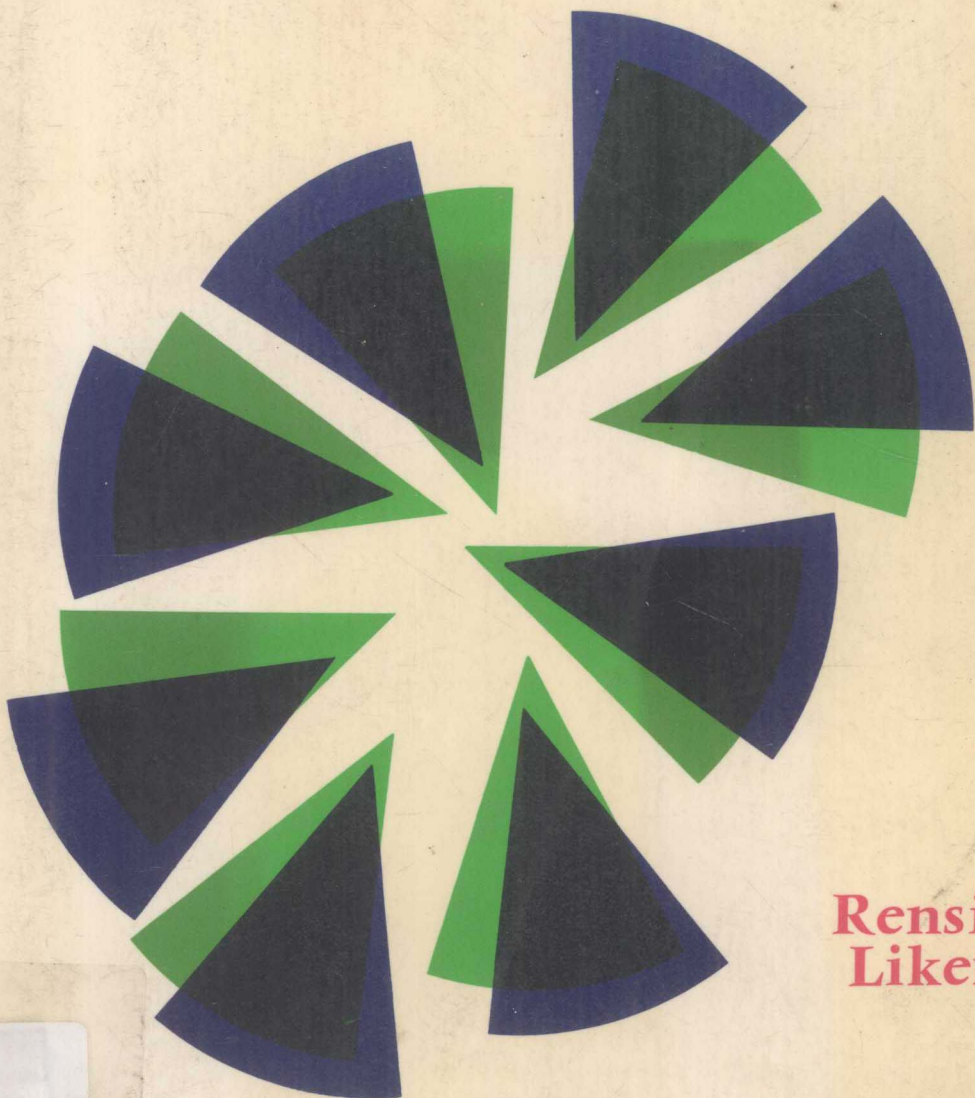


# *NEW PATTERNS OF MANAGEMENT*



**Rensis  
Likert**

*international student edition*

## **NEW PATTERNS OF MANAGEMENT**

## PREFACE

This volume is intended for persons concerned with the problems of organizing human resources and activity. It is written especially for those who are actively engaged in management and supervision and for students of administration and organization. It presents a newer theory of organization based on the management principles and practices of the managers who are achieving the best results in American business and government. It draws also upon research done in voluntary organizations.

