

OPINION

APS VIEWS

New Task Force To Examine Growth of APS Journals

by Eugen Merzbacher, University of North Carolina, Chapel Hill

In 1993 the APS celebrated the one-hundredth anniversary of the *Physical Review* and reflected with justified pride on the success of the journal and its offspring, *Physical Review Letters*. In the glow of good feeling about our journals and their demonstrable effectiveness in carrying out the Society's objective ("the advancement and diffusion of the knowledge of physics") it was tempting to ignore some warning signs of a gathering storm. Reality, however, is catching up with us quickly. In the simplest terms: Our journals are threatened by their success!

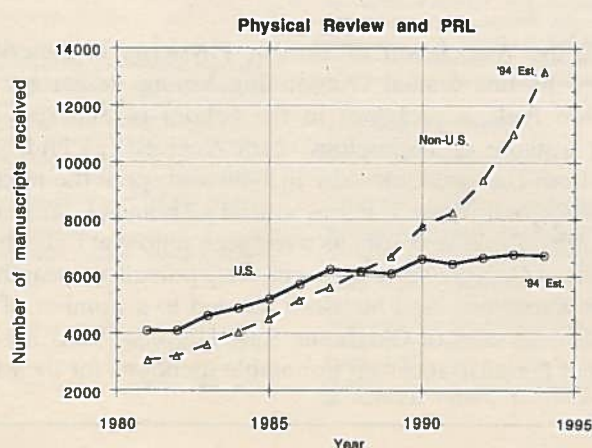
A new Task Force on the Growth of APS Journals, chaired by myself, has been asked to examine the causes of the rapid increase in volume of the *Physical Review* as a function of time, and to recommend how the Society can best deal with the problems brought on by this growth. To assess growth, the task force is using the Megacharacter (Mchar) unit which measures the number of characters that fit on the published pages of a journal annually. In the six years between 1987 and 1993, the annual volume of *Physical Review* grew from 305 to 504 Mchar, a 65% increase. Fueled by this growth and compounded by inflation, the library subscription price of all the journals together rose in the same period from \$2,885 to \$7,160, increasing about 15% per year.

Our editorial process is governed by a 1992 Council statement that proscribes the use of any means other than scientific merit as a criterion for accepting incoming papers, based on the system of refereeing by peers. This policy precludes the imposition of annual page budgets and reaffirms the principles which are responsible for the preeminence of our journals. Since acceptance rates of submitted articles have remained fairly constant and the average length of papers has not much changed, growth in submissions is the engine that drives the system. As the figure below shows, annual increases in submissions have been close to ten percent, rising from twelve thousand in 1987 to over eighteen thousand in 1993. Manuscript submissions by authors from outside the United States now exceed domestic submissions by almost 2:1. Europe and the Former Soviet Union account for half of the non-U.S. submissions, and Japan, China, and the Pacific Rim for a quarter. All geographic areas, except North America, show double-digit growth.

Why is APS worried about the obvious success of its journals, which are held in such high regard everywhere? The reasons are mundane: Although APS journals, at about \$12 per Megacharacter, remain significantly cheaper per unit of information than most other physics journals, library subscriptions show a slow but steady decline, creating a vicious circle of additional price increases and posing a threat to the Society's balance sheet. The editorial operations are experiencing extraordinary strains which, under the present policies, can be alleviated only by expanding staff and facilities. This makes sense if the publications expect to continue to operate at or above their present levels.

The bright prospects and murky uncertainties of electronic publishing loom large over all this. The fraction of papers submitted in TeX is rising every year, and soon electronic submission will be the rule rather than the exception. Electronic distribution is not far behind and is certain to affect the process of the "diffusion of the knowledge of physics" profoundly. The APS must keep faith with the growing number of physicists who regard the *Physical Review* and *Physical Review Letters* as the preferred vehicle for communicating their results, but it can do so only if there is a consensus on what indispensable values are added to a research report as it winds its way through the editorial process, from author to referee to reader. The task force is attempting to determine how APS can best serve the publication needs of its constituencies, now and in the next dozen years.

