Education by Radio

Volume Two

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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 publications, 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.

1932

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EDUCATION BY RADIO
VOLUME 2, NUMBER 1, JANUARY 7, 1932

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 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 compeled 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

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.

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 extoled thru your loud speaker between periods of music or dialog."

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.

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 compeled 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 propaganda—American listeners are told that governmental control of broadcasting causes programs to be filled with political propaganda. In Europe, where some governments operate the broadcasting stations and others place broadcasting monopolies in the hands of controled corporations, complaints against political propaganda are not so numerous as complaints against commercial and political propaganda in America.

Program quality—American listeners 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.

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.

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 fultime 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 Speak[1]

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 private system? We have fairly well demonstrated in Canada already that a certain amount of adult educational work can be successfully sponsored by 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 nomal 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.*

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.]

[1] A 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.

[2] It 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.

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.—[1] Jaccard, 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

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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 apparatus, 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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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.

$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 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?

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 monoply—*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 substantially 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 student 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 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.

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.

Alloted 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 practises 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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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.
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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 compeled 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 wellprepared 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 fultime basis.

[2] Colleges owning or sharing in the ownership and operation of radio stations on a partime 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 socalled "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 undoubtedly 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 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.

WHILE I RECOGNIZE that educational broadcasting over socalled "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.

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 reduction 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.

> **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.**

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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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.

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.

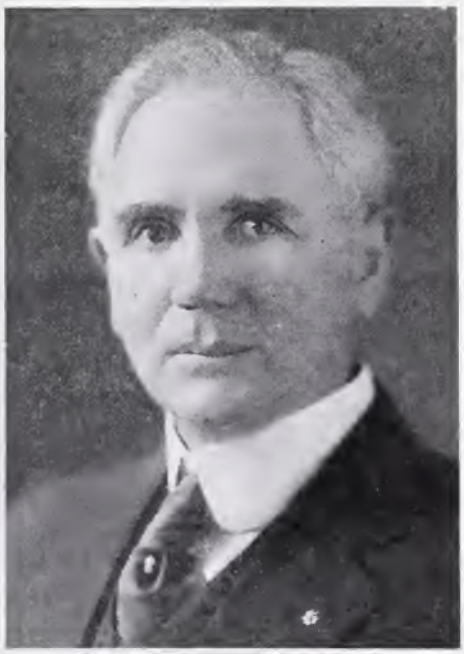
The Weakness of American Radio

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 wavelengths, 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 socalled 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!

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 withdrew; 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 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 advertising 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.

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.

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 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.

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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?

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 WEAO 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 [WEAO], 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 WEAO, 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 WEAO'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 WEAO. January 25, 1932.

Exceptions to Examiner's Report No. 318

Present Assignments	WEAO	WKBN
Frequency	570 kc	570 kc
Power	750 watts	500 watts
Hours of operation	Sharing time	

Appearances:
Gilbert Bettman, attorney general of Ohio, for WEAO.
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 WEAO, 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, WEAO 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 WEAO 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.

WEAO 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, WEAO 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 WEAO 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 WEAO 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 WEAO 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 WEAO 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 WEAO 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 WEAO 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 WEAO have only been needed during the football season. A mere cursory examination of the hours heretofore assigned to WEAO 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 WEAO is now before this Commission. The examiner highlights the failure of WEAO 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 compeled 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 WEAO 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 WEAO 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. WEAO is the station of the public itself, supported by the taxpayers' money, managed, controled, 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 WEAO. A mere examination of WEAO 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:

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[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 PM. Extension agents cannot get in for 5:00 to 7:00PM talks. The hours between 5:00 and 7:00PM 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 5:00PM, [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 renewal 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, farreaching 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.

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 receivers [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 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 controled 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-

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] Luxemburg. 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.

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 dependent 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, *Kringkastingsalskapet, 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-

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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 Diffusion 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.

