

letters

changes in the current structure of physics education and practice. The number of physicists engaged in education, particularly at PhD-granting institutions, is likely to grow, because the institutions are growing rapidly and because the PhD degree seems to be spreading to many new institutions. In any case, tenure regulations prevent any sizeable decrease in the numbers of professors.

Currently the bulk of US physics research is being done at universities, particularly at the large PhD-granting institutions. "Publish or perish" remains a fact of life in these quarters. In order to do this research, technical assistance is needed. Someone must do the calculations, design and build the apparatus, run the experiments or the computer and so on. This is usually the job for the graduate student, who willingly trades technical assistance for a chance to learn. Eventually, however, the graduate student attains his degree. So, another graduate student enters the laboratory or research group. If there is a sharp reduction in the number of graduate students, this supply of technical labor, which not only does research but grades papers, teaches lab sections and so on, assuming a considerable fraction of the teaching load, will be gone. It is not clear how, in the absence of the labor force, the current level of research and teaching will continue. Yet the production of PhD physicists must be cut for the good of the profession. We can not continue to grow at ten times the population and three times the GNP.

Somehow the doing of physics, that is, basic research, must be separated from the producing of new physicists. After all, most doctors practice medicine somewhere other than medical schools and most lawyers practice law outside the law school; but most physicists do their physics in the physics school, a habit that inevitably leads to overproduction of the species.

The big question is: How can we restructure the physics community so that research proceeds without necessarily producing hordes of new, probably unemployed, physicists?

References

1. *physics today*, October 1969, page 48.
2. *physics today*, March 1971, page 70.

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In defense of tenure

It was most distressing to find the February 1971 annual meeting of the APS and AAPT torn with angry accusations by those who cried out re-

peatedly that someone else should have done something to anticipate the events that trouble us today. In many sessions physicists were urged to take up the fight against pollution, to save the environment, to lend their talents to the fight against injustice, and in this period of a shortage of jobs, physicists were urged to refuse to accept jobs in government laboratories directly or indirectly involved in war-related projects.

The incredible climax was reached in a contributed paper in one of the sessions on Thursday afternoon, when a younger member of the community was delivering his prescription for steps he recommended that the community must take in order to improve the job and employment situation. One of the things he recommended was the elimination of academic tenure, or possibly reducing tenure to periods of seven years at a time. He spoke of wanting to get rid of bad teachers and of other academic deadwood. I listened in amazement as this aspiring "academic type" revealed his limited understanding of the basis and reason for academic tenure. Since I have never before heard tenure attacked in an APS meeting, I can only presume that the attacks coming at this time are motivated by a desire to fire older people to open their jobs for younger faculty, many of whom would then want to use their new academic positions to lead crusades against all of the evils in the society. Let me present some observations to suggest that the recommended cure would be worse than the disease and that those who now recommend the abolition of tenure would become the most outspoken defenders of academic tenure if they had the academic positions to which they aspire.

Many students today believe that tenure is a clever job-security gimmick achieved by a tight union of selfish, self-serving faculty who have thus achieved the ultimate in a "free ride." I have found that students are quite genuinely amazed to learn that academic tenure is the keystone of academic freedom. It guarantees an academician the right to make known the results of his investigations and studies without fear that he might be fired because of pressures generated by those who feel they might be threatened by the results of his investigations. I have worked for over 15 years in trying to solve environmental problems in my community, and I know that this urgent work often arouses the ire and anger of powerful establishments who would like nothing better than to be able to call up the University and say "fire those troublemakers!" Academic tenure protects us from retaliation as we seek to use our skills and abilities to voice and to implement a humane and conscientious concern for the welfare of mankind. It is perhaps growing more common

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letters

today than it has ever been before for scientists, in their concern for the welfare of others, to participate in studies and investigations whose results indicate that present systems and regulations give inadequate protection to our people. When these scientists have academic tenure they can continue their studies and investigations. When these scientists work in private or governmental laboratories without the protection of tenure, we hear stories of cases where it is alleged that individuals were fired because of outside pressures that did not approve of the work of the individuals in question.

