



A NEWSMAN LOOKS AT PHYSICISTS

by *Stephen White*



Tips on the press by a newswriter caught between the exacting standards of the physicist and the equally exacting but somewhat alien needs of the newspaper reader.

I have seen physicists in their natural habitats, which are the universities; at their roundups, which are the regular meetings of the American Physical Society; on the prowl at Almagordo, Las Cruces, Bikini, Washington, Brazil; at a good many way stations; and (once) in jail. I have seen them talking—on the whole very sensibly—on physics; a little less sensibly on more remote matters; and very foolishly about newspapers.

For more than two years, ever since August 6, 1945, I have been looking at physicists as science writer for *The New York Herald Tribune*. There was a little time lost, now and then, looking at chemists, biologists, astronomers, physiologists, and lesser breeds within the law, and at one unclassified character who said he could kill people merely by looking at them. But sooner or later, on any given assignment, I always got back to looking at physicists.

They are, as a general rule, highbrows. They think and talk in long, Latin words, and when they write anything down they usually include at least one partial differential and three Greek letters. I imagine I would make a good deal more sensible company if I could figure out, some day, what they mean by canceling out infinities, but if they know what they mean—or think they do—I'm willing to let that be enough for me.

But they are also, I am glad to say, lowbrows. Rabi can speak all he wants to about nuclear momentum, but he can't impress me: I once heard him play "It Ain't the Money" on a comb and cellophane, and, believe me, he is no more adept at playing the comb and cellophane than I am. Once, at the Institute for Advanced Study, I watched four

of our brighter young physicists struggle for hours learning to play cribbage, without once divining the true strategy of the game, which is to knock down the scoring pegs "accidentally" and cheat putting them back. And don't let anyone tell you that a meeting of the physicists is fundamentally any different in appearance from a convention of the National Plumbing Tool Manufacturers' Representatives Association, although the physicists don't carry samples, except Luis Alvarez, who carries pictures.

In short, I have grudgingly come to the belief that physicists are people, differing from the common run of humanity only in that from time to time they tend to speak a strange language of their own, much of which they understand.

I have, also, a good deal of respect for the job they did in the first months after Hiroshima. The world desperately needed information on this new problem in the daily life of the planet, and the physicists, after a slow start, did a good job of giving it to them. It hasn't come out with a fraction of the efficiency that the teachers might have wished, but it was infinitely more effective than anyone would have dared expect. Thinking about it now, I remember with a sense of great distance in time an afternoon at the Quadrangle Club in Chicago, when I broke my neck trying to convince a tableload of physicists that any information they wanted to give the public would have to have their names appended to it—that men and women will pay no heed whatsoever to anonymous exhortations. The prospect was a horrible one to my luncheon-mates, and I know I was unable to convince them, in one dose, to forsake the custom of anonymity or of action through vague committees. But I did my part,

nounces Cosmic-Ray Bomb," and in a few papers it would be, "Red Scientist Gives Cosmic Bomb Secret to Russia." Don't laugh—it has happened. Of course, if it happened to you, you aren't laughing.

If you don't know the reporter or his paper, I might suggest that you ask him if he is a member of the National Association of Science Writers. There is an attempt going on now to make this an even more efficient organization than it has been, but even as it stands, it offers some guarantee that a member knows a little something about his subject, and is a relatively responsible person.

What to Do

Here I can make a suggestion that, if adopted, might improve the relations of physicists and the press more than any other single thing. In Metropolitan areas, where the effort would be worthwhile, physicists might appoint from among their number a group of volunteer experts, capable of answering most questions that might come up in a newspaper office in physics or related sciences. Editors should then be told of the existence of this panel, and urged to use it freely, at any hour of the day or night, for expert advice. It will not be fun for the volunteers—things always seem to happen at midnight. But editors, who are harried mortals and who recognize their own deficiencies, will jump at the offer of aid, and an improvement in science news reporting will be maintained just as long as the scientists are willing to put themselves out to make the system work.

On local stories, I urge that scientists use the "hold for release" technique whenever it is applicable. That is to say, if your laboratory has built a rocket that hits Brobdingnag only, write up the details, send them to all the papers, and announce that the story must not be used until three days, or five days, after mailing. Specifically, the technique is to endorse the first page, in bold letters, "For Release to P.M.'s of Jan. 7," or "For Release to A.M.'s of Jan 8," or "For Release at Noon, Jan. 9." Newspapers always respect this, since there is a threat implied that if they break the release date, future releases will be withheld.

The obvious purpose of this is to insure that the story will not be prepared hastily. The reporter assigned to it will have time to study the subject and to write his story with care; the editor will have

time to digest it and to evaluate it fairly. This system doesn't guarantee good stories, but it moves the index up appreciably. Only, don't do it when the laboratory blows up; it should be used only when the release of the news is, legitimately, within the control of the organization. Hurricanes and fires don't wait for release dates.

It will probably increase the number of stories in which the news source is allowed to read and comment upon the story before publication. Most reporters have no objection to permitting this, and welcome it in such subjects as science, where the competence of the reporter is obviously inadequate for his task.