Comments on these difficult questions are invited. Please address them to any of the members of the task force: Henry H. Barschall, University of Wisconsin, Madison (barschall@uwnuc0.physics.wisc.edu); Wick C. Haxton, University of Washington (haxton@gamow.npl.washington.edu); Eugen Merzbacher, University of North Carolina at Chapel Hill (merzbach@physics.unc.edu), Chair; T. Maurice Rice, ETH Zurich (rice@itp.ethz.ch); Barrett H. Ripin, Naval Research Laboratory (ripin@cfe1.nrl.navy.mil); Jin-Joo Song, Oklahoma State University (caroljw@okway.okstate.edu); Erick J. Weinberg, Columbia University (ejw@phys.columbia.edu).



LETTERS

APS Council Acted Responsibly on Colorado Statement

I am writing in response to the letters which appeared in the June issue, criticizing the Council statement on Colorado's Amendment 2 on both procedural and substantive grounds.

Let me first address the procedural issues. There was nothing hasty, high-handed, or secretive about the Council's action, or the POPA and CIFS resolutions which initiated it. The issue of an APS action on Amendment 2 was debated at two successive POPA meetings before a POPA draft resolution was passed and transmitted to Council, and Council in turn considered the issue in a careful and deliberate fashion. The views expressed by several of the letter writers were ably aired within POPA, which, after full discussion and despite a vigorous minority opposition, approved the final resolution by a substantial, not just a bare, majority. The vote for the resolution within CIFS was unanimous. There was again a debate within the Executive Board and a vote to pass the resolution on for discussion by the full Council, which finally approved the resolution by a substantial majority (as had the Executive Board in its transmittal action). Given the democratic process by which the membership of Council and the APS committees are selected, I see no basis for the assertions by several of the letter writers that passage of the Council statement on Amendment 2 represents a minority imposing its views on the majority. To the contrary, I believe that the votes taken are representative of opinion within the Society membership as a whole.

To turn to the substantive issues, the Council action did not, as implied by Robert Amme, discourage the travel of APS members to Colorado. The article in the March issue made it explicitly clear that the Council's action referred only to *Society sponsorship* of meetings in Colorado (or other regions implementing legislation with language similar to Amendment 2), *not* to travel by APS members to Colorado to participate in the activities of local physics organizations. Thus, the Council action is consistent with earlier actions taken by the APS and allied organizations in dealing with human rights abuses in the former Soviet Union and elsewhere.

James Felten states in his letter that Amendment 2 "doesn't deprive homosexuals of their civil rights." I disagree. The essence of civil rights is equal protection under our laws; the Colorado action creates a body of citizens stigmatized by label and specifically denied the right to be eligible to seek legal redress against discrimination. If

implemented, it could have a chilling effect on the participation by homosexual APS members in APS-sponsored activities in Colorado. This is a clear-cut civil rights violation. I see no sharp distinction in principle, only shadings of degree, between the restrictions based on sexual orientation mandated by Amendment 2, the old racial segregation laws in the South, and the restrictive laws against Jews passed in the 1930s in Nazi Germany.

Admittedly, the Colorado action is not as extreme a case as the latter two examples, and only a minority of APS members are potentially affected (perhaps five to ten percent of our membership, based on figures in the latest Yankelovich poll), but we would be wise to heed the famous warning sounded by the German pastor Martin Niemoller, "When Hitler attacked the Jews I was not a Jew, therefore, I was not concerned. And when Hitler attacked the Catholics, I was not a Catholic, and therefore, I was not concerned. And when Hitler attacked the unions and the industrialists, I was not a member of the unions and I was not concerned. Then, Hitler attacked me and the Protestant church—and there was nobody left to be concerned." (Congressional Record, 14 Oct. 1968, p. 31636, cited in *The Oxford Dictionary of Modern Quotations*.)

In sum, I believe that the APS Council has acted responsibly on this issue, and that the action is fully consistent with the underlying physics mission of the APS. Any matter that affects the human rights of physicists indirectly affects the practice of our profession, and whether in our own "backyard" or abroad, is a proper Society concern.

Beyond this, we must not forget that for many of the groups which championed Amendment 2, the agenda on homosexuality is only one of several agendas. Many of the backers of the Colorado action are also campaigning to teach a literal Biblical interpretation of the origin of the Universe and of life as "creation science" in our schools. This directly concerns science, but I think that it would be dangerous for the APS to wait in speaking out until analogs of Amendment 2 are floated which attack the teaching of the standard model of cosmology or the theory of evolution. The clear lesson of history is that when basic liberties are threatened, the time to speak out is sooner rather than later. To remain silent until one's most direct core interests are threatened is to wait too late.

