more highly bureaucratized environments of government and industry. Conflict in such situations may be fairly predictable, but it is not irreconcilable. Research of the adaptations of scientists in different organizational contexts being conducted at Stanford Research Institute under sponsorship of the Air Force Office of Scientific Research,[11] along with other studies, has pointed to a number of what we have called "adaptation mechanisms" that enable scientists to live in these strange organizational environments and, in turn, have enabled different kinds of organizations to utilize scientific products in ways that support organizational objectives and scientific interests at the same time.

Adaptation Mechanisms

Let me now describe what some of these adaptation mechanisms are and how they operate.[12] Some will be more familiar than others. I believe that an understanding of these mechanisms can provide a more sound basic background for tackling some of the more persistent and more frustrating problems that occur in the management of research organizations. We will briefly consider some of these problems later, after we have reviewed the mechanisms that enable scientists to adapt to different organizational contexts, and vice versa.

The first class of adaptation mechanism we shall call "professional adaptation mechanisms," because they permit scientists to pursue professional objectives in accord with professional values and modes of behavior in organizational contexts like government and industry. We have already pointed out that scientists tend to be different from many other kinds of employees in that they typically enter an organization with a deeply ingrained sense of what they want to do and of the conditions of employment under which they expect to do it. Scientists have been taught to value basic research--that is, research that is oriented toward making fundamental contributions to basic knowledge in their scientific fields--more highly than applied research, oriented toward the solution of practical problems of their employer. They expect to do their work with a bare minimum of direction from non-scientists; they tend to be especially jealous of what they consider to be scientific prerogatives, including a high degree of freedom in choosing the research problems they engage in, as well as a high degree of freedom in the actual day-to-day conduct of research.