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fast phenomena in superconducting materials; cross-phase modulation and pulse compression and amplification of ultrashort laser pulses; and ultrafast semiconductor structures, optical physics and devices. Hamamatsu has continued to support the core research at the laboratory at approximately \$200 000 annually.

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'Distinguished' Universities Redefined

The Carnegie Foundation has recently called for a broadened definition of what is acceptable scholarship for a university professor. I would like to point out that a broadened definition of what constitutes a distinguished university could well solve many of the nation's problems in higher education.

In a report entitled "Scholarship Reconsidered: Priorities of the Professoriate," the Carnegie Foundation calls for acceptable scholarship to include not only the discovery of new knowledge (that is, research) but also its integration, application and teaching. If universities could be considered distinguished for being excellent in some but not necessarily all of these areas, then not all would feel the necessity of becoming research universities. This obviously would allow some to concentrate on teaching or other areas of scholarship.

The flow of money influences the flow of events. People (including physics professors) tend to change their activities so as to intercept the flow of money. Thus Federal money means Federal control. The nation has seen this happen in detail in its subsidy of farming: The nature of farming has drastically changed. As a person who was raised on a farm, I see some similarity between what has happened to American farms and what is happening in our physics departments. The fact that there is money for research means professors are strongly encouraged to seek it. If there were money for all four of the above-mentioned areas of scholarship, things would balance out a bit. Further, since there is never going to be enough money to support all the universities that want to be research universities, something has to be done. Supporting research is very expensive. Supporting some of the other areas is not so much so.

Finally, I would like to make a plea for having the people who actually do

the jobs make recommendations on how the taxpayers' money is spent. For example, professors who are in the trenches doing the teaching should have a large say in how money to improve teaching is divided up. It is too easy to use people who are more grantsman than researcher, teacher or scholar to write the guidelines and review the proposals. At all levels of society we need to have reasonable expectations of our productive workers. There is no better way than to have the workers define those expectations.

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Fastie Spectrometer Recollections

It was a pleasure to read the piece by Bill Fastie entitled "Ebert Spectrometer Reflections" (January 1991, page 37). In the opinion of one person who was present at the creation, Fastie has always given too much credit to Hermann Ebert for the realization of the so-called Ebert-Fastie spectrometer. My solution has always been to reverse the order of the names. Indeed, I would prefer to call it the Fastie spectrometer. To those who ask how to tell the difference between an Ebert spectrometer and a Fastie spectrometer, I should explain the method that was recommended at Johns Hopkins: "The Fastie spectrometer is the one with the thumbprint on the grating."

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I read with pleasure the splendid article by William G. Fastie on the Ebert spectrometer. As he wrote in the article, I gave him a small transmission diffraction grating when he was 17 and with it he went around Baltimore looking at the spectra of neon signs and getting hooked on spectroscopy.

A few days after he got the grating, he showed me a spectrum of iron nails he had made with a spectroscopic outfit contrived from the grating, a box camera and an induction coil from a Model T Ford as a source of high voltage. Of the many spectrographs and spectrometers that benefited from his touch, including that of Ebert, this surely was one of significance.

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FASTIE REPLIES: The most significant fact is that John A. Sanderson is a

generous, kind and superb teacher.

My great and good friend Tom Donahue has confused the resurrection with the creation. I forgive him.

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Aid to Minorities and Women /s Physics Aid

There is a disturbing sentence in Alexander Kaplan's reply to a letter from Michele Kaufman (February 1991, page 120). He contrasts existing programs for aiding minorities with his proposal (October 1990, page 121) for aiding immigrant scientists: "While those programs are aimed basically at promoting *representation* of minorities in science, my proposal is meant to strengthen US *science*." The emphasis is his. No doubt he also means the reader to put some stress on "strengthen." Kaufman had pointed out that his proposal, which would amount to discrimination on the basis of national origin, would work against American blacks and women.

My understanding of the existing programs differs from Kaplan's. They aim to be fair to those who were victims of unfair discrimination, and also to *strengthen science* by attracting them. Increased representation is simply a clue that we are succeeding. Or am I wrong? Are we more concerned with statistics than with the effect on potential scientists or on science?

In 1876 Maria Mitchell, America's first woman astronomer, had something to say on the matter: "In my younger days when I was pained by the half-educated loose and inaccurate ways which we all had, I used to say, 'How much women need exact science.' But since I have known some workers in science who were not always true to the teachings of nature, who have loved self more than science, I have said, 'How much science needs women.'"¹

Reference

1. H. Wright, *Sweeper in the Sky*, Macmillan, New York (1949).

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A Thornton on EPSCOR's Side

The news story in the February 1991 issue (page 77) about NSF's Experimental Program to Stimulate Competitive Research accurately describes