Stephen Adler
Institute for Advanced Study

Physics Community Should Support Council's Action

I am a second-year graduate student at the University of California at Santa Barbara. Today I picked up my copy of the June APS NEWS expecting to read about various goings-on in the physics community. I did not expect to find myself compared repeatedly to alco-

holics, pedophiles, and practitioners of bestiality and ritual murder. I had always thought that my life would have a private sphere, and that within the

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context of the physics community I would be judged on the merit of my worth and not have to contend with attacks on the most intimate aspects of my life. Now, however, I feel I have no choice but to talk frankly with the members of my professional community in order to explain why I find the remarks made by my colleagues, Robert Amme, Anthony DiStefano and James Felten, both misguided and offensive, and urge the physics community to join with me in supporting the APS Council's decision not to hold conferences in places where I and others like me are obviously unwelcome.

DiStefano asserts in his letter that homosexuality is changeable behavior which cannot be measured or scientifically determined, and therefore cannot be the subject of discrimination. Putting aside for the moment that the American Psychiatric Association concluded in January 1990 that there is no published evidence to support that any therapy can "treat" homosexuality *even in those who wish to become heterosexual*, DiStefano also claims that race and religion are not measurable. Do we then have to conclude that discrimination on the basis of race and religion cannot occur? How naive does he think we are?

DiStefano goes on to draw analogies between homosexuality and "human sacrifice" in esoteric religions. This would be laughable if, as the grandchild of Jews who narrowly escaped the Holocaust, it did not conjure up images in my mind of the blood accusations against my people in Eastern Europe: namely, that the blood of non-Jewish infants was used in Passover seders. Am I to believe that DiStefano draws such parallels lightly? To whose peril?

Amme states that as long as homosexuality is not conclusively proven to be of genetic origin, gays and lesbians cannot be considered minority groups. He is more comfortable with the comparison between homosexuality and alcoholism. Might I remind Amme that sexually compulsive behavior occurs in the heterosexual community and in the homosexual community, but characterizes neither? To the best of our research, homosexuality is immutable and in no way impairs an individual's ability to function in society. It does not matter one iota whether homosexuality is genetic or not. We define minority groups along such non-genetic lines as religion and disability.

The remark that most alarmed me was Amme's statement that he and other Americans are concerned with the "cost of combatting AIDS in the homosexual

community." Embedded in this simple statement are several dangerous assumptions. Amme implies that AIDS is a homosexual disease. AIDS does not discriminate. It affects all sexes, races and sexual orientations. Gay men (but not lesbians) are at particularly high risk if they engage in unsafe sexual practices, and as such, gay men and lesbians have taken the lead in AIDS education and care inside and outside their communities. AIDS is a quickly growing problem among heterosexuals, particularly among people of color in this country. Amme implies that AIDS patients who happen to be homosexual are not valid members of our national community and should be denied access to health care if the costs are too high. Perhaps he should collaborate with DiStefano to decide how to experimentally determine which AIDS patients should be denied medical care. Since when do we determine some sick people as being "innocent" victims and some "guilty"? Is this compassion?

Although James Felten makes similarly callous remarks, I wish to directly address only his question, "Why take positions on such issues?" How am I supposed to feel as a young physicist if my professional society holds a conference in a place which actively prevents anyone from taking an interest if I am thrown out of a restaurant or refused a hotel room? Certainly, a landlord in Colorado can throw an active bachelor out of his home for making too much noise and disturbing his neighbors, but should he or she be able to get rid of him because of a suspicion that he is heterosexual? In Colorado, under Amendment 2, a landlord could throw out a tenant under suspicion of being a homosexual. Would you expect American women physicists to attend a conference held in a country where they had to wear veils and couldn't drive? Would you expect African-American physicists to attend a conference in a country which made them carry ID cards everywhere and in which they were treated with suspicion at every road crossing? Why is it so much to ask that my professional organization take me into account when choosing where to place its conferences?

I hope this letter serves to open some people's eyes to what is at stake for the targets of the bigotry expressed in the June issue. And I hope this letter does not interfere with my aspirations in physics, or make me a target for those around me who lack the courage to try to understand me.