The few partial tests of the theory suggest that important increases in organizational effectiveness and productivity can be achieved through its use. Moreover, there is evidence of increased human satisfaction for members of the organizations applying the theory.

The research upon which the proposed theory is based has been carried on intensively since 1947. It has gone forward in both centers of the Institute for Social Research, namely, the Survey Research Center and the Research Center for Group Dynamics. Brief summaries of the general pattern of the research findings are presented and used as the basis for the theory.

To maintain a relatively consistent orientation, the focus of this volume is largely on the problems of business enterprises. People interested in other kinds of institutions, such as schools, hospitals, labor unions, professional and voluntary organizations, should, however, experience no difficulty in applying the general principles of the theory to their organizations.

This volume has been made possible by the companies and other organizations in which the research was done. We who have done the research and all those who benefit from it owe a deep debt of gratitude to these companies, their managements and employees. Their generous support and wholehearted cooperation contributed indispensably to the successful conduct of the research.

At times the assistance of particular persons has been of crucial importance. For example, the entire program of research was launched in 1947 by funds provided by the Office of Naval Research under the imaginative and forward-looking leadership of Admiral Harold G. Bowen and

Captain Victor A. Conrad. The faith and courage of F. Bruce Gerhard made it possible to conduct the clerical experiment which has yielded fundamental insights. The extension of the research to include labor unions occurred because of the initiative of Joseph H. Willitts and Leland C. DeVinney of the Rockefeller Foundation.

This book draws heavily upon the research and thinking of the staff of the Institute for Social Research. Angus Campbell, Director of the Survey Research Center, and Dorwin Cartwright, former Director and now Research Coordinator of the Research Center for Group Dynamics, have provided valuable stimulation and constructive criticism. The past and present directors of the Organizational Behavior and Organizational Change Programs of research, namely, Daniel Katz, Robert L. Kahn, Stanley E. Seashore, and Floyd C. Mann, have been a major source of ideas and valuable suggestions. I have benefited greatly also from the work and advice of Alvin Zander, Director of the Research Center for Group Dynamics, and from John R. P. French, Jr., Ronald Lippitt, Donald Pelz, and Arnold Tannenbaum. Similarly, I feel a deep debt to all those other persons, some of whom are now with other institutions, who conducted or aided in the studies which I have drawn upon so extensively and which have guided my thinking. The citations and bibliography reflect the importance of their contributions.

In addition to the members of the Institute staff, many persons have read parts or all of the manuscript and have given me many excellent suggestions. Charles W. L. Foreman, S. F. Leahy, Donald Grant, Mason Haire, John Paul Jones, James Marshall, Douglas McGregor, Irwin Rose, and Robert Schwab have been especially helpful.

Jane Likert, my wife, has edited the manuscript and has significantly shortened and clarified the material presented.

Margaret M. Johnson has prepared the bibliography and index in addition to giving other indispensable help in the preparation of this volume.

Helen M. Gault, Edwin Taylor, and Russell Trubey have conscientiously reproduced copies of the chapters through what seemed to them—and to me—countless revisions. Their assistance is deeply appreciated.

For permission to quote from their publications and to use some of the material published previously I am grateful to the following: American Management Association, American Philosophical Society, American Psychological Association, Harper & Brothers, *Harvard Business Review*, Harvard University Graduate School of Business Administration, Holt, Rinehart and Winston, Inc., League of Women Voters of the United States, Life Insurance Agency Management Association, McGraw-Hill Book Company, Inc., North-Holland Publishing Co., *Personnel Psychology*, Public Service Administration, The Society for the Psychological Study of Social Issues, Tavistock Publications, and John Wiley & Sons, Inc.

*Rensis Likert*

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# Chapter I

## INTRODUCTION

Managers with the best records of performance in American business and government are in the process of pointing the way to an appreciably more effective system of management than now exists. With the assistance of social science research, it is now possible to state a generalized theory of organization based on the management practices of these highest producers. The over-all characteristics of this management system are presented in this volume.

