column and in the discussion at the Chicago meeting (reported in PHYSICS TODAY, March, page 81). Although there have been a number of arguments of substance that the reader will evaluate for himself, it appears to me that several statements represent off-scale reactions of alarm, and these should be put back into perspective.

Chief cause of the exaggerated responses was probably the unfortunate phrasing of the announcement presented by the editors of the *Bulletin*, "Should the APS broaden its purpose and aims to include discussion of public issues?" Many readers appear to have taken this question too literally and have drawn the false conclusion that some group is trying to turn the society into a wide-open political debating club. Problems of the pursuit of physics that are entangled with questions of public policy have been and will continue to be topics for discussion at APS meetings. An outstanding example was the stimulating session at the last annual meeting, "The Coupling of Physics and Society in the Seventies," sponsored by COMPAS, the AIP Committee on Physics and Society. The fear that such activities will grow to dominate the meetings is quite without basis; the APS council will certainly see to it that physics remains foremost.

A desire to revise the object and purpose of the society is another misrepresentation of the intent and substance of the amendment. My own expectation is that we can achieve a greater fulfillment of our stated purpose if we first disabuse ourselves of the notion that the activity of physics takes place in a vacuum without interacting strongly with the outside world. The society as a body is obliged to make judgements about whether or not particular matters of public policy impinge on "the advancement and diffusion of the knowledge of physics," and vice versa. What the proposed amendment does is to provide a mechanism whereby the membership at large can participate, when it cares to, in making these judgements. The habit has been to avoid controversial issues whatever their substance, and the one thing we do hope to change is this prudish habit.

Another element that has led to the extreme character of many letters and comments is the physicists' love of a good argument and the inclination to let a small prejudice lead one by logical progression to the most exaggerated conclusions. What we need most precisely in this area of the overlap of science with politics is a tempered weighing of facts, opinions and probabilities. The proposed amendment has been criticized for being less than perfectly constructed, and I will apologize for this failing even though I have yet to see any concrete suggestions that might improve it. If it is agreed that greater participation by the members is desired in studying how our professional concerns intermingle with public issues, then let us adopt the proposal as at least a reasonable instrument to start with. Then we can proceed with the experiment in earnest.

CHARLES SCHWARTZ
University of California, Berkeley

Base decisions on traditions

I read with great interest the interview of Chalmers Sherwin in the September issue, together with the letters commenting on it in the December issue, especially since one finds in the pages of PHYSICS TODAY so few such insights into the serious political and social issues that are affecting even the internal structure of science. Indeed, I would argue, in support of Charles Schwartz's challenge to the traditional policy of the American Physical Society towards political controversy, that the Sherwin interview is a clear sign that the hands-off-politics attitude that has served so well in building our magnificent scientific structure is outdated and will only accentuate the stagnation of this structure in the next few years.

It is now clear that 1945–65 have been the fat years. One would prefer not to measure this prosperity solely in terms of rising budgets and salaries but also in terms of an increasing capacity to realize our individual and collective capabilities as scientists. Part of this prosperity has involved an alliance with the war establishment. Of course the long-term dangers of this alliance are widely recognized, and attempts have been made to build up other institutions such as the National Science Foundation. In addition a relatively small group—the "science advisory" people—have worked very hard at serving as intermediaries between science and government. They seem to be an admirable group of men, and no doubt are very capable on short-term issues, but I would sus-

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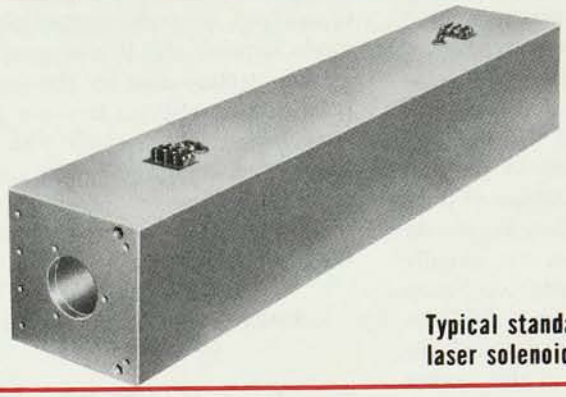

