

OPINION

APS VIEWS

by Brian B. Schwartz
Associate Executive Secretary and APS NEWS Editor

For many years, various educators and researchers have been proposing very reasonable actions on how to ameliorate the employment situation for Ph.D. physicists. The suggestions range from providing good information on supply and demand with *caveat emptor*, to outright curbs on the production of physics Ph.D. degrees. Other suggestions focus on expanding the scope of physics education to include more applications (even business courses), in order to enlarge the horizon of students in their search for employment in nontraditional areas.

However, very little change has occurred in the system. Perhaps the format of reasoned written discourse is no longer effective in this media age. With that in mind, I presented the following "Top Ten" actions to solve the oversupply of Ph.D. physicists, in the manner of late night talk show host David Letterman, in hopes that with a lighter touch, more attention will be paid to possible solutions to the problem.

Top Ten Actions To Solve the Oversupply of Ph.D. Physicists

10. Disallow use of the term "shortage" until the starting salary of Ph.D. physicists is increasing at a rate of twice the national average.
9. Require at least 50% of graduate students in physics departments to be U.S. citizens or have permanent visa status.
8. Develop a course or seminar series, "Physics for Potential Millionaires," to give students a basic understanding of how the knowledge and application of physics can be used to gain wealth, power and influence (and hopefully a measure of compassion).
7. Require all physics faculty to take every other sabbatical leave in a work area outside the traditional fields of physics. This would enable faculty members to (a) learn the difference, difficulty, and excitement of other career fields; (b) gain valuable information to broaden their teaching and horizons; (c) help develop job networks outside traditional physics careers; and (d) not consume physics funding which could then be used to support younger physicists. Hopefully some faculty would enjoy working in nontraditional areas and not return, thus freeing up more positions in academia.
6. Publicize highly successful nontraditional careers by Ph.D. physicists, preferably featuring them in expensive cars, clothes, houses, etc. Perhaps *Physics Today* could have a special "Physics People" section.
5. Require senior faculty over the age of 50 whose children have finished college to renounce taking summer salary from grants (2/9 to 3/9 of the academic year salary). The faculty member would continue to perform research over the summer, but the extra funds would be used to support postdoctoral students and younger physicists.
4. Encourage the NSF to shift grant fund allocations from supporting graduate research assistants to supporting postdoctoral students, which would reduce the number of graduate students and hence the production of Ph.D. physicists.
3. Develop a quality rating system for Ph.D. department programs and close down those departments which average in the bottom 10% over a five-year period.
2. Require physics departments to temporarily suspend faculty tenure whenever the oversupply of Ph.D. physicists reaches the 20% level for three consecutive years, thus opening faculty positions in every U.S. physics department to the most qualified physicists (even if a recent Ph.D.).
1. Allow Ph.D. recipients who do not find suitable jobs that make use of their physics skills at appropriate salaries to move in with their thesis advisors until they do.

NOTE: The above appeared as an appendix to a recently published article on the job crisis, entitled "Breaking the Mold: Expanding the Horizons for Physics Students," by Brian Schwartz, included in the proceedings of the AAPT/APS sponsored topical conference Physics Departments in the 1990s, edited by G.M. Crawley and B.W. Khoury, AAPT (1993). Copies of the full article may be requested from Brian Schwartz, Editor, APS NEWS, One Physics Ellipse, College Park, MD 20740-3844, or via e-mail: schwartz@aps.org.

CORRECTION

George Campbell Jr.'s letter in the May issue of *APS NEWS* contained an unfortunate typographical error. The fourth sentence of the second paragraph should have read, "Moreover, there is *no* evidence to suggest that the academic performance or intellectual development of high-achieving students is inhibited by placement in heterogeneous groups."

LETTERS

Council Statement Unjustly Penalizes Colorado Members

The announcement in the March 1994 issue of *APS NEWS* of the APS Council's response to the passage of Amendment 2 in Colorado presents a frightful example of the few, speaking—without expressed authority on behalf of its entire membership—in a manner which penalizes a few of us for the actions of the many. I am not condemning the Council's decision to speak out against perceived discrimination in the passage of Amendment 2; rather, I refer to its decision to disenfranchise the Colorado members of the APS from full and equal participation in our Society.

