

the AEC does not challenge this conclusion and does not provide a valid reason for delaying the use of nuclear power.

In addition to befouling the environment, the burning of fossil fuel depletes atmospheric oxygen. Lamont C. Cole, physicist turned ecologist, stated in a recent address here in Rochester that in the continental US the consumption of oxygen by burning fossil fuels exceeds the amount produced by our plant life. The debt has to be made up by the marine flora of the Pacific Ocean.

I would suggest that the American Institute of Physics take on the task of educating the US public to the necessity of converting to nuclear power. Find out what the hang-ups are and address the educational program toward clearing them away.

Among the few people that I have talked with, the problem of thermal pollution looms large. Your editorial and Walter H. Jordan's article (May, page 32) did not really come to grips with this problem—it is not sufficient to say that this is also a problem in burning fossil fuels.

The public also must understand the risks and dangers involved in the mining and purifying of the reactor fuels. Finally, the products will exceed (in volume) the need for isotopes and some provision will have to be made to dispose of same.

The process of education will be slow, but it will pay dividends to all concerned.

HENRY A. KNOLL
Rochester, N. Y.

Comments on training funds

In my Navy days I had something to do with torpedoes. As I understood it, the torpedo with which we went into World War II was a copy of a German torpedo that had washed up on a beach in 1908. The distinguishing feature of that misbegotten weapon was its level-control mechanism. If the torpedo was traveling slightly upward, the response was full rudder down. On the other hand if the torpedo were aimed somewhat down, the response was full rudder up. The natural result was that our torpedoes zigzagged in a vertical plane with rather large amplitudes.

A further consequence was that our torpedoes frequently went under ships and on occasion they even went over them. When we obtained Japanese torpedoes for testing during the course of the war, we observed with a measure of disbelief that they actually ran level. Our first reaction was that our depth gauge was not functioning properly.

There is much about the American political and economic system that seems to operate like our early World War II torpedoes. In so many ways we seem incapable of a controlled differential response. At the moment we are faced with a surplus of PhD's in many areas of science and engineering. To deny this is unrealistic and even dangerous. There is no way in which this society or economy can continue forever to produce science PhD's at a rate six times faster than the population itself increases. It does not make academic, sociological, or economic sense to continue to grant our highest academic degree to students of marginal competence and promise. It does not make sense to proliferate mediocre degree programs in schools that can ill afford them.

The federal response to this problem has been FULL RUDDER DOWN. The NASA traineeships are a fading memory; the NDEA Title IV fellowships are plummeting. The decision has been made that there will be no new awards of NSF traineeships in fiscal year 1971. The rumor is current that NIH grants are to be decreased by the amount of money being awarded to students for research assistantships. All this represents a weird and frenzied over-reaction to a serious problem. To say the PhD surplus problem does not exist is cruel nonsense. To say that the observed federal response is a sensible solution to the problem is irresponsible madness.

This nation must not be denied its chance for scientific and technological advance through this shortsighted program of blindly eliminating graduate students. Rational estimates of our needs can be made. Continuous incremental adjustments can be made each year. Adjustments between the areas of graduate-student support and postdoctoral support can be made to provide sensible short term buffering to compensate for minor predictive errors.

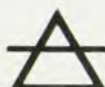
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our bureaucracy and in our education system; but, gentlemen, that Japanese torpedo did run level. Surely we have people capable of smoothing out this lurching, broaching torpedo run on which we are being taken.

HAROLD P. HANSON
University of Florida

One way to reduce the present employment crisis is for the appropriate government agencies (NSF or HEW) to allocate a small amount of money for programs to train present PhD graduates or graduates-to-be to take jobs in other fields. The money would pay their tuition for supplemental courses in fields such as business administration, management, medical science and so on, and in the case of PhD graduates to provide fellowships for such training.

If we assume that one quarter of the total graduates need tuition assistance and one quarter of these need fellowships, the total amount required is about $(400 \times \$1000) + (100 \times \$8000) = \$1.2$ million per year. This would be well spent if we consider the time and money already invested in these young talents.

S. J. TAO
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Job-hunting experiences

It has been amusing to read the recent letters in PHYSICS TODAY concerning the employment situation for young (and old) physicists. And I would probably be chuckling if it weren't for my sense of rage about the attitudes contained in them.

For instance, it would no doubt be valuable for graduate schools to gear their production of physicists to the market (James D. Kerwin's letter, November, page 9), if only we knew what the market was going to be like four years hence. Or we could be righteously indignant (along with R. C. Hansen, February, page 11) about all these young fellows, with their narrow disciplinary training, sitting on their butts waiting for job offers to arrive in the mail. If only that were true so that our indignation could be justified. And of course it was nice to reminisce (with Harold A. Zahl, April, page 11) about the hard times with happy endings in the good old days.

PHYSICS TODAY TO DROP MEETINGS DEPARTMENT

Beginning with this issue PHYSICS TODAY will no longer publish a meetings-report department. The amount of space that we can make available to this kind of department is no longer adequate to do justice to the already large and still increasing number of physics meetings being held each year. In future issues we plan to include the significant developments presented at meetings in our staff-written news columns. Verbatim accounts of selected physics meetings will soon become available as part of the AIP Conference Proceedings Series, which the American Institute of Physics has recently announced it will begin to publish (see May, page 62).
—The Editor

I have working for me this year a postdoctoral fellow who decided for family and financial reasons to do battle with the job market. I think that a careful accounting of our efforts will reveal that even if the job market isn't disastrous, it is tough and discouraging. Whether the job market is disastrous or not can not be determined from an isolated example, such as this one, but from figures such as those in the April issue of PHYSICS TODAY (page 23). The circumstances I describe here contradict most of the assumptions and conclusions contained in recent letters. The job applicant was young, intelligent, willing to look for a job, willing to leave his narrow discipline, and do anything, except intellectually perjure himself, to get a job. Between mid-December, 1969, and mid-March, 1970, a total of 139 prospective employers were contacted by first-class mail with individually written and addressed letters (see Edward P. Clancy's letter, April, page 15) with a breakdown and response as follows:

Small Colleges (up to 2500 students)—35 written, no jobs at 29, no response from 4, job filled at 1, 1 interview, no offers.

Medium Universities (up to 8000 students)—48 written, no jobs at 30, wrong category of research interest at 5, jobs filled at 5, no response from 3, under consideration at 3, interviews at 2, 2 job offers.

Large Universities (larger than 8000 students)—18 written, no jobs at 11, wrong category at 5, no response from 1, 1 was confused by

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