

THE DEMONSTRATION AND DRAMATIZATION OF RESEARCH

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There is no public! "The man in the street" is a myth. We must objectify the great masses of people outside the immediate sphere of influence of research if we are to be effective and successful in selling the research idea. Speaking in terms of research, you would hardly classify any one in this room as the public, and yet to the street car conductor, the doorman at our club, the man who sells us a newspaper or a magazine at the corner stand—we are the public.

When we speak of selling the research idea to the public, more specifically making them "research conscious" (to borrow an advertising phrase) the conception of the masses of people with whom we are dealing, their background and the center of gravity of their interest, we are prone to be much too vague. The subject of research itself is ephemeral and intangible, and dealt with, too often, in general terms.

If you were to step outside this building and catch hold of the arm of the first man you meet scurrying up the avenue and say to him, "Do you know that helium gas was first discovered in the gases which surround the sun?", he would probably answer, "Well, what's that got to do with me?" How is that going to put any money in my pocket?" That is another way of saying that to visualize the vast audience which we must reach in selling the research idea, it is at once apparent that it is a futile effort to use a shot gun and spray B-B shot all over the landscape. We must use a high-powered rifle, armor-piercing ammunition, look through a peep site and shoot at marked game.

The protective armor which that mythical "man in the street" uses to fend off attempts to get his attention, time or money is the armor plate of self-interest. The vulnerable spot in his armor is in the general location of the pocket nerve. If you can save him time or money, give him a better, a cheaper product, make life more comfortable by research, he becomes interested at once.

We can hardly blame the man in the street for not becoming even remotely interested in research when research workers themselves wrap their products in unattractive forms of passive academic interest and speak in scientific "jaw-breakers"

Until we can translate a report of the fruits of research in terms of the man in the street, until we establish a channel of communication by speaking a common language we don't deserve his attention. If we are to arrest and hold his interest, we should learn to speak his language, or at least translate what we have to say into a language which he understands. If we would translate scientific treatises, voluminous reports of research from "headaches to headlines," we must demonstrate the practical value and recast in dramatic form the results of research. Without resorting to circus methods of bidding for columns in the sensational press, we can take the products of research which have been transformed into commodities used in our daily lives and with these tangible evidences of the value of research, molded in concrete form, we can lead our audience back over the trail of technical development which produced this result. We must sugar-coat the pill, make it palatable—easy to digest—and capable of ready assimilation.

To draw an analogy in another field than research, let us consider for a moment the five-year struggle to sell the aviation idea to the public generally. The air mail had been running in all kinds of weather with an over all operating efficiency of 97 per cent—that is, arrivals and departures on schedule time—for nearly four years before Lindbergh spanned the Atlantic. One report showed that the operating efficiency of the air mail had a higher reliability factor than all the limited trains and expresses operating in New York State. The press notice of this report was tucked away in a three-paragraph news item on the inside page of only a few newspapers. The army fliers had circled the globe, Byrd had flown over the North Pole—but still the general public was not "sold" on aviation, it had touched neither their lives nor their hearts.

Along came Lindbergh—dramatized aviation by a single hop from New York to Paris—and the public is still agog over his exploits. What that has done for a starving industry is reflected by Secretary Hoover's statement in Washington less than a month ago that "the 117 aircraft factories in this country are running behind their production schedules."

There is a "Lindbergh" somewhere in research who will perform the same feat of dramatizing science and research for the American

public. Perhaps the span, from the mind of research workers to that of the general public, is a bigger hop than from New York to Paris. But there is just as much color, romance and drama in science being applied to the technical problems of industry as there is in a non-stop flight across the Atlantic. In fact, if it were not for the assistance science and industrial research applied to that infant industry—air transport—there would have been no non-stop flight. The Wright whirlwind engine, the earth inductor compass, the parachute, and a host of other accessories to that flight are numbered among “the children of research.” But how many non-technical men would have known a year ago what you were talking about had you mentioned earth inductor compass, or attempted to explain the intricacies of an air-cooled motor. At the time of Lindbergh’s flight I was riding on an elevated train in Philadelphia, and two young ladies, who may have been somebody’s stenographers, were glibly carrying on conversation about the gas consumption of air-cooled motors, earth inductor compasses, weather charts of Atlantic air currents and a host of other technical details connected with that heroic flight.

Perhaps it is aspiring too high to even suggest the possibility of dramatizing research by placing it in the same category with the glamorous exploits of Lindbergh and other trans-Atlantic fliers. We can, however, demonstrate and, in some measure, dramatize the results of research.

If you walk along the upper reaches of Connecticut Avenue, where one automobile showroom follows another, and notice the number of people standing outside the show windows, it is invariably the rule that a demonstration of a moving mechanism will pull the biggest crowd. If we can but make the results of research transparent—that is, figuratively speaking, display them oil-immersed in a glass tank, let the man who is interested see “the wheels go ’round”—we will have no trouble in getting an audience.