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The Music That Is Broadcast

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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 monopoly[1]—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 socalled 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 complete 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 *Gürrelieder,* 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*, *Liebestraum*, *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 *Cielo e Mar* or *Dance of the Hours* from *La Giocondo.* [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 Pantomine* from *Hänsel und Gretel;* or a Wagner program of popular excerpts from the early *Flying Dutchman* and *Lohengrin.* As for NBC'c 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:

Blue Is the Night	Fischer
Intermezzo, *Gay and Wistful*	Savino
Ay, Ay, Ay	
In Tientsin	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":

Syncopated Love Song	Suesse
Lotus Land	Scott
Mood in Blue	Pollack
Jeannine, I Dream of Lilac Time	Shilkret
Air de Ballet	Chaminade
Memory	Shilkret
The Rosary	Nevin
Introduction and Tarantelle	Sarasate
Danse Russe	Tchaikovsky

A "General Motors Family Party" devoted to *Music of Living Composers:*

Aria, *Cavalleria Rusticanna*	Mascagni
Madrigal	Chaminade
Country Gardens	Grainger
Pomp and Circumstance	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 highbrows 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.

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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 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, Lesson 18 in Multiplication tests the radio class on the material taught in Lessons 13 to 17, Multiplication.

SUPERINTENDENT R. G. JONES, *Cleveland, Ohio, under whose leadership masterteaching by radio is going forward on an effective scientific basis.*

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

$$\begin{array}{r} 6 \\ \hline \end{array}$$

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:

$[6 \times 8] + 4 =$ $\quad$ $[7 \times 9] + 5 =$

$[4 \times 6] + 2 =$ $\quad$ $[8 \times 7] + 6 =$

When learning certain difficult combinations such as 7 X 7 or 6 X 8 and 8 X 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
—	—

$[7 \times 7] + 3 =$ $\quad$ $[7 \times 7] + 5 =$

2	6
49	49
—	—

$[7 \times 7] + 2 =$ $\quad$ $[7 \times 7] + 6 =$

Row C. Study these:

6	4	5
49	49	49
—	—	—
55	53	54

Multiply:

783	760	791
7	7	7
—	—	—

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 $\_ \times 2 = 12$, 2's $= 12$, $12 = \_$ 2's in multiplication help the child to find the answer to $2\overline{)12}$. Radio lessons help the child to make the connections in this manner: Row A.

$6 \times 2 = 12$	$\_ \times 2 = 12$	2's $= 12$	$2\overline{)12}$ $\quad 12 \div 2 =$
$4 \times 5 = 20$	$\_ \times 5 = 20$	5's $= 20$	$5\overline{)20}$ $\quad 20 \div 5 =$

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.

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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.

EDUCATION BY RADIO
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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.[3]

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 radio channels belonging to the public and regardless of their record of public service.[5]

> 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.

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 shortwave 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 attention, 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 lettting 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.

Education by radio is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C.

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.

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Radio in the Rural Schools

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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 be patient for many years yet before he is comfortably and sanitarily housed.

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.

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 statewide 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 wellorganized, 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 thoroly, 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 compeled to be satisfied with one or two short visits per year from the county superintendent during which no constructive help could be given. The fact that a continuing, organized program of supervision can be instituted in this manner guarantees values not even dreamed of.

> 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.

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 receivingset 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 coworkers." 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.*

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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 juponnière*, 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 oclock 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:

Twilight ..... Friml
The Garden of My Heart ..... Ball
In Elizabethan Days ..... Kramer
Serenade ..... Schubert
Scarf Dance ..... Chaminade
Kamennoi Ostrow ..... Rubenstein

The final number here, Rubenstein's bell-ringing exercise, shared honors with *A 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 repertories 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 interfere 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 "im*po*tent," "pictewer," "of*te*n"—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 handsome 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.

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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 socalled nuisance area is one of the factors limiting the total number of broadcasting stations which can operate in the United States without producing 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 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?

> **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.**

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 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 prepared 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

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.

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 rhythmics, 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 Damrosch 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 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.

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.

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 rhythmics, 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.

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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.
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.

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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 drivel of second-rate jazz, sickening crooning by degenerate sax players [original or transcripted], 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 commercial 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 respresent 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 not do away with the necessity of trying the other charges.