Surely Council recognized that the community in Colorado with the largest APS membership (Boulder), as well as the city of Denver, where APS meetings are likely to be held, had already passed laws pertaining to gay rights. It is surely safe to predict that most APS members in Colorado could care less about the sexual orientation of their colleagues. Does the Council actually believe that those Coloradans who voted for Amendment 2 give a fig about whether the APS holds its meetings elsewhere? Does it think that Colorado's economy will suffer from this decision? Be assured, the state's economy is already doing too well to notice.

Thus, the truly affected individuals are the nearly 700 Colorado members of the APS who are clearly being discriminated against, together with our physics graduate students. The reasoning presented by Stephen Adler regarding the need to prevent "plac(ing) those members in the position of having to risk discrimination" is specious. It is pure conjecture substituting for solid reasoning, which should have led to the conclusion that hundreds of members have become victims of the Council's blatant discrimination against them. Did the Council discourage the travel of APS members to the Soviet Union when some physicists there were truly suffering from oppression? How about condemning the participation of its

members in scientific meetings held in China?

Those familiar with Colorado should know that there exists a great number of small, conservative communities, consisting of honest folks who would likely vote the same way if a similar amendment were to reappear on a future ballot. Furthermore, it is likely that the nationally divisive issues surrounding gay rights and the perception of gays as an identified group of minorities are likely to escalate as national health care plans advance. The cost of combatting AIDS in the homosexual community has become an important political consideration for many voters, irrespective of the gay rights issue *per se*. It is viewed as an economic debate, not simply one of sexual orientation. Since science has not conclusively demonstrated that homosexuality is of purely genetic origin, there will continue to be citizens who refuse to classify gays and lesbians as a minority group. To them, the analogy is closer to alcoholism. And alcoholics, even within our membership, are not protected from "discrimination" by law if they appear intoxicated in public.

In my judgment, the APS Council is mistaken to derail itself over the complex arguments surrounding this national debate. Voters in other states, it appears, are likely to consider similar referenda.

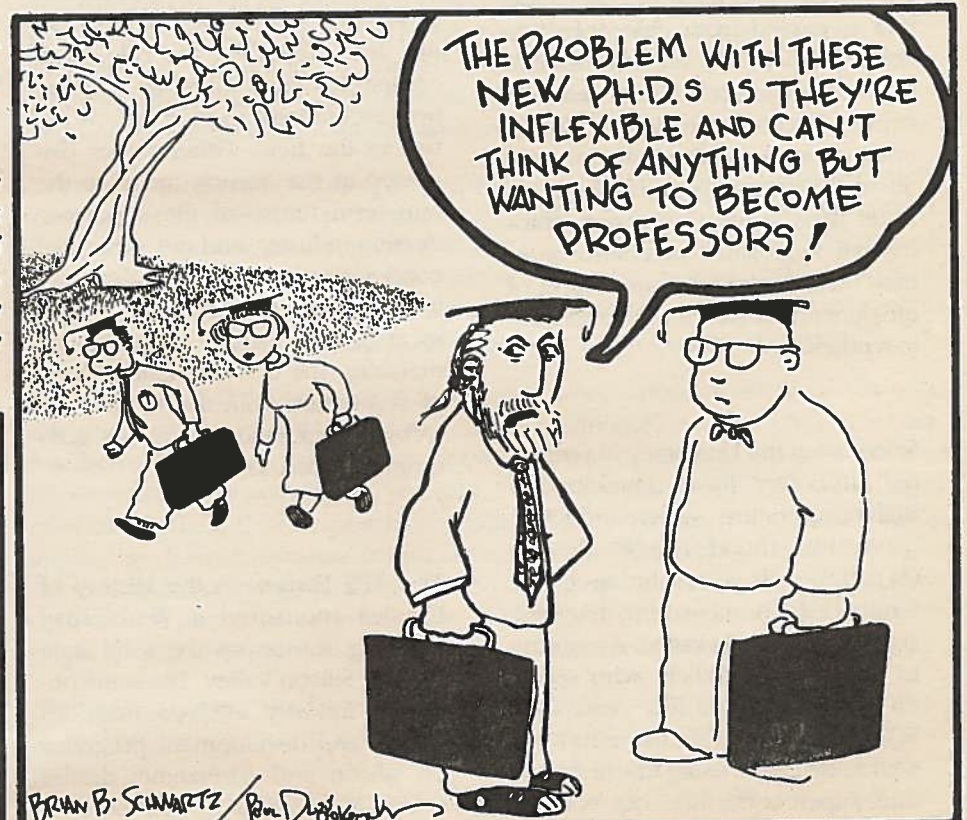
I, for one, don't wish to vote for Councilors on the basis of their "political correctness," but of their scientific competency. While it is appropriate for the collective membership to speak out on discrimination, there are better ways of combatting it than merely penalizing its own membership.

