

# The Illustrated Radio Meeting

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**R**ADIO HAS RECENTLY BEEN SYNCHRONIZED with a film projector using radio station WEOA 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 co-operation 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 money men, 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.

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## 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 per cent. The magazines recently announced that these idle wire facilities are being reserved for a two-way long distance television service as supplementary to the point-to-point service on the regular telephone plant.

At 4PM on March 24, 1922, in the presence of the Associated Press and a group of radio engineers, occurred the first demonstration of wire-wireless broadcasting of programs on the regular standard electric light circuit in the office of the chief signal officer of the army, in the Munitions Building, across the street from the National Academy of Sciences Building in Washington. Today, after nine years, I have to report a practical development extending continuously thruout this period at a cost of some three millions of dollars where at present a staff of seventy-five men are employed in the laboratory at Ampere, New Jersey. Superimposed upon the sixty cycle power transmission plant without interference, is a thirteen kilocycle carrier current which is stepped up in multiples of the lucky number thirteen to deliver three separate programs simultaneously into the homes of subscribers from the standard light socket on frequencies of 26, 39 and 52 kilocycles per second. The complete equipment designed, manufactured, and tested for 270,000 homes is now ready for shipment to Cleveland, Ohio.—*Science*, Volume 74, Number 1929, December 18, 1931, p636.

THE RADIO IS CAPABLE of unlimited development. No one will hazard a guess as to its immediate possibilities. . . There must be the greatest vigilance in the enactment of legislation and in the administration of it to protect the public in the use of the radio and against monopoly and unfair discrimination in granting licenses for broadcasting stations.—Representative William W. Hastings of Oklahoma, *Congressional Record*, May 31, 1932, p12063.

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## ***The Menace of Madrid***

**T**HE 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.