What Not to Do

But (and now we get out of the realm of the possible and talk of actualities) it would give me great delight if physicists would learn that when a reporter submits a story for checking he is interested in the facts, and the relative weight given to the facts, so that a total impression is formed which is correct. He is not asking for a lesson in pure prose style.

As mystifying as it may seem, the average reporter writes a good deal better than the average physicist (not you, Ridenour, not you Morrison, not you, a few others). And when I say "a good deal better" I mean exactly that—don't go telling me that "better" is an adjective improperly used in that sentence. It isn't.

The only thing worse than a physicist's prose style is a reporter's mathematics. The difference is that a reporter knows that his mathematics is no good, whereas a physicist can quite possibly go through life under the mistaken belief that *The Physical Review* represents all that is best in the English language. Whatever else may be true of our writing, it is generally adapted to the purposes of our newspapers. If it is rich with cliches, they are *our* cliches, and we use them because they enable our truck drivers to get the gist of a paragraph without trundling out the dictionary.

When a story is to be checked by a physicist, he can do the whole newspaper a service if he limits himself to the physics. Even here I must ask him to use a little discretion. I do not expect physicists to be sympathetic audiences for what I am about to

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say, but I would appreciate a hearing.

A news account, by its very nature, is a compromise between the facts and the general impression. Beyond a certain point, what it gains in precision it loses in communication. For example, too often I have written "almost simultaneously" and had a physicist try to make me change it to something like "in ten to fifteen microseconds." The ten to fifteen microseconds may be important to the experiment, but, unless it is the crux of the story, it obscures a newspaper story because it introduces a technical word which *hides* the meaning for most readers. This loss in communication for a gain in precision is not a peculiarity of science stories, although it is most noticeable there; it is equally true of a fire, a train wreck, or a murder. Fortunately a fire or a corpse doesn't care what is written about its moment of glory; most physicists do.

I know as well as most that an electron has mass, but in some stories, to which the mass of the electron is not essential, I say it has no mass. It is wrong, but it may permit my reader to get a substantially clearer idea of what my story is intended to convey. It is an inaccuracy, but a necessary one, for which I make no apologies.

With all humility, I should like to ask scientists to take this double life of a news story into consideration when they curl up their lips at a newspaper. Try to gauge the material by what it seeks to do, and how well it accomplishes it, rather than by the minutiae of the individual paragraphs. Try, also, to help the well-meaning reporter convey the purpose of work, rather than the details of a process. Those readers who want the details will usually be told, in the first paragraph, that they are available in *The Physical Review*, or the *Journal of Applied Physics*, or where you will.

Perhaps it can be summed up by saying that the terminology of the layman is an absence of terminology; the precision of the layman is an accuracy of impression rather than an accuracy of specific fact; newspapermen, like physicists, vary and must be approached according to their reliability; and newspapermen, like physicists, have certain over-all requirements they must fulfill, and physicists, in dealing with newspapermen, must be guided by these needs.

In any case, I seem to have summed up my feel-

ings here, and there is little I might add unless there may be some interest in one of my own discoveries in physics, entitled, "A Method of Approximating the Importance of a Given Physicist." Briefly stated, after elimination of all differentials, the importance of a physicist can be measured by observation in the lobby of a building where the American Physical Society is in session. The importance of a given physicist varies inversely with his mean free path as he moves from the door of the meeting-room toward the street. His progress, of course, is marked by a series of scattering collisions with other physicists, during which he remains successively in the orbit of other individuals for a finite length of time. A good physicist has a mean free path of 3.6 ± 0.3 meters. The shortest m.f.p. measured in a series of observations between 1945 and 1947 was that of Oppenheimer (New York, 1946), the figure being 2.7 centimeters. I know. I was waiting for him on the street.

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PROFESSOR CARL MILLER, on sabbatical leave from the Department of Physics, Brown University, is a member of the National Geographic Society Expedition to observe the solar eclipse in Siam this spring. He will act as photographer. PROFESSOR CHARLES SMILEY, of the Department of Astronomy, is director of the group.

DR. CHARLES R. MINGINS is the new Director of the Research Laboratory of Piezoelectricity of the Department of Physics at Tufts College, Medford, Massachusetts, and CARL A. STEVENS is Assistant Director, it was recently announced. Messrs. Mingins and Stevens serve also on the instructional staff, as Associate Professor and Assistant Professor of Physics, respectively.

ESTHER DUKE REDDING, a graduate student in physics at Bryn Mawr, has been awarded the Fanny Bullock Workman Travelling Fellowship. Mrs. Redding will spend a year at the University of California at Berkeley.

DR. MARCEL SCHEIN of the University of Chicago will lecture on high-energy particles at Stanford University during the summer quarter.

The American Standards Association has elected PROFESSOR FRANCIS W. SEARS, Department of Physics, Massachusetts Institute of Technology, to head the work for the development of national standards in the field of optics. Professor Sears represents the Optical Society of America, which is taking the leadership for the work of the committee organized to develop these standards.

GIAN C. WICK, Professor of Physics at the University of Notre Dame, has been appointed Professor of Physics at the University of California, Berkeley, effective July 1.