over the last year or two in *Harper's*, by John Fischer, and *Saturday Review*, by John Lear. But I think such a point of view is inexcusable in PHYSICS TODAY and serves no useful purpose. It propagates a myth that is widely believed and very popular these days, namely, that every physicist in a large university physics department has no interest in students and wishes to do as little teaching as possible. Certainly there are such people, but in my observations over 14 years spent in the heart of this academic research community they are the exception rather than the rule.

There are several points to be made. The first is that editorials such as yours tend to paint the picture that the typical academic physicist has two choices—either to sell his soul down the river and engage in a whirl of self-serving travel, wild spending of government dollars, mad writing of journal articles and the like or to sit in the classroom with 25 undergraduate students hanging on his every word. How absurd! Such a picture simply reveals ignorance of the nature of the research community in a university. It ignores one very central and fundamental fact, namely, that the training of graduate students is the balance wheel of that community. Certainly a physicist is interested in the opportunity to explore his own ideas and to meet colleagues from other laboratories. How else would physics have accomplished what it has in the universities over the last 50 years? But, in practice, implementation of these goals is inextricably intertwined with an enormous amount of blood, sweat and tears devoted towards working with graduate students. The stereotype of the graduate student as a hired slave to the professor's research ambitions is nonsense. Moreover, if a department has a structure with four to five graduate students enrolled per faculty member (a rather typical number among the large universities), that average faculty member is certainly going to spend less time in formal classroom activities than would his colleague in an essentially undergraduate institution.

The second point is directed more sharply to the content of the editorial. Your editorial carries the clear implication that the time that he *does* spend in formal classroom teaching is spent begrudgingly and with half a mind. I just do not believe that the facts of the situation bear out that innuendo at all. If I look around at the genuinely inspired innovations in the teaching of physics at all levels over the past ten years or so, I find just as many of them coming from people at institutions with substantial commitments to graduate training and research as from institutions without these commitments, and the individuals making these contributions are themselves actively engaged in research activities.

To repeat, of course there are people such as the antihero of your editorial. And, of course, a large university has to be watchful of serious distortions in its responses to the various demands put upon it. But I simply do not believe that the available evidence justifies the kind of simplistic, crusading attitude that threads not only through this editorial but several of your previous ones.

DONALD F. HOLCOMB
Cornell University

Upgrading British colleges

I feel that, on the whole, the article on relations between industries and universities in Britain in the January issue of PHYSICS TODAY presented a fair and sympathetic picture of our problems, but it did not present the whole picture, largely because the interviews on which it was based took place at the top of Olympus, that is, at Oxford, Cambridge and Imperial College, London. One of the main reasons why there is such a separation between the pure and applied sciences in Britain is that, in the past, the majority of engineers have been educated in the technical sector of higher education, which is completely separate from and socially decidedly inferior to the university sector. It was therefore a major breakthrough when, of the ten technical colleges that in 1956 had been upgraded into colleges of advanced technology, eight became full universities during 1966–67. They brought with them into the university sector their tradition of coöperation with industry and the "sandwich" course, in which periods in industry alternate with academic periods in the degree course. They appointed visiting professors from industry and established "collaborative" schemes by which a student can work for a PhD, while employed in industry, under the joint guidance of an academic and an

