

## *Radio, Television, and Scientific Research*<sup>1</sup>

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WHETHER HE WOULD or no, the average scholar engaged in scientific research has an excellent chance of finding himself involved in at least one radio or television program within the next twelve months.

The demand for scientists in every field to present explanations of their work and achievements over the airways has been increasing steadily since the dramatic demonstrations at Hiroshima and Nagasaki made the general public acutely conscious of science. Few radio and television stations are without at least one science program on their weekly schedule; an increasing number of colleges and universities, scientific societies, and research institutions are preparing their own science program series.

In theory, most research men tend to agree with the idea of popular science education through the broadcast media. The statement that it is vital for the general public to be given more information about current scientific developments and a greater opportunity of understanding the techniques and objectives of scientific research has become a widely accepted truism in scientific circles.

In practice, however, the average scientist tends to avoid as much contact with broadcast activities as possible. The ingenuity he displays in developing reasons for not appearing before the microphone or camera often approaches the astounding; and he frequently is hesitant to act even when he is asked, not to make a broadcast appearance, but merely to supply information for use by a professional science commentator.

Most of his reluctance is understandable. Much as the scientist may believe in providing scientific information for the general public, he tends instinctively to be repelled by the form in which his material is placed to make it palatable for radio and television audiences. The vocabulary dismays him. It smacks uncomfortably of the conversations his wife has when Aunt Jane asks her inevitable leading question: "Is Joe still wasting his time cutting up fish-worms?"

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<sup>1</sup> Remarks regarding the adaptation of research results to radio and television programming are based upon the author's experience in radio writing and producing. His University of Denver "Science Reporter" received national recognition, and his "Science in the News" is at present heard over twenty radio stations in Washington and Idaho.

But the fact is, if Joe is actually involved in a study of *Oligochaeta*, they are going to have to be identified as fishworms for the radio listeners or television viewers. No matter how fascinating the *Lumbricus terrestris* is to the research man, it means nothing to the lay listener unless it is identified as the squirmy creature he digs up in his garden or uses to bait a fishhook. The fact that fishworm is hardly an exact term is beside the point. It is meaningful to the scientifically uninformed man and woman; and the mere fact that this lowly, everyday creature is the object of serious attention by a trained scientist tends automatically to stimulate interest in what the scientist has to say.

This reducing of terms to the commonplace almost inevitably proves to be a stumbling block in the path of the research worker who is seriously trying to make a popular presentation. He is bothered by the fact that the public recognizes no temperature scale but the Fahrenheit, regards the metric system as something foreign and possibly subversive, and is never quite sure whether molecules contain atoms or atoms, molecules. He is uncomfortable when he is asked to draw analogies between his own experiments and the commonplace experiences of the listeners in their kitchens or on their jobs. Explanations of this type sound "unscientific" to his ears because they can never more than approximate exactness, and, even more, because they are so completely foreign to the familiar language of the scientific journal and the research paper.

An even more depressing factor arises when the scientist is confronted with doing a series of radio or television programs. He discovers that, even in a sustained series of weekly presentations, each program must stand alone. He must always begin at the beginning, for rarely can he assume that more than a portion of this week's audience heard last week's program. This necessity of always "starting from scratch" is particularly bothersome to men from the academic field who are accustomed to picking up today where they left off in day-before-yesterday's lecture.

Added to these hazards are other difficulties posed by radio and television men who claim to (and often actually do) "know audiences." These include a demand that the scientist dress up his remarks in more colorful language; that he inject humor into his remarks, if possible; and, frequently, that he indulge in far-reaching speculation on the possible implications of his research in industry or medicine, even though the research itself may be in the most esoteric realms of pure science.

It is small wonder, then, that the first instinct of a scientist is to decline with considerable fervor when he is asked to contribute to a radio or television presentation. Even if he accepts the conditions outlined above as necessary, and goes ahead, there is bound to come the awful moment just before the broad-

cast when he begins to worry about what his colleagues will think. The talk or interview he has finally prepared, with all its simplifications and homely illustrations, will sound hopelessly shallow and sophomoric to men in his own research field. At this point the temptation becomes almost irresistible to throw away the finished script and go back to the original research paper, *Lumbricus terrestris* and all.

But the truth of the matter is, virtually every successful popular presentation of science on radio and television has followed the general formula suggested above. These programs include such presentations as the American Chemical Society's "Headlines in Chemistry," California's "University Explorer," the University of Denver's "Science Reporter," General Electric's "Excursions in Science," and the "Johns Hopkins Science Review." Many of the nation's leading research men have appeared on these and similar programs and have emerged with their reputations unscathed.

If the scientist does work intelligently within the limitations suggested, his chances are excellent of emerging with a program that will be both interesting and intelligible to the average listener, and that will be highly worthwhile in increasing the public's understanding of his work and the work of science in general.

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