

# Perspectives

## Reflections: NABT—1976

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“Perspectives” is an appropriate heading for paragraphs composed by the past president of any organization. It suggests retrospect and invites prospect. A past president can certainly look back and the principal purpose for any backward glance is to clear the view ahead. This particular past president hopes that aft and fore vision can combine as *through* vision—perspective.

In recent decades biological science has changed greatly, as every reader of this journal well knows. Our science has become both the cornerstone—from the viewpoint of motivation—and the capstone—from the viewpoint of goal—in the entire human enterprise of natural science. We have not all taught from such a conviction, of course. But latterly the conviction has been creeping over the public—over engineers and lawyers, over politicians and economists.

Changes in the directions of research and concomitant changes in the interactions between research results and social responses to them must affect the ways in which biological education is pursued. And past efforts in biological education must, on the one hand, have influenced present research—through the training of investigators—and, on the other hand, it must have influenced the attitudes toward science that lead society to support the scientific enterprise. The National Association of Biology Teachers has been a part of this reciprocal relationship and it has therefore been a part of the process by which biological sciences have

gained an ascendancy among the other sciences.

Our present situation, however, engenders other problems. Recently Phillip Abelson, the editor of *Science* wrote on the problem of scientists communicating with the various publics that hold values and skills different from theirs (*Science*, 194:565, 5 November 1976.) As an example, he contrasted scientists with politicians, denigrating neither. Of the latter, he wrote, “Almost all the upper echelon politicians are intelligent, well-informed people. When they wish to, and that is most of the time, they can be completely charming. They know how . . . to establish rapport with almost anyone they meet.” That is, they are masters at establishing the bases for communicating, whether or not they have anything worthwhile to communicate. It occurs to me that the quoted sentences should also describe teachers.

The good biology teacher on any level must be able to communicate with a wide variety of students, enlisting interest, stimulating activity, and illuminating thinking. This is usual at the secondary level but, unfortunately, not so usual at the college level. The good biology teacher on any level must also appreciate the skills, the frustrations, and the values involved in biological research. Indeed, he or she should have had some first hand experience in such research. This is usual at the college level but, unfortunately, not so usual at the secondary school level.

Redress of these imbalances is required for any future improvement in communications between biologists and the various publics, because those who serve as teachers of biology on the middle echelons of the modern womb-to-tomb educational

process are in the best position to effect such improvement.

Well, what kind of perspective do these musings lead to? In looking through the 39 years of NABT history and in thinking through the deepening interaction of science and society, I am led to a profound appreciation of the wisdom of Oscar Riddle and his cooperators in establishing the National Association of Biology Teachers. But I am left with an uneasy feeling. The tasks seem too great for the frail structure of the organization. Biologists generally do not yet see the critical importance of the biological education of the whole citizenry and tend to think of biological education merely as the education of biologists. Educators generally do not see the centrality of biological sciences in all meaningful education. NABT is left with only slim support from both sides and it depends upon hand-to-mouth nourishment from a small minority of biology teachers and teaching biologists.

This situation, it seems to me, calls for simultaneous actions in three directions. Increase effort to convince biologists (*sensu stricto*) that the continuance of their research freedom and funding is dependent upon the level of biological literacy in the general population. Insist that educators recognize the importance of biological science in every aspect of the educational process. Strengthen the voice of NABT. The degree of success in the first two directions may be dependent upon success in the third. And that success can be built on two bases: a large, active membership and a firm financial support.

Have you obtained a member?

Have you contributed to the endowment fund?