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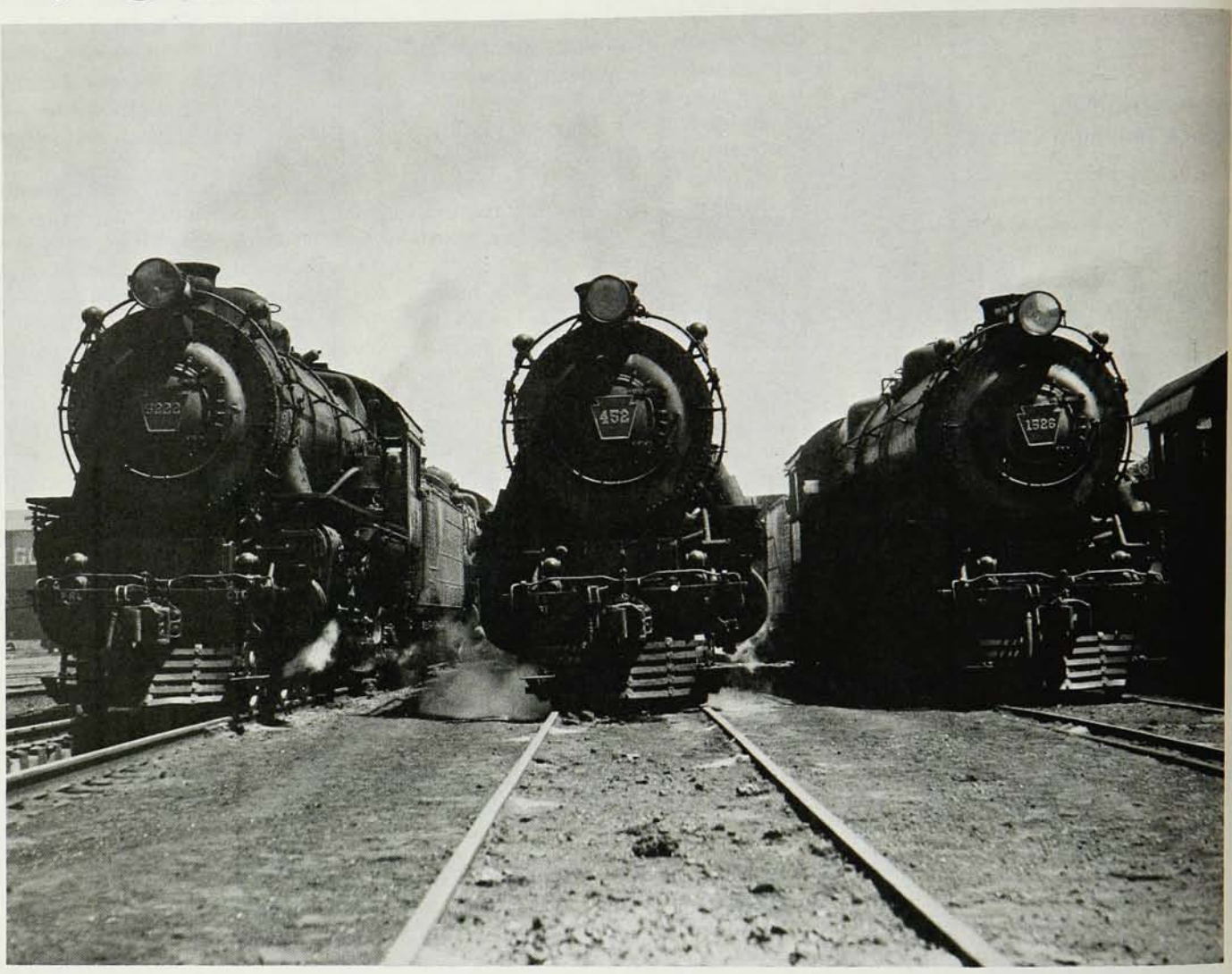

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industrial supervisor. In the physics department of the University of Surrey, which used to be Battersea College of Technology, we now have 12 such research students, as well as two who work within the department under the special industrial scheme of the Science Research Council mentioned in the atricle. Further, the vast majority of students who graduate from the eight technological universities go into industry.

The situation in Britain is therefore in one sense better and in one sense worse than the article implies. It is better because some of the things that are there suggested for the future are, in fact, already being practiced; it is worse because they apparently do not know at the top of Olympus of what is going on in the foothills.

L. R. B. ELTON
University of Surrey, London

Opinions on the amendment

In keeping with the practice established in the "Letters" column of the April issue, we herewith list recent opinions on the proposed amendment to the American Physical Society constitution.

All of the new responses are in support of adoption of the amendment. Those responding are as follow:

Ian N. Court, Electromagnetic Techniques Laboratory, Stanford Research Institute; Robert J. Yaes, Research for Theoretical Physics, Helsinki, Finland; Michael Anderson, North American Rockwell Corporation, Thousand Oaks, California; Dennis G. Douglas, San Jose State College, California.

A ballot will be mailed to all APS members this month. Meanwhile we will continue our practice of listing new opinions. So far we have recorded approximately 125 responses to this issue. Further coverage of the story may be found in subsequent issues in our "State and Society" department.

THE EDITORS

A CORRECTION: The editors regret that in PHYSICS TODAY, March, page 113, the following line was dropped from the bottom of the left-hand column: "Einstein, Infeld and Hoffmann dis-". □