Powerful forces are gathering on the horizon, and I predict that in the coming years you will see many attempts to wipe out academic tenure by legislation or by edict. There are many people in our communities who believe that the university long-hairs are anarchists, trouble-makers, and that the country would be better off if we would get rid of this whole bunch of "kooks." How strange it is to find that the most reactionary elements in our society are working hand in hand with the self-anointed avant-garde liberals who have been speaking out at our recent meetings. It is all the more strange when we realize that these very same liberals, if they achieve academic positions, will be among the most ardent protectors of academic tenure. The politics of emotion and of non-think do indeed produce strange bedfellows.

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New UFO center

More than a year has passed since the Air Force formally closed its Project Blue Book, which acted as a national center for the receipt of reports of certain types of strange phenomena more commonly known as UFO's.

As consultant to that project for many years I am aware that neither the closing of Blue Book nor the Condon Report has laid the UFO problem to rest, and a number of my scientific colleagues and I have become concerned lest data of potential scientific value be lost for want of a reporting center. As evidence that the subject is still very much alive under the covers, I can cite not only my own personal mail which continues to contain UFO reports from reputable persons but also news-clipping services. The latter show an almost complete absence of UFO reports from urban dailies but a continued spate of UFO reports from small-town newspapers, where the editor is either less sophisticated, or less prone to be influenced by officialdom, or where he may have

knowledge of the source of the UFO reports.

It has been my estimate over the past 20 years that for every UFO report made there were at least ten that went unreported. Evidence for this comes from the Gallup Poll, the many UFO reports I subsequently learned of that were not reported to the Air Force, and from my own queries. There has always been a great reluctance to report in the face of almost certain ridicule. It would seem that the more trained and sophisticated the observer, the less prone he is to report unless he could be assured of anonymity as well as respect for his report.

Accordingly, in order that material of potential scientific value not be lost, and in order that persons, particularly those with scientific training and experience, can submit a UFO report without fear of ridicule and publicity, my colleagues and I, all associated with universities, hereby offer to act as a receipt center for UFO reports that otherwise would almost certainly be lost to science. I will be personally responsible that the data so submitted will be treated seriously and that no embarrassment to the sender will result. Names, for instance, will be immediately disassociated from the report and not used without specific written permission of the originator.

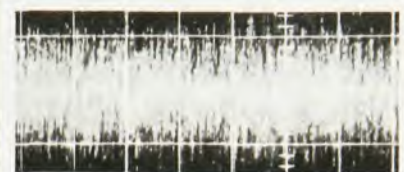
It may be of interest to note, in passing, that over the years I have been the recipient of UFO reports from many highly trained technical people and scientists. It is a gross but popular misconception that UFO reports spring from "ding-a-lings." A study of the record shows that such persons are almost entirely absent. The address to which UFO reports may be sent is: J. Allen Hynek, Chairman, Department of Astronomy, Northwestern University, Evanston, Illinois 60201.

J. Allen Hynek
Northwestern University
Evanston, Illinois

MIT-SLAC collaboration

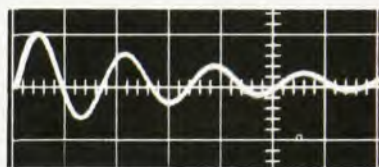
Recently a report (February, page 17) in the "Search and Discovery" section of *physics today* may have left some of your readers with the impression that the program of deep inelastic scattering measurements was entirely a SLAC effort. The experiments were done at SLAC by a collaboration of physicists from the Laboratory for Nuclear Science at MIT and a local group at SLAC. The collaboration began some years before operation of the SLAC accelerator when J. I. Friedman and H. W. Kendall of MIT joined their forces with several other groups to design and build the SLAC Spectrometer Facility. Since SLAC became operational, the MIT

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