

editorial

25 years later: time of self-examination

We salute PHYSICS TODAY on its 25th birthday. In its 25 volumes it has chronicled the changes in the substance of physics, the fortunes (and misfortunes) of the physics profession, and the attitudes that both physicists and the public have held as to the value and role of physics in national affairs. In all three areas the changes have been great. The expectations in 1948 when PHYSICS TODAY was started were, as Charles Weiner describes in his article, that basic research would enjoy high national priority and that the rate of expansion of financial support would match the capacity of the scientific enterprise to absorb it. In most of the years between 1948 and the present those expectations were realized. But four or five years ago acute dislocations began to develop. As is natural when any sharp upset occurs, the first efforts of the physics community were directed toward recovering the lost equilibrium-toward simple survival. Now, as of four or five years down the road, a redirection in thinking is occurring. New modes for physicists, both in relation to their professions and to the larger society, are being thought about intensively. To the extent they prove viable, and become part of the fabric, they will result in a somewhat new way of life, not in the restoration of the old.

A remarkable fact about the current ferment is that much of the leadership is being assumed by the scientific societies. Within their councils there is now in progress a wave of self-examination directed at finding ways of broadening the scope of their services both to their members and to the Nation.

Let me be more specific as to questions the societies are putting to themselves. Those that might be termed internal to the profession include: aid in the placement of PhD's and other graduates, the monitoring of manpower, employment and funding, the redesign of graduate and undergraduate training programs for those who will enter the profession, employer-employee relations, and opportunities for the minority components. Among questions that relate to external relations are: means of advising and aiding government at all levels, furthering the public understanding of physics through the popular media and "cultural" physics courses, the means of making physics information more widely accessible across discipline lines, the matching of physics talent directly into national problems. The last mentioned is of especial interest to many physicists. Problems I have in mind are for example the deterioration of the environment, the

approaching limit to the existing sources of energy, and the concern over our world-trade position in high-technology items. Physicists in certain industrial and government laboratories have the opportunity of working on these problems. But there are many others who would like to contribute and find no ready mechanism within which they can do so. In the pattern of World War II, organizations created for the purpose—for example, the MIT Radiation Laboratory—provided such matching. Societies are wondering if now it falls to them to play a direct catalytic role of that sort.

The activities mentioned are a far cry from those for which the classical society structure was designed: publishing archival journals and holding meetings for the exchange of scientific information. In the extreme, the new activities would call for changes in charter, bylaws, staff, dues structure, even tax status. No physics societies have yet made changes that radical; nevertheless the changes being considered are serious ones. In several physics societies (and in societies in other disciplines as well) deliberations on the topics I have mentioned have been pressed to an advanced stage over the past year or two. Committee reports are available, and some changes have been put into effect. The AIP, while a federation of societies rather than a society, is as much involved and as active as any other group in self-examination. It is involved because many of the activities mentioned are common to all the societies; consequently the staff work and execution may best be done in concert, namely through the AIP. The existing manpower studies and the information program are examples.

My parting word is that it behooves every member of a society to be aware of what his society is doing and give it the benefit of his judgment. PHYSICS TODAY, the principal medium of information among the physics societies, will have a heightened responsibility in keeping all members informed as to the progress of events.

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