Robert C. Amme
University of Denver

Council Statement Imposes Arbitrary Political Agenda

I am appalled that according to the March 1994 issue of the *APS NEWS*, the APS Council approved a ban on holding meetings in Colorado because of a civil law in that state that does not

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provide a certain protection from something called "discrimination." The Council opposes "discrimination based on race, gender, nationality, religion, or sexual orientation." Why don't the members of the Council act like physicists instead of politicians who utter nouns without knowing what the nouns mean? What is "race," "religion," "sexual orientation"? What experiment does one perform to ascertain if a given person is a member of a listed group?

The nouns "gender" and "nationality" are fairly easy to measure. To determine gender, one could measure the subject's DNA or pull the subject's pants down and peek. To determine nationality, one performs an historical search to determine the subject's spatial coordinates at a certain time. Usually that time refers to the time of birth. Sometimes that time is when a person's nationality is changed in a court of law.

The experiments to determine the other three characteristics of a person are not clearly defined. What experiment does one perform to determine a person's race? If any reader were to measure my race, he would discover that my race is mongrel.

The last two characteristics in the Council's statement, however, deal with changeable behavior and not unchangeable properties. It is here that I am appalled because the Council is imposing its ethics on me, in violation of the unconstitutional decisions by the United States Supreme Court, where the courts have foisted their logically inconsistent "value-free neutrality" on the populace. The Court has imposed its ethical beliefs on us while denying us the freedom to do the same. The Court has implied that we as human beings are not equal intellectually because the scientific evidence does not support such equality, that we are not equal physically because the scientific evidence does not support such equality, but that we are equal ethically because the U.S. Supreme Court says so.

What experiment does one perform to determine a person's religion? You could determine historically what service, if any, the subject attended during the past weekend, but maybe the subject changed his views this morning at 9:46 A.M. What experiment would you perform to verify the change of view? If you believe that religious tolerance means the tolerance of any religious behavior, then you should investigate the Aztec and thuggee religions where human sacrifice was part of many rituals. Such behavior does not have constitutional protection. What experiment does one perform to determine a person's sexual orientation? How about determining the person's physical, social, financial, artistic, pedophilic, or bestial orientation? Maybe the subject changed his orientation this morning at 9:46 A.M. If these measurements cannot be scientifically determined, how can the law hold us accountable to such vague definitions?

Please, the Council of The American Physical Society, do two things for me. First, act like physicists and ascertain what the nouns mean before you casu-

ally use them in your condemnation. Second, do not impose your ethical standards on me and require me, regardless of my ethics, to accept behavior which is not constitutionally protected. Let physicists disseminate knowledge anywhere in the world without coupling such dissemination to an arbitrary political agenda.

Anthony J. DiStefano
University of Scranton, Pennsylvania

Council's Threatened Boycott over Homosexuality Must Be Avoided

The March issue reports Council's November resolution threatening an APS boycott of Colorado and other localities over the homosexual issue. Several APS members resigned immediately upon learning of this.

Members who don't know should learn that Colorado's new Amendment 2 (presently suspended while under legal challenge) is not an extremist measure. It doesn't deprive homosexuals of their civil rights or clap them into jail. All it says is that no Colorado city can give people protected-group status under civil-rights laws on the basis of "homosexual, lesbian, or bisexual orientation." They can only have the same rights as other people. This means, for example, that a granny landlord can give notice to a homosexual, just as she could to an active bachelor or a smoker whose life style offends her. Is this inhuman or draconian?

Council's resolution is a mistake which needs to be rectified before it becomes a major embarrassment to the Society—i.e., before we have to declare a kinetic (as opposed to potential) boycott, which may happen in several ways. (1) After a year or two, the Supreme Court may not make things easy for us. They may hold that Colorado voters do indeed have the right to govern themselves, and may uphold Amendment 2. Then we must either back down sheepishly, or swing into action to deprive Colorado voters of their rights through an economic boycott. (2) Other states and cities may pass similar legislation. Cincinnati and other cities have already done so. Are any of these now under boycott? Measures similar to Colorado's are pending in eight states. In the next state, perhaps no liberal lower-court judge will be willing to thwart the will of the voters, even temporarily. Then we'll have to boycott at once, won't we?

