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Bigotry in Science

One of the most astonishing characteristics of scientists is that some of them are plain old-fashioned bigots. Their zeal has a fanatical, egocentric quality characterized by disdain and intolerance for anyone or any value not associated with a special area of intellectual activity.

This attitude may have its beginnings in undergraduate studies; it is strongly nourished in graduate work. During this period the student is subjected to enormous pressures toward specialization. His course work is directed toward a limited area of science. His thesis research is even more strongly focused on a tiny area of inquiry. To achieve his Ph.D. degree he must work hard and spend especially long and devoted hours. He must give his graduate studies overriding priority above any other physical or intellectual pursuit. He is driven by the situation but he also must become his own most hard-eyed taskmaster. To achieve the necessary concentration of effort he uses every kind of psychological weapon on himself. One of the most useful processes is to convince himself that the area of knowledge under study is indeed the most important possible. As a corollary all other intellectual pursuits can be ignored as worthless. It is necessary for virtually all scientists to adopt such rationalizations from time to time. To achieve success one must concentrate on performing a series of specific tasks with complete rigor. Putting the blinkers on is a great help toward this accomplishment. The trick is to know how and when to take them off. One must be able to specialize but one must be able to escape the web of his own rationalizations. Many have not the will or wit to do this. Thus they are cut off from the rest of the evolving fund of knowledge. For a time such specialization has survival value after graduate school. It can lead to early establishment of a scientific reputation. In the end, however, it is often bitterly self-defeating.

A frequent consequence of bigoted overspecialization is early obsolescence. Areas of science which are at the center of the stage at one time are destined to be mined out in a few years. As the mining process nears completion many concern themselves with ever more specialized and trivial aspects. Ultimately they discover that the rest of the world has passed them by, that few others are even slightly interested in what they are doing. They face the need, first of overthrowing deep-seated prejudices and then of acquiring a whole new body of knowledge and techniques. Few succeed. Some turn sour and in effect die intellectually thirty years before they are buried.

Avoidance of bigotry carries with it important bonuses. If one is tolerant and willing to admit quality in others, the world can be a great teacher. In universities professors give guidance as to what is important and worth while. After university days, the scholar has a more difficult problem. He must become aware of the existence of an important body of information, he must somehow select that limited portion which he has time to absorb, and then he must study it. Thus he must be both professor and scholar. But if he is tolerant enough he can let the world become his professor. With some effort he can identify a host of others who have wisdom and taste. With their help he can enjoy a continuous process of self-renewal.

—PHILIP H. ABELSON