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.

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.

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.

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.

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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 report [1] 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 oclock 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. . .

[1] The 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 wellserved 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 uncontroled 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 socalled 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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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.

EDUCATION BY RADIC
VOLUME 2 NUMBER 16 APRIL 28, 1932
NEXT ISSUE, MAY 12, 1932

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 controled 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 Sovereg


Benjamin M. Miller
Alabama


George W. P. Hunt
Arizona


Harvey Parnell
Arkansas


James Rolph, Jr.
California


William H. Adams
Colorado


Louis L. 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 a
All rights and prerogatives not specifically assigne
served to the states. This system of state individuality,
has brought our country to a high position of world lea
at the head. He holds a mandate from the people. He is
and aspirations. He has a just and natural pride in the
processes of education, sacrifice, and hard work, a pe
opportunity of the state government is more important
For this education, radio is now an indispensable tool
strengthening the hand of the teacher and enriching
use this new instrument under its own ownership and
of its own citizens, whose rights

gn 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

aunique and mighty place under the American system.
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, freedom, and leadership has been a fruitful practise that
adership in an amazingly short period. The governor stands
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g he life of the student. Not to give the state its right to
d anagement is to destroy its control over the education
e ery 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 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.—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.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C.

EDUCATION BY RADIO
VOLUME 2 NUMBER 17 MAY 12, 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 Cloudcuckooland," 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 bandbox 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 tho 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 hoofer 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 naïve—or has a smart press agent.

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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, Brussells, 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 selfsupporting 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 socalled "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.

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An Appeal to Canada

LEE DEFOREST

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 controling 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 oclock period with an attractive tobacco program, and beginning sharply at ten oclock 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-controled 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.

EDUCATION BY RADIO is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C.

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.

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The Illustrated Radio Meeting

VanRensselaer 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.

Education by radio is published by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washing, D. C. The members of this Committee and the national groups with which they are associated are as follows:
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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, Wasbington, 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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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 thoroness 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 inserted as appendices at the end of the record of certain day's proceedings.

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.*

The official report of the committee taken from *House of Commons Debates,* Volume LXVIII, Number 64, May 9, 1932, follows in full text:

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 farreaching 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 selfsustaining 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 oclock 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 oclock 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 PM. 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 enroled, 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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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.

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.

EDUCATION BY RADIO
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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 practise, 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.

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.*

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 thoroly familiar with the principal purposes and best practises 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.

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 subjectmatter for that field, thus influencing the curriculum. The care with which such lessons are prepared results also in a general improvement of subjectmatter.

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.

I rise 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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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.

EDUCATION BY RADIO
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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 controled 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 controling 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 compeled 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 compeled 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 agreement, 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 compeled 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 received 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 Radiodiffusion*.—The *Listener* [London], Volume VII, Number 178, June 8, 1932, p816.

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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.
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.

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.

EDUCATION BY RADIO
VOLUME 2, NUMBER 24, SEPTEMBER 15, 1932
NEXT ISSUE, OCTOBER 13, 1932

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.

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.*

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

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 thruout 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.

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 fultime 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 socalled 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 folowing 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.

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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.

EDUCATION BY RADIO
VOLUME 2, NUMBER 25, OCTOBER 13, 1932
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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.

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.*

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.

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 concensus 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 oclock 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 Mammas 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 compeled 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.

This article is abridged from the April 1932 issue of *Philippine Magazine* by courteous permission of the author.

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 oclock? Yes—749; No—491.

[2] Has the change in time to 5 oclock 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 noonday 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-controled 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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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.
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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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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 Hampshire 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 boadcasting 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 fultime, 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 radio 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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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.

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 controling 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 risque 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.

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.*

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 thorogoing 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.

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 socalled 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 selfexplanatory 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 familarity 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 wellsounding 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 untrammeled, 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.

Abstract of speech delivered at the 1932 Convention of the National Catholic Educational Association, Cincinnati, Ohio.

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 antisocial 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.

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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.