Important forces and resources are accelerating this new development. Others are delaying it. One of the accelerating forces likely to grow in importance in the United States is the competition from the industrially developed countries throughout the world. We are already experiencing this competition and are apt to feel its effects even more acutely in the next decade. Other highly developed countries are using modern industrial technology with skills approaching ours and in some instances equal to ours. With lower labor and salary costs and other lower fixed costs, they can compete with us in world markets on very favorable terms. One way of holding a satisfactory share of the market, domestically and abroad, will be to increase the productivity of our enterprises.

One important source of increased productivity will be the full development and skillful application of the form of social organization which the highest-producing managers are using increasingly.

Another factor likely to accelerate the development of a better system of managing the human resources of an organization are certain changes taking place in the American society. Supervisors and managers report in interviews that people are less willing to accept pressure and close supervision than was the case a decade or two ago. The trend in America, generally, in our schools, in our homes, and in our communities, is toward giving the individual greater freedom and initiative. There are fewer direct, unexplained orders in schools and homes, and youngsters are participating increasingly in decisions which affect them.

These fundamental changes in American society create expectations among employees as to how they should be treated. Expectations pro-

foundly affect employee attitudes, since attitudes depend upon the extent to which our experiences meet our expectations. If experience falls short of expectations, unfavorable attitudes occur. When our experience is better than our expectations, we tend to have favorable attitudes. This means, of course, that if expectations in America are changing in a particular direction, experience must change in the same direction and at the same or at a greater rate. Otherwise, the attitudinal response of people to their experience will be unfavorable.

Another development providing impetus to the trend toward greater use of participation in business and government is the substantial increase in the educational level of the labor force. In 1940, the proportion of workers with a high school or college education was 39.1 per cent. By 1950 it had increased to 50.3 and by 1959 to 62.0 per cent. The trend seems likely to continue if one can judge by the aspirations of parents for their children's education. As people acquire more education, their expectations rise as to the amount of responsibility, authority, and income they will receive. Also, a longer exposure to the values of an educational system which places emphasis on participation and individual initiative increases the likelihood that these values will be accepted by the individual and carried over into the working situation.

Coupled with the cultural trend in American homes, schools, and communities is an increasing concern about mental health and an emphasis on the growth of individuals into healthy, emotionally mature adults. These developments are also creating pressures in business and government which may well lead to important changes in the management system. Argyris (1957c) has a volume devoted to the dilemma which management faces in endeavoring to adhere to accepted management principles and at the same time to fulfill the personality needs of the emotionally mature people which our homes and schools are trying hard to produce.

Another factor likely to accelerate the formulation and use of a newer theory of management is the growing state of readiness for it. In our interviews and discussions with middle and top management, we have been impressed with the number of people who display a restless dissatisfaction with the theories and practices prevalent today.

Finally, in the larger companies, there are increasing numbers of people with training in diverse, complex technologies and highly specialized skills and professions. The great increase in research and development, the rapid growth of new fields of engineering, such as nuclear, electronics, missiles, and plastics, the increased use of more complex forms of mathematics and statistics, and the introduction of large computers illustrate current developments. It is not at all uncommon for subordinates or staff to know far more about an important matter than does the chief. The chief, by himself, can no longer make the best decision based on the best technical

facts. The problems are often so complex that no one subordinate has all the technical information required. To marshal all the relevant information bearing on a decision, it is usually necessary to involve experts from several different fields. As a consequence, there is much greater need for cooperation and participation in managing the enterprise than when technologies were simple and the chief possessed all the technical knowledge needed. To meet the demands created by our more complex technologies and much larger and diverse enterprises, more complex systems of organizing human effort are being created. The theory proposed in this volume extends this development.

Several decades ago Taylor (1911) pointed to the fact that human variability in performance could be used to discover better ways of doing work. The social sciences and their capacity to measure human and organizational variables are making possible the extension of this fundamental idea from the organization of the work itself to the problem of building the most productive and satisfying form of human organization for conducting any enterprise.

Measurements now made available by social science research reveal that managers achieving better performance (i.e., greater productivity, higher earnings, lower costs, etc.) differ in leadership principles and practices from those achieving poorer performance. This variation reflects important differences in basic assumptions about ways of managing people.

