Should APS Discuss Public Issues?

For the Schwartz amendment

As the author of the constitutional amendment now before members of the American Physical Society I would like to present arguments in favor of its adoption. There are two questions to be considered. The larger one is, Should the American Physical Society involve itself in public issues?; and the specific one is, Why is this constitutional amendment needed? Let me start by answering the second, more technical, question.

One individual physicist may talk to another about any subject at all, but if he wishes to address the entire membership of his professional organization he must have the approval of those officers of APS and American Institute of Physics who control the publication facilities. While I agree that some controls are needed, recent experience has shown me that the present manner in which these decisions are made is seriously out of balance. I believe that there operates today a censorship completely alien to the principles of free discourse upon which a scientific community is built. The correctness of this opinion is most clearly demonstrated by the manner in which the debate on this amendment has been handled. The editors of the Bulletin of APS and of PHYSICS TODAY have rejected publication of both a summary statement and a thorough expository article, by means of which I had hoped to explain to the society membership at the outset of the debate just what had motivated 248 members to sign the original petition. Instead, and against repeated objections, they have chosen to present this whole debate in their own terms, as if they could play the role of an impartial mediator, when in fact they represent the chief target of my complaints. By the time this letter appears in print-at least two months after the first announcement of the proposed amendment-I fear the issues may have become badly confused.

ystem:

ned for

tical p

ecision

u all fi

uto del

the 14

easure

riding

ments*

lay a M

asures

allovon:

er. (CR)

couple

tion, or

bility.

be reli

h-frequ

ranges

The

141AF

140A)

nt syst

326

The change we hope to achieve should lead to a more open-minded at-

titude on the part of the society towards new situations now and in the future. In the opening sentence of the proposed amendment, "The members may express their opinion," etc., the emphasis is on "members." basic idea is that the members retain for themselves the right to decide which issues they wish to consider and which they choose to ignore. Specifically, upon petition by 1% of the membership any question, in the form of a proposed resolution, would be placed before the society for formal consideration and voting in a mail ballot. This critical measure, 1%, should make it not too easy for any extreme faction to coerce the majority, but not too hard for a respectable minority to get its views presented.

Further discussion of the procedural details of the proposed amendment is, I understand, the subject of other items in PHYSICS TODAY and so I shall not dwell on these here. However, one crucial point deserves comment: the interpretation of the phrase "on any matter of concern to the society," which defines the scope of resolutions that members may vote upon. editorial in the December PHYSICS TODAY says that presumably the APS council will decide how to read this. While I agree that the council might concern itself with this question, I point out that the whole intent of this amendment is to create motive power for the members outside of the council. Thus I claim the view should be that any matter meeting the formal requirements (1% support) was ipso facto of concern to the society.

Now I turn to the major question of society policy: the appropriateness of discussing public issues. Certainly one of the easiest ways to destroy the integrity of the society would be to turn it into a debating club open to every political issue of the day; and the proposed amendment is carefully designed to protect against such excesses. At the other extreme we must recognize the absurdity of complete political innocence. Such statements as, "We are concerned only with phys-

ics as physics," are simply nonsense. There exists a whole range of issues where the technical activity of physicists gets tied up with political decision making. Our individual requests for government funds and the scientific appraisal of others' proposals are the most obvious examples. reader, and each letter writer, will doubtless have his own list of priorities in this regard. The choice in these cases of whether to take a position-as a professional group-and when to stand aloof should always be an open question, to be decided by the members as a whole once some threshold community concern has been passed. At present it too often happens that the "public opinion of physicists" emerges from sources quite remote from the actual majority of our colleagues. (For this we have only our own lassitude to blame.)

There is one other situation when, I believe, my professional society should concern itself with a public issue: when there exists an external crisis of such magnitude that we fear a general catastrophe of a political, military or cultural nature. In my view the Vietnam War in all its ramifications does now pose such a crisis; and I would like to see the Physical Society face up to this issue, not because we have any unique competence in this matter, but because we share an equal concern and responsibility along with all other segments of American social structure.

In closing I return to the immediate question of the proposed constitutional amendment and remark that it refers to no particular issue or class of issues. It simply seeks to establish the means whereby the members can take it upon themselves to consider when some issue may be pertinent to their professional future. That is to say we are individually and cooperatively willing to be responsive to external realities, while retaining concern for our internal integrity as scientists. Such a commitment is neither easy nor guaranteed safe from criticism, but I believe it is a responsibility we should assume. If not, then we shall continue



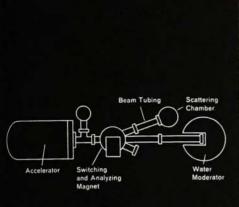
What happens when a grad student closes his textbook and starts an experiment on the accelerator? Checks the vacuum system. Then the electronic instrumentation. Pours liquid nitrogen. Reads digital printouts. Strings wires. (Oh! the wires.) Checks connectors. What has this got to do with nuclear theory?

