

WOMEN IN PHYSICS FACE PATTERNS OF INEQUITY

I feel compelled to address a number of the issues that were raised in the letters (September 1993, page 11) responding to the article by Mary Fehrs and Roman Czujko (August 1992, page 33) on factors influencing the participation of women in physics. As an ex-chair of the APS committee on the status of women in physics (the only male to hold that post) and the current chair-elect of the forum on education, I have a high personal interest in these issues.

For many years it has been abundantly clear to me that it is not only unfair but unproductive to place women in the position of "explaining" the lower participation in physics by their gender. The problem is that virtually any *individual* story or comment can be met with criticisms such as those raised by John Wallace. While I don't doubt his sincerity and I agree with his general point that there are important issues that influence *both* men and women in career decisions, I believe it is disingenuous to assert that the general unfriendliness of the field toward aspiring women physicists has nothing to do with the problem. Some of the writings on the subject may err on the side of overstatement and ignoring other, more subtle influences, but the overriding issue, I believe, is clearly that women find themselves isolated and ignored within their chosen community.

It is certainly true that men experience many of the same kinds of rejection and isolation, or lack of reward, as women do. But—and this is the crucial difference—women experience it *all the time*. It is the *pattern* that makes the difference, not any one incident. That is precisely the reason that any anecdotal evidence is so easily discounted by those of a mind to do so. The letter from Janis Cortese demonstrates the point in ample fashion. And I'm sure that if many of the readers examine their reaction to that letter honestly, they will find that much of that reaction was based on explaining it away, not on recognizing the pattern as the

damaging influence that it is.

This sort of "pattern" influence pervades the entire sphere of gender-specific effects. It begins in elementary school and continues past grad school into the professional workplace itself, with varying degrees of overt-ness and impact. I do not regard the problems of science education for girls as separate from those of female scientists who find themselves isolated from their colleagues. There are those who are concerned about the competition from a "new" group of innovative, intelligent individuals. While I agree with Wallace that we need to be careful of overselling physics *research* as a career choice, I fail to see any connection between that and the suggestion that we should not take very seriously the need to include the best people available in the activities of our profession. To do otherwise will have lasting effects on the quality of the work that emerges as well as on the way physicists are viewed by society at large. I agree that we need to decrease the overall production of physics PhD students, but it would be a big mistake to use that need as a justification for continuing the exclusion of women.

KENNETH LYONS

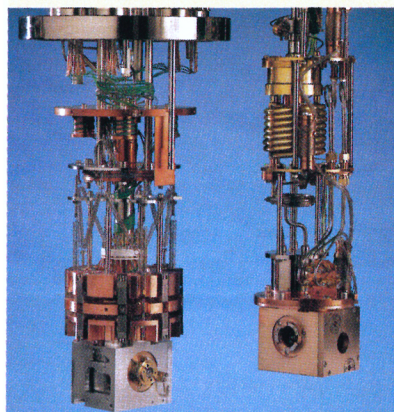
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As a partial explanation for the low number of women in physics, Joseph Ciparick mentions in both his original letter (June 1992, page 108) and in his reply to Morton and Judith Tavel (July 1993, page 116) that "game playing" is "more appealing to males." But *his own hypothesis*, that the cultural bias of a society plays a large role in determining the demographics of the resulting population of scientists, itself argues against concluding this "fact" on circumstantial evidence alone. From my perspective as a female inside the scientific community, I see no predisposition toward or against game playing among the girls and boys that I have worked with

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when both sexes are encouraged to try and both sexes are reinforced in the belief that they can succeed. Until we can either remove our cultural sexual bias or construct an experimental plan that can statistically determine the bias, the existence of a predisposition must remain an open question and cannot be assumed to be a fact. In the meantime, Ciparick introduces a "fact" that increments by one the number of microinequalities that women are consistently subjected to and that they have repeatedly reported as being a part of the largest barrier they face in science today. In short, he is part of the problem.

Further, as a fundamentalist religious person I reject his "fact" that as such I have accepted "the dogmatic authority of Scripture with no questions asked." Indeed I am as capable of discerning logical errors in my personal religious beliefs as I am of discerning Ciparick's logical errors and inconsistent arguments.

I strongly urge Ciparick and others who share his beliefs to understand in what sense such "facts" are really excuses for poor research, and poor research leads only to poor science.

LOUISE PERKINS

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Scientists Should Heed George Brown's Thesis

There is an ergodic theorem that applies to old physicists; namely, if you live long enough, everything will have happened to you. I have been a practicing scientist, the chair of a university physics department, an academic dean, a vice president and provost at several universities and the executive director of a Congressional authorizing committee with jurisdiction over virtually all Federally financed civilian R&D. I support science, big and small, with no reservation or hesitation.

From my vantage point, I have seen few legislators over the years who have been as good a friend to science and scientists as George Brown, chairman of the House Committee on Science, Space and Technology. Further, I see no one on the current scene who compares to him.

Thus I am dismayed by the apparent disgruntled rancor and sense of betrayal evinced by many in the academic community with respect to Brown's recent speeches and editorials on the role of the scientist in society. Apparently some scientists feel resentment that an enlightened representative, elected by a disparate

set of voters, does not lead a science *claque*. That should not be his role or responsibility. Personally I believe that it is *our* (the scientists') obligation to persuade Brown's colleagues, through such actions as the APS program of regular Congressional visits, that science is affordable and as close to being a panacea for society's ills as we have any prospect of finding.

I believe that Brown's thesis on the responsibility of scientists is a most appropriate injection of reality into a debate often rooted in fantasy as to what the nation must do for scientists. George Brown is a complete public servant and, at the same time, a staunch defender of science. If he has chosen to speak to us about the social responsibility that must undergird our priorities in research, we would do well to recognize that he is being pragmatic and, I might add, patriotic.

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10/93

Physicists' Long Hours Limit Job Numbers

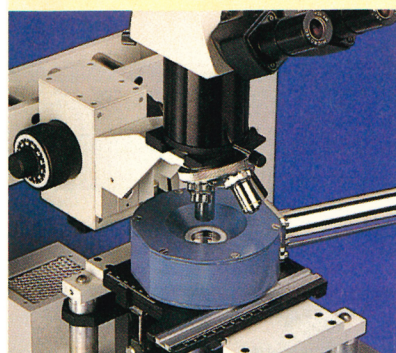
The changes in the economy of the United States and many other nations have resulted in a situation where it is difficult for physicists and engineers to find employment opportunities in industry. There have been a number of letters addressing this situation from various viewpoints in PHYSICS TODAY over the past few years, but I have not seen reference to the practice in industry of "exempting" professional salaried employees from the 40-hour week that applies to hourly wage workers. It seems to me that this practice must have a significant impact on the number of people required to carry out a development program in a specified time frame, and thus on the number of professional employment opportunities.

As a recently retired physicist, I have been a "beneficiary" of this exempt status over the past 30 years. I have worked many 60-hour weeks and sometimes went over 100 hours a week when an urgent "fix" was needed. Much of the work was interesting, and the urgency of certain schedules was evident, so I do not state this as a complaint. However, it is evident that if employers had to pay overtime for such work, and if other current disincentives to hiring additional staff were removed, significantly more technical people could be employed.

It seems to me that reducing the

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