The full significance of the contribution of the high-producing managers to the creation of a better management system is not recognized even by the managers themselves. Each has made his changes gradually over time, often by intuition and, as a consequence, tends not to be entirely aware of the magnitude of the changes he, himself, has introduced. Nor is he fully aware that his improvements and insights, and those of other successful managers as well, are beginning to form a general pattern.

Social science research is providing systematic evidence that such a pattern is emerging. It is also providing a body of organized data from which a valid statement of this better management system can be made. This volume presents a suggested formulation of this newer system.

Chapters 2, 3, and 4 summarize research findings which show the general pattern of management used by the high-producing managers in contrast to that used by the other managers. This summary of the research results is highly condensed and does not include all the qualifications that a rigorous statement of the research would require. It reflects, however, generalizations and over-all patterns which the author believes to be valid.

Attention is turned next, in Chapters 5 and 6, to a consideration of why this general pattern is not more widely recognized and accepted as the best way to manage.

Chapter 7 states a general principle of supervision which helps to



explain the causes of differing results from the same supervisory procedures. It also points to the necessity of using broad principles rather than specific procedures.

Chapter 8 presents an over-all statement of a newer management system based on a systematic integration of the principles and practices used by the high-producing managers. In Chapter 9, tests are made of some of the important dimensions of this management system.

Results of a large study of a national voluntary organization are summarized in Chapter 10. A major finding of this study is used to elaborate an important dimension of the newer management system.

Chapters 11 and 12 develop in some detail major dimensions of the proposed newer theory for organizing human behavior. Chapter 13 discusses the value of measurements of the human dimensions of an organization and the use of these measurements in operating under the newer theory.

Chapter 14 suggests that the various systems of management and control that have evolved in the course of time can be examined from a comparative viewpoint. The orderly array of relationships that appear when this comparative approach is used provides additional material to show the nature of the newer system of management and to suggest appropriate operating procedures for applying the newer theory in specific situations.

The final chapter touches briefly on some of the problems likely to be encountered in any attempt to apply the theory and suggests ways of coping with them.

Most of the research findings on which the newer theory is based have come from studies in business. But application of the theory is not limited to these enterprises. It is equally applicable to other kinds of organized human activity, such as schools, voluntary associations, unions, hospitals, governmental agencies, scientific and professional organizations, and the like. The specific procedures will vary with the organization, but the basic theory can be applied to all.

The material presented in this book draws heavily on the work of the two centers of the Institute for Social Research: the Survey Research Center and the Research Center for Group Dynamics. The over-all results of this research are, generally speaking, quite consistent with the findings of other investigators in the United States, Europe, India, and Japan. Unfortunately, it has not been possible in this volume to discuss even briefly all this other important research. References to some of it, however, will be found throughout the text. The bibliography may help also to fill in the gaps.

## Chapter 2

# LEADERSHIP AND ORGANIZATIONAL PERFORMANCE

How best to organize the efforts of individuals to achieve desired objectives has long been one of the world's most important, difficult, and controversial problems. Many people have worked hard to find better ways, but progress has been slow. In recent years, a new approach is being made based on advances in research methodology. It is now possible to measure such dimensions of organizational functioning as motivational forces, communication effectiveness, and decision-making processes. Rigorous, quantitative research can now be used in place of the cruder methods available previously. The sample-interview survey, controlled field experiments, and refined methods of statistical and mathematical analysis are some of the tools useful in such research.

The Institute for Social Research began, in 1947, a large-scale program of research, using these new methodologies to study the complex human problems of administration.<sup>1</sup> A series of related studies has been conducted to discover the organizational structure and the principles and methods of leadership and management which result in the best performance. The general design of most of the studies has been to measure and examine the kinds of leadership and related variables employed by the best units in an organization in contrast to those used by the poorest. In more recent years, some experiments have also been undertaken in companies to apply and test the findings of the earlier studies.

In carrying forward this research, several criteria have been used to evaluate administrative effectiveness. These include:

<sup>1</sup> This program was given generous support during its formative years by the Office of Naval Research. Other major sources of basic support include the Rockefeller Foundation, the Carnegie Corporation, the Schwartzhaupt Foundation, and the National Institutes of Health. Funds for numerous specific research ventures have been provided by several other foundations and by the firms and organizations in which the research was done.

