

LETTERS

Copyrights, Human Rights and the APS-China Memorandum

The memorandum of understanding that the APS signed with the Chinese Physical Society (February, page 50) asks for an increase in the number of subscriptions to APS journals by Chinese institute and university libraries. There are more than a thousand universities in China. Only seven Chinese institutions are subscribing to the APS journals. The discrepancy in journal subscriptions is just another blatant example of copyright violations by the Chinese government.

Statistics about human rights violations, which went unmentioned in the memorandum, are much harder to get. Even so, the committee on international freedom of scientists, an APS by-law committee, has received information that many of our outspoken scientific colleagues are under constant police surveillance or languishing in the Chinese gulags, being submitted to threats, inhumane treatment and occasional torture. An example of the disregard for international human rights standards by the Chinese government is the practice of keeping political prisoners such as Zhu Xiangzhong, a physics major who graduated in 1986, in the same cell with violent criminals as a form of punishment. When they are not in solitary confinement, these political prisoners are subject to beatings by their cell mates. In August 1993 Zhu received severe head injuries after he was beaten by a convicted murderer. After the incident, the prison authorities denied proper medical treatment to Zhu.

The roots of copyright violations and human rights abuses are the same. Both types of violations stem from the disregard for internationally recognized rules of law by the Chinese government. Letting the Chinese authorities get away with human rights violations will not make

them responsible citizens in the world community regarding intellectual rights. Indeed, President Clinton's policy of delinking human rights from trade did not succeed in persuading the Chinese government to respect American copyrights. It only encouraged the current Chinese regime to continue its "get tough" policy. By failing to demand that an explicit and official clause on human rights be included in the memorandum of understanding with China, the APS reinforced that policy.

As the APS was offering subsidized journals and technical help to the Chinese electronic communications networks, it had the leverage to convey our serious concerns to the Chinese government in an official capacity. Unfortunately, a historical opportunity to speak out for our imprisoned and harassed colleagues was missed.

The memorandum of understanding in its final form was approved narrowly by the APS council, 13 to 11. While we can feel gratified that human rights concerns are far from constituting a minority viewpoint in the physics community, these concerns must be expressed openly and officially by our representatives.

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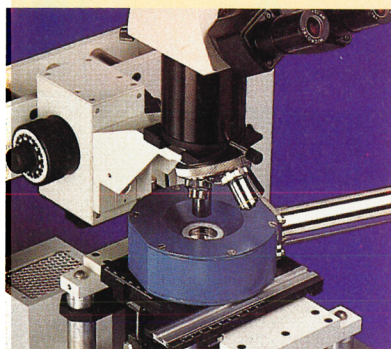
(The authors are the chair and past chair, respectively, of the APS committee on international freedom of scientists.)

THE PAST PRESIDENT OF THE AMERICAN PHYSICAL SOCIETY REPLIES: Betty Tsang and Fang Lizhi accurately characterize China's human rights record but do not accurately characterize the situation with respect to the American Physical Society's memorandum of understanding.

The chairs of the committee on international freedom of scientists wanted the APS delegation, which I led, to require that our Chinese colleagues sign a memorandum that criticized their own government.

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China is not a democracy, and the political situation is more uncertain than usual because of the impending change in leadership. The committee's position was and is unreasonable. The APS delegation did transmit a unilateral statement on the human rights situation on behalf of the APS. That statement was, as expected, transmitted without comment to higher levels of the Chinese government by our Chinese colleagues.

There will always be legitimate differences of opinion on how to act when values conflict, as they did here. The majority of the council of the APS agreed that the memorandum of understanding was the best that could be done at that time. It should, of course, be reviewed in a few years to see if it is still appropriate.

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Altering the Academy in Industry's Interests

I write you concerning Werner Wolf's article "Is Physics Education Adapting to a Changing World?" (October 1994, page 48). We in industry—I work for a major military and commercial semiconductor device and components manufacturer—have learned that, except for a few exceptional people, most new graduates face a significant learning curve in industry. It can take them a considerable amount of time (six months to a year minimum) to become fully productive. I feel that most of the reasons for this lie in the different needs of universities and industry. At universities, students work independently on highly specialized problems with little regard to manufacturability, time pressure or budgetary constraint. The opposite is true in industry: Teamwork (an acquired skill), versatility, manufacturability, tight time schedules and cost containment are paramount.

Things were not always this way. In the past we mostly hired new graduates and trained them on the job. Times were prosperous and we could afford to invest in on-the-job training. Much to my frustration, times have changed. The corporate environment is much more demanding and intolerant. Downsizing has increased the need for employee productivity, and competition and profit pressures are fierce. We generally cannot afford the time and money to train new graduates. Rather, we seek experienced individuals with

proven ability, good references and the specific experience that we need for the position. Typically, we now want five years of relevant industrial experience for the PhD positions we seek to fill.

I feel sorry for the many excellent students whose resumé's I must reject. I hope that universities and the outside world can cooperate to find ways to improve their employment prospects.

If you decide to publish this letter, please withhold my name. My employer is paranoid about individuals speaking publicly on corporate policy, and I could get in a great deal of trouble if they found out. The company currently is downsizing and consolidating operations. Need I say more?

NAME WITHHELD

Werner P. Wolf's timely article "Is Physics Education Adapting to a Changing World?" dealt primarily with undergraduate programs in physics. However, current opinion appears to have it that the problems in unemployment and underemployment of physicists are mainly at the PhD level. While it is not well known, there is a 30-year-old program involving the University of California, Davis, and Lawrence Livermore National Laboratory that attacks those problems through "hands on" training, with a great deal of success.

In 1963 Edward Teller persuaded the regents of the University of California and the Davis campus of the university to support a purely graduate program—the Department of Applied Science—making use of the people and physical facilities of LLNL. His concept was that students with undergraduate degrees in physics, chemistry, mathematics or engineering would come to Livermore and be exposed to "applied science" (defined as large-scale projects that involve teams of people from various disciplines), learning in an apprentice mode. In contrast to the common situation where a new graduate student is tolerated until he or she can be trained to carry a fair share of the research work, at Livermore the students are expected to carry their weight from the start.

In the 31 years since the program started, 252 men and women have earned their PhDs. The majority of them have found nonacademic jobs as their first post-PhD positions. Even today, in what we all recognize to be a tight job market, recent graduates of the Department of Applied Science have for several years been able to find technical positions, although some have spent a year or two in

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