Plenty. It's the *doing* of physics, which is essential to the knowing of physics. This graduate student will confirm for himself the basic discoveries that built modern physics. And he will earn the right to move up to larger accelerators where further original work is waiting.

Van de Graaff accelerators are ideal for training because even the least expensive ones (0.4 and 2 MeV) produce particles at precisely controllable energies: protons, deuterons, alpha particles, electrons, neutrons, and photons. The largest Van de Graaffs extend nuclear structure investigation to the binding energies of the heaviest elements.

Think acorns.





Complete Nuclear Physics Teaching Laboratory

At last! An accelerator-based teaching system for less than \$50,000. A lot less if you already have some of the electronics.

By system, we mean first, the equipment: a 400 KeV Van de Graaff accelerator, vacuum equipment, magnet, scattering chamber, detectors, radioactive sources, support electronics, pulse height analyzer, and radiation monitor.

Second, our teaching manual: 30 graded experiments in nuclear physics, explained step by step, enough to fill a 3-semester laboratory course. By then the student will have performed the fundamental experiments of nuclear physics and encountered a great deal of quantum mechanics, atomic physics, and solid state physics.

Research? Yes. In nuclear physics, solid state physics, atomic physics, and activation analysis. The magnet provides for additional research stations where your staff and graduate students can do original work.

It's everything a teaching/research system should be: simple to operate, virtually maintenance-free, easily modified for different experiments, low initial cost, expandable with optional equipment.

Our booklet, "The Van de Graaff Nuclear Physics Teaching Laboratory," shows just how this equipment and course book combine theory and practice in the modern physics curriculum. We'll be glad to send it to you.

\mathbb{H}_V	HIGH VOLTAGE ENGINEERING Burlington, Massachusetts
Nan	ne
Posi	tion
Orga	anization
Add	ress

Zip_

to be judged according to the dictum, "silence implies consent."

CHARLES SCHWARTZ University of California, Berkeley

EDITORS' NOTE: We do not wish silence to imply consent to all of the statements in the preceding letter. The following is the closing paragraph in a letter that we sent to Charles Schwartz on 11 October:

Consequently I return to you the article that you recently submitted and suggest that you make it into a letter to be part of the correspondence we will publish. In the letter we would like to have your own point of view as expressed in most of your article. We do not need the text of the resolution because it will appear elsewhere; we do not want the points of view of other people that you quote because they will have their own opportunity of expression; we do not want your "Exhibit A" and "Exhibit B." We do not need exhibit A because in the foreseeable future we do not plan to discuss political issues, and we do not want exhibit B because it is available in the APS constitution and it has been briefly summarized in our November story. I look forward to receiving a letter from you.

In a subsequent telephone call our chief editor told Schwartz that we would remove the strictures placed on him in this paragraph and allow him to publish anything he wanted to say in 3000 words including the original letter that was rejected. The editor reiterated that he thought Schwartz would dilute and weaken his argument by including other unnecessary material but allowed him that privilege if he wanted to use it.

The basic purpose of the letter was to invite submission of what Schwartz refers to as "a thorough expository article," in a form suitable for this January "Letters" department. The overall delay would have been about four months from date of submission, and such treatment is not appropriately labeled by the words "rejected publication."

We of PHYSICS TODAY and AIP do

not feel that we "present this whole debate in [our] own terms." Perhaps the letters in the present column and our December editorial are the appropriate evidence on which to judge.

Let us call to your attention that the quoted, "We are concerned only with physics as physics," is a misquote to the extent that the word "only" has been added and appears to give an emphasis that was not intended in the original editorial.

Finally we do not wish to consent by silence to the term "censorship." Because of limits to space and staff, we must make choices. The terms of reference for PHYSICS TODAY and AIP are stated monthly on page 6 of this magazine: "advancement and diffusion of the knowledge of physics."

As we make our judgments in following this purpose, we are sure we make errors. We do not feel, however, that censorship is properly classed among them.

THE EDITORS

Responsibility to society

It is generally agreed that scientists have two traditional duties: first, the duty of seeking the truth; second, the duty to communicate to all who need it the knowledge gained in their search. Because of our burgeoning technology, we have reached the point where many key political judgements must be based on technical knowledge and scientific judgement. These judgements that should not be left to the politicians who on the whole are seriously lacking in scientific background. Scientists who help contribute toward political judgements in this computer age are performing a valuable public service and should be encouraged in this by their societies and publications. I am not advocating discussion of scientifically related political issues in The Physical Review: however, PHYSICS TODAY appears to be suited for this.

Another duty we scientists have is to protect the public from scientific hoaxes, whether small or large. This can best be illustrated by going into a specific example. It is purported that the President's scientific advisors and the Secretary of Defense have recommended against deployment of a \$5 billion ABM system. There is a case to be made on scientific grounds that