- Productivity per man hour or some similar measure of the organization's success in achieving its productivity goals
- Job satisfaction and other satisfactions derived by members of the organization
- Turnover, absence, and similar measurements
- Costs
- Scrap loss
- Employee and managerial motivation

Since 1947, studies have been conducted or are now under way in a wide variety of industries: automotive, chemical, delivery service, electronics and electrical instruments, electric appliances and equipment, food, heavy machinery, insurance, paper, petroleum, public utilities, railroads, and textiles. Studies have also been made in hospitals and government agencies. Data have been obtained from tens of thousands of employees doing widely different kinds of jobs, ranging from operations involving unskilled workers to laboratories doing highly specialized scientific research.

This and the next two chapters will summarize some of the major findings of these studies. No attempt will be made to present all the results. The general conclusions, however, are supported by comparable results from other studies the Institute for Social Research has made and are consistent with the results obtained by other investigators.

### Employee-centered or Job-centered Supervision

Many companies base their operations upon theories which state that it is management's responsibility to:

1. Break the total operation into simple, component parts or tasks
2. Develop the best way to carry out each of the component parts
3. Hire people with appropriate aptitudes and skills to perform each of these tasks
4. Train these people to do their respective tasks in the specified best way
5. Provide supervision to see that they perform their designated tasks, using the specified procedure and at an acceptable rate as determined by such procedures as timing the job
6. Where feasible, use incentives in the form of individual or group piece rates

Supervisors who base their activity on this concept of management are more often found to be in charge of units producing at a *low* rather than a high level; that is, those supervisors whose units have a relatively poor production record tend to concentrate on keeping their subordinates

busily engaged in going through a specified work cycle in a prescribed way and at a satisfactory rate as determined by time standards (item 5 above).

Supervisors with the best records of performance focus their primary attention on the human aspects of their subordinates' problems and on endeavoring to build effective work groups with high performance goals.

Supervisors with the latter orientation will be called "employee-centered"; those with the former orientation will be called "job-centered." Figure 2-1 presents the findings from one study. It illustrates the pattern



Fig. 2-1. "Employee-centered" supervisors are higher producers than "job-centered" supervisors.

of results from several different studies in widely different kinds of work, such as clerical, sales, and manufacturing (Bose, 1957; Ganguli, 1957; Kahn, 1956; Katz & Kahn, 1951; Katz & Kahn, 1952; Katz, Maccoby, & Morse, 1950; Likert & Willits, 1940).

The point of view of an assistant manager of a low-production department illustrates job-centered supervision: "This interest-in-people approach is all right, but it's a luxury. I've got to keep pressure on for production, and when I get production up, then I can afford to take time to show an interest in my employees and their problems."

Contrast this with the point of view of a manager of a high-producing division (R. Likert, 1952b):

One way in which we accomplish a high level of production is by letting people do the job the way they want to so long as they accomplish the objectives. I believe in letting them take time out from the monotony. Make them feel that they are something special, not just the run of the mill. As a matter of fact, I tell them if you feel that job is getting you down get away from it for a few minutes. . . . If you keep employees from feeling hounded, they are apt to put out the necessary effort to get the work done in the required time.

I never make any decisions myself. Oh, I guess I've made about two since I've been here. If people know their jobs I believe in letting them make decisions. I believe in delegating decision-making. Of course, if there's anything that affects the whole division, then the two assistant managers, the three section heads and sometimes the assistant section heads come in here and we discuss it. I don't believe in saying that this is the way it's going to be. After all, once supervision and management are in agreement there won't be any trouble selling the staff the idea.

My job is dealing with human beings rather than with the work. It doesn't matter if I have anything to do with the work or not. The chances are that people will do a better job if you are really taking an interest in them. Knowing the names is important and helps a lot, but it's not enough. You really have to know each individual well, know what his problems are. Most of the time I discuss matters with employees at their desks rather than in the office. Sometimes I sit on a waste paper basket or lean on the files. It's all very informal. People don't seem to like to come into the office to talk.

