

This leads us to the third area of very understandable concern to management in practically all larger government and industrial organizations, namely, how do you "couple" research and non-research activities. We may agree that research activities need to be organized differently and separately within the larger organization, but we cannot afford to neglect the translation of research findings into useful applications at every possible opportunity. We need to know much more than we now know about how to facilitate the coupling of research with nonresearch activities, but at this point we might consider the imagery of the concept of "coupling." Coupling implies the relationship of two things that retain their integrity; it contrasts with the concept of "assimilation." Thus the problem becomes, how can research activities be related to other activities without detracting from the integrity of both research and nonresearch functions?

To date, our investigations of this matter indicate several findings to bear in mind. One is that we have found that scientists employed in government laboratories who are quite professional in their attitudes and quite devoted to making basic contributions to their scientific fields also develop strong feelings of obligation for helping to translate their findings into useful applications for their employing agency. In other words, we find that most scientists, like other professionals, are very moral men when it comes to their work. The employer who allows them freedom in the pursuit of basic scientific concerns will also call forth a reciprocal obligation from scientists to spend some time considering the employer's problems also. We suspect that a more authoritarian attitude on the part of management would conversely induce scientists to have more resentment and less interest in their employer's problems.

Furthermore, we have reason to believe that the most effective interchange of ideas occurs in person-to-person contact, rather than through written communication alone, and we also know that many scientists are stimulated to higher levels of research productivity by engaging in a variety of activities, rather than being completely absorbed in one all-consuming research project. 21 Therefore, there is good reason to believe that many scientists might spend a limited amount of time in contact with non-scientists in ways that would facilitate coupling and perhaps even stimulate new research ideas. Here again, we believe that we are moving toward a better understanding of accommodation between the requirements of bureaucracy and the interests of professional scientists.

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