two in December, and one in February, will end on April 12.

This year's course follows as a result of Dr. Nuttall's successful radio course in the advanced technics of teaching given last year. [See *Education by Radio* 3:15, March 2, 1933.] Last year's course, the first experiment of the University of Utah in this field, attracted a large number of registrants, 80 percent of whom received university credit.

The topics to be treated in the twenty-five radio lectures follow: [1] the place of learning environment and morale in school achievement; [2] organizing the pupils for instruction;

[3] adjustments to individual differences; [4] class size and teaching load; [5] school plant and pupil population; [6] seating in classroom organization; [7] lecture based on questions asked by class members on problems of organization; [8] factors in pupil progress; [9] school failures; [10] lecture based on questions asked by class members on pupil progress; [11] the daily program; [12] establishing classroom and building routine; [13] adjusting to the time schedule; [14] routine of attendance control; [15] compulsory attendance administration; [16] lecture based on questions asked by class members on routine; [17] routine problems of discipline; [18] conserving and developing character thru discipline; [19] lecture based on questions asked by class members on discipline; [20] management records; [21] pupil accounting; [22] permanent school records; [23] management in relation to auxiliary activities; [24] school publicity devices; and [25] questions and summary.

Prefers British System

JOHAN McCORMACK, the Irish tenor, adds his name to that large group of Americans who having an intimate knowledge of both British and American broadcasting prefer the British.

"Radio appears to be in need of new ideas," Mr. McCormack observes. "Programs are repeated day after day, with slight modifications and under different titles, because good program ideas are scarce." But he contends the broadcasters can find solace in the fact that the motion pictures and stage are in the same predicament. A producer makes a novel picture and others are quick to imitate.

"In the main, I prefer England's broadcasting to America," said the noted tenor. "The English showmen seem to have discovered the knack of making abstruse subjects clear, interesting, and entertaining. American broadcasters should concentrate on more speakers who devote their talents to presenting interesting topics in a popular style."¹

Selective Listening Essential

IF THE NATION CONTINUES to turn its millions of radios to a certain point on the dial and receive thruout the day from early morning until late at night all that comes over the station without discrimination there is serious danger to the emotional life of the nation. Millions of children and young people who are subject to the continuous nerve-racking jangle of a Rudy Vallee orchestra or a noise equivalent, or to the whining, crooning of the average radio performers, not artists, are undergoing an emotional strain that will inevitably cause social and economic trouble. It is impossible to send into the intimate home-life of the nation all of the offerings of our radios without leaving these results.—G. B. Phillips, in "Possibilities of Radio in Education." *North Carolina Teacher*, April 1933, p299.

¹ *New York Times*, December 3, 1933.

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