In addition to their orientation toward employees, the performance goals of supervisors are also important in affecting productivity. Kahn (1956) found that foremen in charge of high-producing units are both employee-centered and seen by their employees as feeling that achieving a high level of production was one of the most important parts of their job. If a high level of performance is to be achieved, it appears to be necessary for a supervisor to be employee-centered and at the same time to have high performance goals and a contagious enthusiasm as to the importance of achieving these goals. Other data bearing on this point will be examined in Table 2-1, page 10.

Figure 2-2 shows that there is a marked *inverse* relationship between the average amount of "unreasonable" pressure the men in a department

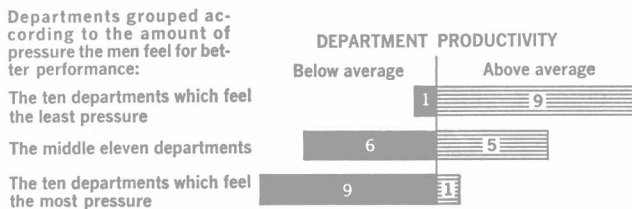


Fig. 2-2. Relationship between unreasonable pressure men feel for high performance and department productivity.

feel and the productivity of the department. Feeling a high degree of unreasonable pressure is associated with low performance, according to unpublished data from a study conducted by Stanley E. Seashore and Basil Georgopoulos. The data in Figure 2-2 are from thirty-one geographically separated departments, all of which perform essentially the same operation. The question asked was, "On the job, do you feel any pressure for better performance over and above what you, yourself, think is reasonable?" The answers could vary from "I feel a great deal of pressure" to "I feel no pressure at all." The results shown in Figure 2-2 are in keeping with the finding that low productivity is associated with job-centered supervision.

Unreasonable pressure for better performance is also associated with a low level of confidence and trust in the supervisor. The greater the

amount of unreasonable pressure the men feel from the supervisor for better performance, the less confidence and trust the men have in that supervisor.

Consistent with the inverse relationship between unreasonable pressure for better performance and the amount of work turned out is the finding that conflict between supervisors and employees is associated with low productivity. Georgopoulos (1957) found an appreciable relationship between the amount of conflict employees felt existed between them and their supervisors and the level of production of the employees. The greater the conflict was felt to be, the lower was the level of production.

### Supportive Managerial Behavior and Productivity

General rather than close supervision is more often associated with a high rather than a low level of productivity. This relationship, found in a study of clerical workers, is shown in Figure 2-3 for supervisors. Similar

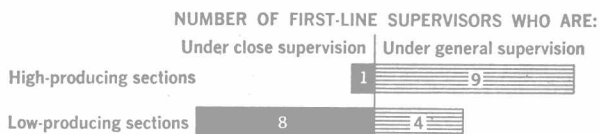


Fig. 2-3. Low-production section heads are more closely supervised than high-production heads.

results were also found for nonsupervisory employees (Katz et al., 1950). Comparable findings have been obtained in other studies. In a large public utility, for example, it was found that those supervisors who were rated as "immediately promotable" by their superiors were much more frequently seen by their subordinates as using general rather than close supervision (Mann & Dent, 1954a). The high-producing supervisors and managers make clear to their subordinates what the objectives are and what needs to be accomplished and then give them freedom to do the job. The subordinates can pace themselves and can use their own ideas and experience to do the job in the way they find works best. Supervisors in charge of low-producing units tend to spend more time with their subordinates than do the high-producing supervisors, but the time is broken into many short periods in which they give specific instructions, "Do this, do that, do it this way, etc."

The differences between these two methods can be illustrated by an example cited recently by Estes (1960), "the difference between getting a janitor to agree to keep the floors clean, as contrasted with sweeping routinely every half hour with a 20-inch broom 10 strokes to a minute."