It annoys traditional Christian and observant Jewish members when Council takes a position encouraging homosexuality. It will be worse if the APS actually boycotts states which don't share that attitude of encouragement. We haven't boycotted cities which discourage drinking or smoking, although these are legal activities.

To save space, I'll devote the rest of this in large part to a list of questions which members can mull over before communicating with members of Council

and/or the Panel on Public Affairs. Why was this done in a star-chamber manner? Why was there no notice in *APS NEWS* or *Physics Today*? Why, were opinions not sought from members? Why was the Forum on Physics and Society bypassed, just as in Council's earlier fruitless boycott in support of the Equal Rights Amendment? Didn't we learn anything? Why was there no discussion session at an APS meeting?

Why take positions and start boycotts on such issues? We are divided on these things. Isn't it sufficient that we conduct our own activities without discrimination? Physics is what unites us.

Council's very broad resolution protects not only homosexuals, but "gender" and "sexual orientation," and it declares that we'll boycott any "locality that discriminates." Shouldn't we boycott the entire USA? The U.S. military continues discrimination against homosexuals and to some extent against women. Should we avoid meeting in any school district which refuses to hire homosexuals as elementary-school teachers? Or in any city which won't assign women to hazardous police duty? Or in the many states which still have laws against homosexual acts?

What if pedophiles and bestials come to us and demand a similar boycott? Pedophiles already have an advocacy group (NAMBLA). How could we refuse their demand under the terms of Council's resolution?

Many cities extend no explicit civil-rights protection to homosexuals, and apparently that's OK with Council. Would it then be fair to punish Denver, Boulder, and Aspen, which tried to do so but were slapped down by the state's voters? What message would this send to other cities in conservative states?

Will congresspersons and state legislators from Colorado or other states continue to support science in public universities and labs once they learn that our professional society believes that we're too good to meet in their states? Aren't we meddling in religion (as well as politics) if we take a position which contradicts traditional Christian and Jewish morality? What can Christian and Jewish physicists do? Resign? How many members will be lost as a result of this? Doesn't the APS owe more to physicists than to homosexuals? Should we punish innocent colleagues in states which will no longer be able to host meetings? Isn't this idea of a boycott contrary to the universality of science?

I hope that Council will be wise enough to pull back from this open-ended and extremist resolution before we find ourselves embarrassed, e.g., if the Supreme Court declines to pull our fat out of the fire. At the moment all of this is hardly more than lunch-table talk, but it has already provoked a few resignations. An actual boycott would be a grave matter. I urge members to make their opinions known to the President and/or Council.

James E. Felten
Greenbelt, Maryland

Colorado Boycott Further Politicizes APS

As an APS member, I wish to express a strong protest against the APS Council's decision to "boycott" the state of Colorado. It is an outrage that such a grave decision was made without input from the majority of APS members. The article in the March issue of *APS NEWS* seems to suggest that the Council's decision was based on mendacious testimony of a member of the Panel on Public Affairs, in another attempt to impose "politically correct" behavior as defined by the left wing of the academic intelligentsia.

Some professional "rights" activists complain that homosexuals do not have a privilege of special protection in Colorado. Just because the people of Colorado do not wish to bestow the status of protected minority on a particular group of people does not in itself constitute an act of discrimination against individuals.

What are we to expect next in the spectacle of politicization of the professional societies? Perhaps the Council will want to boycott the entire territory of the United States in another show of contempt for the mores of the general public?

Sergey Rudin
Union Beach, New Jersey

Patent System is Part of Job Problem

Leon Lederman is quoted in the most recent *APS NEWS* (April 1994, p.12) to the effect that the nation's long term economic and societal needs will simply not be met without funded science. If this is true, blaming the lack of proper response on Congressional ignorance cannot be all of the problem.

I submit that the culprit may be the failure of the current patent system to match its goals of promoting science for the benefit of society. If the payback to society from investment in science is large, why is it not supported as a good investment? Patents encourage gadgets but do not reward those who contribute to developments which involve a long chain but do not yield the final commercial product. The payoff from research may be large, but because of the very large reward from few, and the small reward from most, investment in research is not regarded as profitable.

Publication which contributes to a development should be rewarded. If we recognize the nature of the problem, we may be able to come up with appropriate recommendations. We cannot depend on lawyers and politicians to do this for us. Of course it would still be a struggle to get our ideas adopted, but surely this is relevant to our employment problem.

Elmer Eisner
Houston, Texas