If there is one thing more than another that selling the research idea needs, and needs badly, it is what in the theatrical world is known as *showmanship*. We have a historical precedent, and cannot be charged with resorting to sensational methods lacking dignity if we employ devices of demonstration, dramatization and showmanship to get our message across. If any of you have read Paul De Kruif’s book “The Microbe Hunters,” incidentally one of the few books on scientific subjects which is written and reads like a best seller, you know what I mean by “showmanship.” “The Microbe Hunters”

deals with a far more scientific subject, much more "high brow" than the usual industrial research. It is a historical story of a line of famous bacteriologists. It begins with the development of the microscope by Loewenhuck, and, passing down the centuries, it portrays, in a series of character studies, the lives and works of Spallazani, Pasteur, Koch, and Walter Reed—down to the present time. Pasteur, for example, was a master showman. In reporting his researches to the French Academy, he did not come before the most influential and dignified scientific body in Europe and read a long, dry report of scientific details of method and technique. Not he! He had a sense of the drama, and brought in bottles the deadly anthrax germs, and there on the stage of the auditorium, demonstrating the use of serums, he cured and killed the animal subjects of his experiments before the eyes of his audience. He demonstrated the practical application of his historical researches, and, using the anthrax germs as actors on the stage of science, he dramatized the control of the bubonic plague.

Can we in this twentieth century of science-aided industries and research-minded executives do less than these historic figures in the world of science in crossing the threshold of public consciousness? By what devices, methods, equipment, and technique can we get the ear of the "millions of men in the street" and enter the lists of competition with some hope that they will listen to our story, which does not begin with "Stop me if you have heard this one"?

That brings us to the consideration of mediums for reaching the public. There are four generally accepted channels of communication available for this work: the spoken word—that is, the address, lecture, or informal talk. The written word—articles, books, and literature on research. Then, there is the radio—brief talks on popular science or research—and, finally, the motion picture. Briefly considering the four mediums in terms of the number of the audience that can be reached, the amount of preparation required, the expense involved, and other factors, and the relative effectiveness of each, my own picture of their comparative value is something like this:

With the spoken word, address or lecture, you can reach only a few hundred people. A professional lecturer who has a "set speech" carrying his point with humor and anecdote may hold an audience an hour—if he's good. My personal observation has been that if you can dramatize the lecture with demonstrations, moving pictures, slides, or other "property" devices, that is the most effective method of employing the address or lecture, which is but a comparatively

poor instrument at best. One more thing can be done to increase the sphere of influence of a lecture and enlarge the audience—that is a proper publicity set-up for getting out advance press releases. Next consider the written word or article, approach to the public. Here it is difficult to judge the size of the audience and to measure accurately the effectiveness of the medium. An article in the class trade or technical journals will reach anywhere from 6,000 to 60,000 class readers. This medium focuses attention and centers interest for intensive selling in specific fields. On the other hand, if you can break into the field of national general publications, you can reach up into the hundreds of thousands of readers. If you can write a good title, select illustrations with a punch, and tell the story of research in a series of human-interest anecdotes with a popular general appeal, your article may make the *Saturday Evening Post*, and you can reach over two million readers a week, and get \$1000 for your literary labors. But, picture the *Saturday Evening Post* audience; look over the articles appearing in the *Post*, and if you can write your stuff down to the cross section of the American public represented there, you deserve to have your article published in the *Post*—and you've earned the \$1000. I know I've been trying for two years, and haven't landed yet!

Now, the radio, a new accessory in the field of public relations, offers what, in my opinion, is one of the least expensive, most effective mediums for telling the story of research. A brief 15-minute, well-prepared talk on popular science or research by a recognized figure in that field will be welcomed as an educational feature of his program by almost any broadcasting station manager. Fortunately, the trend in broadcasting programs is away from jazz and light entertainment and more toward educational features. Since research talks can qualify under this section of the program, there is no charge or expense for the use of the station. One well-known broadcasting station operating in the metropolitan area around New York reaches from four to five million radio fans nightly. The radio broadcasting stations have a surprising array of statistics on volume of listeners, audience reaction to different subjects, etc. Occasionally, of course, it might be possible to break in on the 23-station hookup, with a proportional expansion of audience.

Finally, we come to a yet untried medium—untried, at least, so far as science, research and technical subjects are concerned in reaching a general audience—the motion picture. Here is virgin territory!

The Pathe News, for example, reaches 12,000,000 people weekly. If short, dramatic feature pictures can be produced which tell in a simple human-interest way the story of research which lies behind the commodities used in our every-day life, no more effective means than the movies could be used to tell the story. Put research in motion pictures for the general public and you will reach the millions of "the man in the street"—meet him face to face, speak a language which he understands—pictures, a common language to all—the movies, the drama of the masses