SELECTED REFERENCES
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RECENT STUDIES OF SCIENTIFIC RESEARCH ORGANIZATIONS AND PERSONNEL

I. Organization of Research


This monograph is based upon study of a large industrial laboratory. Data were gathered through interviews with management, supervisors who are themselves scientists, and staff scientists. The organizational structure of the laboratory and its effects upon research activities are discussed in detail. Recruitment of personnel, their initial and subsequent exposure to industrial norms, and the conflict between these and the norms of the scientific community are analyzed in terms of the adjustment process which this necessitates for both the scientist and the laboratory. A concluding section deals with strain and its resolution in an industrial research organization and presents a list of questionable management assumptions concerning scientific personnel.


This book is based upon the personal experiences of the author both as a scientist and as a research administrator. It is not an empirical investigation as such, but rather is impressionistic and suggestive of important "human" elements involved in directing scientific research. Its major contribution lies in its suggestions as to future empirical investigations in this area. The author discusses the training and recruitment of scientists, as well as their professional needs. Included in this is the question of physical facilities as well as recognition by the scientific community.

* Compiled by Myron Glazer, Research Assistant. Supplements Selected References No. 82, July, 1958.
** Items from this list should be ordered directly from the publisher. Addresses are given in connection with each reference.
2. Motivation, Evaluation, and Utilization
of Research Personnel


This study is based upon interviews with 277 professionals in ten companies. The author makes recommendations for the utilization of these employees based upon the data which are presented both statistically and illustratively in the form of direct quotations from respondents. The recommendations rest upon the evidence gathered concerning the professional needs of scientists and engineers. It is suggested that management people be aware of these needs and how they can best be met without disrupting the organization.


The report deals with environmental and social influences upon creative behavior in the industrial research laboratory. It proceeds to pose pertinent and focused questions for future study of the effect of sociological variables upon creativity based upon these factors: (1) receptivity to new ideas, (2) pressure to produce, (3) toleration of “oddballs,” (4) the freedom to choose problems and change directions, and (5) incentives for creativity.


Engineering managers in a large corporation were studied via a questionnaire method. The sample was broken down into supervisory levels for analytical purposes. The role concept of each level is presented and compared to the managers in the other levels. Their orientation as to professional and business goals, types of authority, and problems of non-supervisory engineers are presented and discussed. The findings indicate that the lowest level of management has the least positive orientation toward the company. They are at the same time most closely identified with the problems of non-supervisory engineers.


The first article deals with the reaction of auxiliary personnel to requests made by scientific personnel. These are presented in terms of their perception of scientists' appreciation of the services rendered. More importantly, the effect of communication channels utilized by scientists upon auxiliary staff attitudes is presented and analyzed. The second article is based upon responses from 338 scientists in a government organization for medical research. It discusses "how their attitudes on the adequacy of various auxiliary services are related to the central or divisional sources of services, to use of direct or indirect channels, and to use of personal and written contact."


The author presents an overview of the attempts made to isolate significant variables affecting the creative process. The findings of many researchers are briefly presented. These indicate the areas of overlap as well as the wide divergence of approach of the different social science disciplines, ranging from the purely psychological to the increasing interest in past and present social influences.


In order to obtain a series of criteria utilized by supervisors in evaluating research activity, 27 supervisors were interviewed intensively. Their responses were utilized to form a checklist of productive behavior. This was administered to a slightly larger group who were instructed to describe the behavior of the least productive and most productive scientists under their supervision. Five significant items resulted from a factor analysis of the responses. These are general productivity, affability, motivation, ability to communicate, and creative ability.

3. Role Adjustment of Scientific Personnel


The problem of "enculturation" (new learning) is the focus of this paper. More than one hundred scientists were questioned as to their initial learning experiences as they entered industrial research. While cognizant of possible conflict situations inherent in this process, the
author points up areas of convergence between business and scientific goals. He proceeds to spend the major portion of his paper discussing the scientist's growing awareness of "organizational responsibility" as well as his ability to influence and make environmental influences more predictable.

Kaplan, Norman. "The role of the research administrator." Administrative Science Quarterly (Graduate School of Business and Public Administration, Cornell University, Ithaca, N.Y.), June, 1959. pp. 20-42. $2.00.

The role of the research administrator is a relatively new one. He may be characterized as the "man in the middle." He must be aware of the needs of the company as well as those of the scientists whose work he administers. This role has inherent strains within it as the administrator attempts to meet the needs of both groups. These men generally have either a business or a scientific background. The guideposts for their behavior have yet to be firmly established. The study is enlightening because of the questions which it raises in regard to research administration itself, as well as the theoretical questions involved in role expectations and performance.


Written by a management person, this article presents a frank statement as to some of the expectations which industry has of the new scientist. This centers about role behavior rather than technical skills. The author suggests that part of this introductory learning could now be done at the university prior to employment. Thus the graduate must be ready to prove himself in an industrial setting. His Ph.D. is only an entrance requirement and must be bolstered by skills in tact and salesmanship of his ideas. As he enters industry he is more than a scientist. He is a member of an on-going organization into which he must fit.


The setting of this study is a research hospital where the role of both researcher and therapist are found in one person. The demands of each role in relation to the patient at times creates a situation of strain. To alleviate this, the role is redefined and greater emphasis is placed upon one component. This study has implications for the organizational structure in other settings as well.