Michael Falk
Santa Barbara, California

A Sad Day for Physics....

The June issue of *APS NEWS* contained three letters objecting to the Council's decision to move a meeting out of Colorado. The arguments made about homosexuality are exactly those arguments made by 19th and 20th century Central Europeans concerning Jewish men and women. What is most disturbing is not merely the attitudes towards gay people, but the attitudes toward their fellow human beings, including their colleagues who are physicists. It is a very sad day indeed.

Martin H. Krieger
Los Angeles, California

It was sad to see the three negative letters in the June issue concerning the APS resolution to boycott Colorado over its anti-gay Amendment 2. There were no letters of support, but what can you expect from the membership of a society that represents an academic

field with absolutely the worst record when it comes to welcoming women and minorities? It is ironic that gay men are probably much better represented in the physics community than are other, more visible minorities. Unlike women, who undergo a daily gauntlet of discouragement, disparagement and disuasion orchestrated by their advisors and peers, gays manage to prosper in physics so long as they stick to a stealth career path.

The APS is not the only learned society sticking its neck out. Many others, such as the American Medical Association, have joined in the boycott of Colorado. I congratulate and applaud the APS decision, and I hope that they remain firm in their decision, in spite of letters of pomp and protestation.

Pat Jonson
Huntsville, Alabama

Action, Not More Studies, Needed on Jobs Problem

I found the irony in your April issue to be particularly striking: the front page article tells of the APS career workshops to help recent Ph.D.s find scarce jobs, while on the back page Sheila Tobias offers several concrete suggestions for improving the bleak job situation for physicists, and A.D. Rutenberg adds two more on the letters page. Yet when your interviewer pressed APS President Burton Richter on what the APS should do to address the employment situation, his only response—other than acknowledging that the problem exists—was to call for more studies to determine whether it is a short- or long-term problem.

I submit that we need action on these issues, not more studies. Previous studies, like that conducted by the NSF in the late 1980s, came to the erroneous conclusion that a "shortage" of scientists and engineers was looming in the near future. Reliable prediction of future economic conditions is notoriously difficult, and the objectivity of the studies can always be questioned when these perceived shortages are used as a rationale for increased research funding. Moreover, what if we undertook

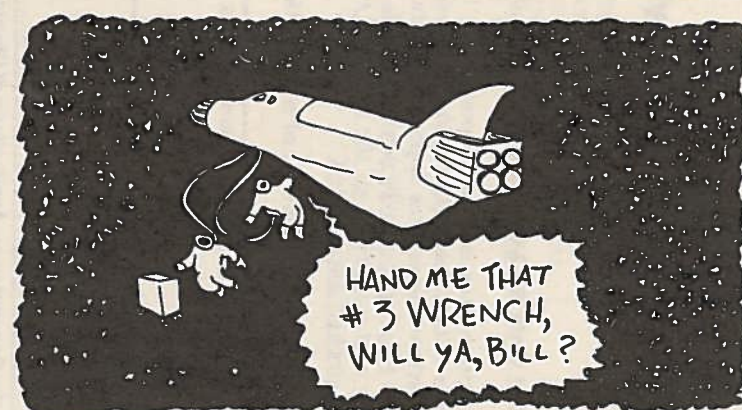
such studies and they did indicate that the current downturn is only a trough in a cyclical employment pattern? Would we then be justified in ignoring the plight of our colleagues who are currently caught in that difficult situation? I hope not. Another study of the problem will not help a single one of us land a permanent job.

Fortunately the APS has provided some mechanisms for its younger members to make an impact on the Society's programs. That is why Kevin Aylesworth and Zachary Levine were elected to the APS Council last year. Hopefully there will be more to follow, and the APS leadership will listen carefully to what they have to say. I am encouraged that the APS is trying to do something by initiating the career workshops and other activities, and by fostering discussion of these issues on the pages of *APS NEWS*. But a more active stance by the APS—and particularly its spokespeople—is needed, or else the organization will lose much of its relevance for an entire generation of scientists.

Glen Crawford
Ohio State University

Letters to the editor are welcomed from the membership. Letters must be signed and should include an address and daytime telephone number. The APS reserves the right to select and to edit for length or clarity. All correspondence regarding *APS NEWS* should be directed to:

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