editorial

Broader roles for physicists

In this issue (page 44) Ralph Alpher, Milan Fiske and Beverly Porter summarize the results of a major APS study—"The Transition in Physics Doctoral Employment 1960–1990." This study originated out of concerns expressed by Chien-Shiung Wu, as president of the APS, on this page four years ago ("Can we save basic research," December 1975, page 88). Wu explored ways of alleviating the threat posed by decreased funding to basic research and employment opportunities. Among her recommendations was the need to do "long-range manpower planning." The Physics Manpower Panel was established soon thereafter and charged with the task: "to identify and to quantify long-term trends in the supply and demands for physicists."

The manpower studies carried out by AIP for its member societies have long served as models for the other scientific disciplines. But the APS study marks the first time such an extensive effort has been initiated by an AIP member society relying on considerable contributions from both its own members and AIP's manpower staff. The APS is to be congratulated for calling attention to the fact that the health of science is closely related to the prospects (especially for young scientists) of establishing stable careers and for making this substantial effort to examine the climate of professional opportunities for its members.

What does the report tell us? The main message is that many young physicists have gone out and obtained nontraditional jobs in physics and on the whole have found them rewarding. For example, the AIP follow-up study of close to 300 untenured assistant professors who had left top physics departments for other positions found that those currently working in nonacademic institutions in areas such as engineering, computer programming, medical technology and so forth reported levels of job satisfaction equal to those who have gone to positions at other top physics departments.

In reaction to the budget crunch of the late 1960's there has often been talk on this page and elsewhere of redefining what physicists do to include nontraditional functions. Our young physicists have now actually carried out this redefinition of the physicist's role, and the APS study has documented this new and broader concept of what physicists do.

But the recent graduates have accomplished this transition out of necessity. The crucial question facing the physics community is whether new students will be attracted to the broader role by choice. The answer depends on how successful physics faculties will be in following APS's lead in recognizing, accepting and advocating this new role of the physicist that their own recent graduates have created. In the words of our authors: "It remains for the physics community to demonstrate to the physics student that physicists outside academic halls can have challenging and fulfilling lives . . ."

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