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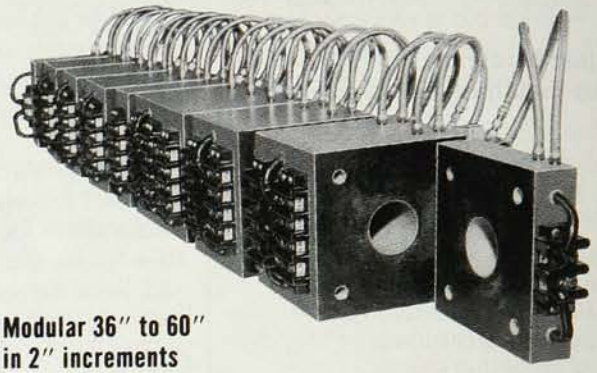

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pect that the pragmatic attitude that makes them effective in this position limits their ability to resist major structural changes that might have a negative effect on our situation—and, without reforms such as those suggested by Schwartz, no voices will be heard from the potentially more influential "masses" of working scientists.

I would also like to comment on the more specific issues brought into the open by the Sherwin interview and Arthur Shawlow's letter in response. In the period of growth mentioned above, "pure" science has, relatively, developed more than "applied" (although of course both have done so well that the rest of the world is now complaining that they will never catch up!). One familiar with the history of science will realize that that is a recurrent pattern that will almost correct itself—or, at most, one that requires gentle and skillful guidance. Certainly one of the lessons of World War II is that the best applied science is done by people trained in pure science who are given some motivation by society and have the opportunity to work at the applied problems in their own way. However, notice the recent actions by those in power in Washington: a severe slash in fellowship funds, basic research supported by DOD, etc., coupled with a crude carrot-and-stick approach—"Project Themis"—to develop applied science at weak institutions ("centers of excellence" is one of the more amusing euphemisms of recent years).

Shawlow, in his December letter, has commented very effectively on the specifics of the Sherwin interview as it involved Stanford. I can add my experience with another institution mentioned in the article, Lincoln Laboratory, where I worked from 1959 to 1961. It was one of the first places to be affected by the policy of a sharp distinction between "basic" and "mission-oriented" research. One major effect of this change of rhetoric was that many of the best minds that the laboratory acquired in the 1950's felt forced to leave. This was tragic; the laboratory was in an ideal and almost unique position to develop pure and applied science together, but this opportunity was missed. I am glad to see from the Sherwin interview that some good pure science survived, but, from what I could see, I cannot but feel that this was despite the system.

In summary, I cannot have any confidence that the people in Washington who make decisions in similar cases will act wisely without some strong pressure from us to base these decisions as far as possible on the traditional principles of support of the best science, pure and applied, in terms of both individuals and institutions.

ROBERT HERMANN
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University of California, Berkeley
Professor of Mathematics
University of California, Santa Cruz

Highly edited dialogue

In connection with the highly edited dialogue you deign to allow in your dignified pages, amongst the advertising of the scientific–military–industrial complex and features like Search and Destroy (oops! I mean Discovery), I would like to point out that German science remained pure and unpolitical during the 1930's. It has not yet recovered.

C. H. BLANCHARD
University of Wisconsin, Madison

A campaign technique

With the impact of the latest business meeting of the American Physical Society upon me, I would like to make a suggestion to my colleagues in the society. I can imagine a future in which the present happy situation of essentially uncontested elections to the council and offices of the society might no longer reflect the opinions of most of our membership. The nominating committee is adequately responsive in that a petition signed by only 1% of the membership will put additional candidates on the ballot. However, I am concerned that all candidates have fairly easy access to the whole membership to advance their candidacy. (For example, 8¢ per letter to 24 000 physicists is not easy access.)

Next year the APS *Bulletin* is to be published monthly and will contain news. I suggest we establish a policy whereby space for personal advertisements will be sold at cost to any member of the society. Many other useful ends would also be served by such a service. (Incidentally, accepting commercial ads at rates above cost may defray some of our expenses.) It would be clear that the views expressed would be only those of the contributor. This section might become