Research scientists: prima donnas or dedicated professionals

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IN ANY DISCUSSION INVOLVING the administration of industrial research scientists and engineers, a question usually asked by nonscientists is "why should researchers get special privileges to dress as they please, to arrive at different hours than non-researchers do, or to expect more say in the running of the organization than other non-supervisory employees?"

The implication in the question is that researchers are being treated like "prima donnas"; and that this should not be so. They should receive the same treatment that any other employee receives.

The answer to the question is in first recognizing the different orientation that engineers and scientists have compared to non-technical employees. Scientists, and to a slightly lesser extent, engineers are professionally oriented"1. look to their fellow colleagues and to their professional associations for satisfaction of their needs for self esteem and status, rather than to the organization they are currently working for. This of course is a generalization which ignores the fact that some scientists, and even more engineers, do consider their organization as a source of need satisfaction2. Also, over a period of time, a researcher can change from being "professionally oriented" to being "organizationally oriented" and vice versa. This illustrates the important fact that scientists and engineers are not a homogeneous class and that as far as possible, they must be treated on a more individual basis.

However, accepting the generali-

zation that most scientists are "professionally oriented" we find that the scientists have expectations about how they will be treated by the organization which differ from those of the management of the organization.

Some expectations which conflict with traditional organizational practices are:

- (a) To be able to perform their work in the manner they consider best, without interference from outside sources, especially non-technical ones. Traditional management would expect employees to work according to set practices.
- (b) Decisions made will be based on the weight of scientific evidence and a full knowledge of the facts. Many management decisions are not logical, and are often made on the basis of probability of outcome, not certainty.
- (c) Authority should be based on technical expertise and knowledge. Organizational authority is characteristically executive authority; it acquires its legitimacy from the mandate attached to an office or position.
- (d) Control over researchers should be vested in their colleagues (colleague control). Organizations tend to be structured hierarchically, such that control over work is lodged in the line.
- (e) The "professionally oriented" researchers expect to be able to continue their professional growth, and do not expect to be asked to do anything which would harm their professional image such as to produce substandard research, or to publish before all the information is

interpreted; for example, shortrun results versus deeply probing research. Again organizations expect employees to follow instructions.

Some of the conflicts are undoubtedly due to the educational levels reached by employees and administrators. Today, in many instances, research employees are better educated than their administrative counterparts, while traditionally, supervisors have usually had more education than subordinates.

The above areas of conflict are by no means all that exist, but they are sufficient upon which to base an answer to the question posed at the beginning of this paper.

The implication that researchers are receiving special privileges is incorrect. The unorthodox treatment, from the point of view of non-researchers, given to industrial scientists and engineers is an important and necessary method for the development of an environment conducive to high output and creativity. The researcher's main tool is his mind. Anything which is allowed to interfere with, or distract him from the work before him results in added costs to the organization in terms of delays and/or failure to solve the problems before him. This is not meant to imply that researchers should have absolute freedom which is also deleterious to creative work. but that a minimum of traditional controls should be applied.

Studies by Pelz and Andrews³, and Isenson⁴ have shown that high productivity and quality of work is inversely proportional to the degree of organizational control. Thus strict adherence to rules of

continued on page 21

See page 22 for a résumé of the author.

Are scientists prima donnas?

continued from page 38

dress and hours of work are considered by the researchers to be a hindrance to their work, and an infringement on their professional rights to autonomy.

An analogy at this point might clarify the situation.

Consider a group of employees whose job it is to construct boxes of balsa wood. Because balsa wood is so soft they can use clay hammers to drive the nails into the wood. An order for hardwood boxes is received by the company. A new, smaller group of employees is brought in. This new group of employees has special training in the use of steel hammers and are given them to use, as the clay hammers would break if they were used to drive nails into the hard wood. The old employees and some of the supervisors begin to complain that the new employees are being given special privileges, in the form of steel hammers. Obviously such complaints are not valid because the new employees have simply been given what they need in order to perform the job.

This situation in an industrial setting is the same as that found in the research situation; the so-called privileges that the researchers seek are the necessary tools, or in this case environmental conditions, needed to successfully complete difficult tasks.

Researchers expect a bigger voice than other employees have in the running of the organization because in most instances they are experts in their particular fields of study, and are therefore the most qualified persons to make any decisions involving their fields in relation to the organization.

When questions such as those discussed above are asked, the firm must take action to educate the other employees about the necessity of these seemingly unusual organizational procedures. If the firm does nothing, the productivity of the other employees may be reduced because they think they are receiving unequal treatment.

Research groups of course, are not the only ones who are engaged in non routine mental activity involving creativity. Senior managers and administrators can also be creative and thus also require an environment conducive to intellectual endeavours.

As increasing numbers of senior people in organizations come to hold post graduate business degrees I would predict that the professionalism now seen in the sciences will spread, with the result that senior managers will have a professional orientation and that the organizations which employ them will not command the loyalty they do today. This would not be detrimental to the organization as professional codes of conduct would require the professional manager to adhere to high professional standards.

In conclusion, it is important to the company to ensure that its researchers are working within an environment which supports and encourages creative thought. The company should be prepared to defend that environment from attacks from within the organization on the grounds of necessity and not privilege.

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