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LETTERS

Objective editorial decisions

The letter of Mendel Sachs (PHYSICS TODAY, June, page 15) evidences a real concern for the loss of the contributions of certain individuals to physics. Although a physical journal that is established especially to provide a publication outlet for sufficiently developed new theses in physics will encourage freedom of thought in physics, I believe something can be gained within the existing framework by present journal editors. What I wish to propose is that the public physics prescribed by editorial decisions be given more freedom by making editorial decisions on a more objective basis.

My point can be made by a review of the difference in degree of anonymity of authors and reviewers. The author's name and institutional affiliation are given to the reviewer with any paper submitted to American Institute of Physics journals for publication. Such a difference tends toward control of the physics to be published through AIP by a relatively small group of physicists. I believe physicists can show their objectivity in choosing which papers should be published by the following procedure.

I suggest that all papers be transmitted to the editors in a form that allows the editor to remove the author's name and affiliation from the body of the paper. Then papers can be reviewed by the reviewer with objectivity as the reviewer does not see the author's name or institutional affiliation. The reviewer makes his recommendation, which is based purely on the form and content of the paper, to the editor who determines whether it should be published.

Perhaps once a year, each journal might devote space to listing those who served during the year as reviewers, and space might be devoted to listing the names of authors who had submitted a paper only to have it rejected. This second space would tend to keep authors feeling a sense of responsibility to their profession

and to prevent editors from being inundated with a barrage of unnecessary correspondence.

If editors of AIP journals feel that the suggestion I have given here is not a workable one, I suggest that authors be given direct contact with reviewers in the case of a rejection. This would bring the individualist into communication with the physics community in charge of public physics. Whether the final result is subjection of the individualist to the group or a revelation to the group through a discovery of the individual who works under unusual freedom, the least accomplishment is removal of decisions on public physics from the wraps of present editorial policies.

Realizing the problems editors may have in getting good reviewers and keeping friends, I should like to offer the compensation to the editor that his reviewers could be drawn from a broader list of physicists than is done, and objectivity should be at least as acceptable as editorial responsibility for the rejection of the paper of a friend.

Moody L. Coffman

Oklahoma City University

Better high-school physics

The discussions on your April editorial "Is Physics Too Tough?" perhaps are symptoms of a more insidious disease. I suspect the trouble is in the high-school physics course. But before I discuss the diagnosis, another disturbing symptom must be noted. It is regrettable that, as far as I know, college physics courses universally start from "scratch." One never assumes any knowledge of physics from high school so that some material need not be covered in the university course. Aren't we really saying that high school physics is not necessary and even that it is a waste of time? The second alternative is particularly true if the high-school course is taught in a perfunctory manner.

I suggest that the disease is that we

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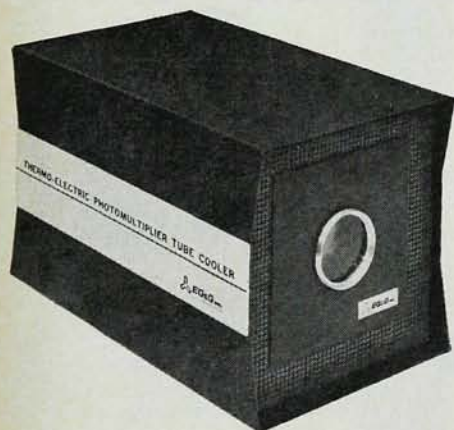
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LETTERS

(Continued)

do not provide the students with *solid* accomplishment. They do not leave the high school course with the feeling that enables them to say (a) "I have learned something that I did not know before I took the course;" (b) "I understand it *well*;" and (c) "I can calculate numerically what will happen in a given set of circumstances with such confidence that I feel I can control my environment as well as just understand it." Physics, more than all other disciplines, should emphasize this third point, because physics is the basis of all other sciences.

In the newer approaches, both content and method have been changed. I do not want to quarrel about the change in method from the "plug into that formula" deductive approach to the experimental and inductive approach of the Physical Science Study Committee. But I do suggest that the content of such courses be severely restricted so a sense of mastery of the subject matter can be observed in the majority of students.

Instead, with the PSSC type emphasis, the content is so broad that we skim the top, and merely understand, but do not predict and control enough. The number of concepts and topics is increased in number to such an extent that (a) when students face an examination, they are at the mercy of the instructor's whim because the large amount of content they are to master is too much and (b) it takes a super-Ph-D to teach the up-to-date high-school course that includes everything from the antisymmetrical eta-zero decay to the Josephson effect and on to the 9/10 conversion factor of relativistic gravitational collapse (using *Time* magazine as the textbook!). No wonder the students think physics is difficult.

I now make a revolutionary (old-fashioned) suggestion. Let us include in the high-school course certain topics that will be studied in depth and that shall not be covered in a university course. They might be uniformly accelerated motion, simple friction, energy, elementary calorimetry, the lens formula, Ohm's law, the atomic and

nuclear periodic tables and the nuclear reactions in stellar energy generation. These are all important things for the terminal high-school graduate to know. Other exotic topics of the teacher's special interest could be included. If a student should get to college without physics (we hope not), we charge him extra for the no-credit "bone-head" physics course. If the university teachers build on the high-school foundation, this will lend much more prestige to the high-school course; physics will appear to the high school students as something that can be mastered in a finite amount of time, and the university teacher would not have to spend time on these topics; so he can get to more advanced topics sooner. All of this would be a good improvement for everyone.

Alfred A. Kraus Jr.

West Texas State University

Alienation of physicists

In response to your July editorial, I submit the problem of alienation or partial polarization of physicists vis-à-vis the rest of society may not be due so much to indifference as to their apparent inability to communicate with it. Certainly one of the greatest chances to do just that is being lost today among nonphysics majors both in colleges and high schools. Thus, a large number of professional physicists have known sin again if only because they are failing to create a large class of potential fellow travelers. Are these not the "grays" who will fill the gap between the physicist and so-called "nonphysicist"? If so, why thin them out?

Michael J. Smith

Howard University

Correction

In a story on "New Astronomy Officers" (PHYSICS TODAY, September, page 109) it was erroneously stated that Leo Goldberg is the incumbent president of the American Astronomical Society. In fact, Bengt G. Strömberg has been president of the society since 27 July. Goldberg is now a past president. □