Table 2-1 is based on data from a study of life insurance agency management. It contrasts the proportion of favorable answers about their managers made by agents in ten of the best agencies in the United States and answers obtained from ten mediocre agencies. Not all agents commented on each variable. Consequently, these data show for each variable the proportion of favorable answers of those who commented. The

TABLE 2-1 \*

RELATIONSHIP OF AGENCY PERFORMANCE TO MANAGEMENT PRACTICES SHOWN BY  
FAVORABLE COMMENTS OF AGENTS ON MANAGERS' BEHAVIOR  
IN "SUPERIOR" AND "MEDIocre" AGENCIES

Trait of manager	Favorable comments as per cent of total comments		
	"Superior" agencies	"Mediocre" agencies	Difference
Group A—The manager's attitude toward his agents:			
Unselfish in dealings with agents.....	100%	26%	74%
Cooperative with agents.....	92	35	57
Sympathetic toward agents.....	88	32	56
Interested in agents' success.....	100	54	46
Democratic toward agents.....	81	36	45
Sincere in dealings with agents.....	91	55	36
Eager to help agents voluntarily.....	70	47	23
Fair and just to all agents.....	67	48	19
Willing to help agents when requested...	96	89	7
Honest in business dealings.....	92	85	7
Group B—The manager's attitude toward the agencies' task:			
Enthusiastic about the importance of the work .....	95%	50%	45%
Group C—The manager's professional skill:			
Capable planner and organizer.....	35%	5%	30%
Capable personal salesman.....	91	67	24
Capable recruiter, trainer, office manager, etc. ....	38	22	16
Knows life insurance.....	93	85	8
Group D—The manager's personality:			
Friendly personality.....	93%	63%	30%
Has "good personality".....	95	90	5
"Fine fellow" personality.....	100	100	0

\* From R. Likert and J. M. Willits, *Morale and agency management*, Vol. II. Hartford, Conn.: Life Insurance Agency Management Assn., 1940.

greater the difference in favorable comments, the more the variable involved is associated with agency success. Those managers who are seen by their agents as "unselfish," "cooperative," "sympathetic," "democratic," and "interested in the agent's success" are much more apt to be in charge of superior agencies than are managers whose agents see them as being the opposite. "Honesty," "fairness," and "willingness to help when asked" apparently are also necessary since they have a positive relation to success even though the relationship is much less marked.

The managers in charge of the superior agencies were convinced that life insurance plays a valuable and significant role in the society and were able to transmit this conviction to their agents. Contagious enthusiasm about the importance of the work has a marked relationship to the success of an agency (Table 2-1) and points to the importance of the manager's attitudes toward the goals of the organization. A conviction that the mission or task has value adds to the likelihood of high levels of performance.

Organizational skills and technical knowledge or competence (e.g., planner, organizer, trainer, "skilled in selling," "knows life insurance") also have a positive relationship to agency success, but this relationship is less marked than with many of the human dimensions. In the studies conducted by the Institute for Social Research, there is evidence that technical competence contributes to supervisory success in situations where the job is not highly standardized. When methods departments have standardized the operation, the technical knowledge of the supervisor becomes less important in affecting the productivity of his unit.

As we have just seen, genuine interest and unselfish concern on the part of a superior in the success and well-being of his subordinates have a marked effect on their performance. This relationship is manifest in all the ways in which superiors and subordinates interact. For example, Figure 2-4, based on a study of railroad maintenance-of-way crews,

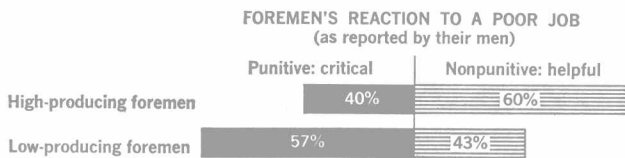


Fig. 2-4. The high-producing foreman is helpful and understanding when his men do a poor job.

shows that high-producing foremen tend either to ignore the mistakes their men make, knowing that the men have learned from the experience, or to use these situations as educational experiences by showing how to do the job correctly. The foremen of the low-producing sections, on the



other hand, tend to be critical and punitive when their men make mistakes (Katz, Maccoby, Gurin, & Floor, 1951).

Further evidence of the importance of the superior's genuine concern for the success and well-being of his subordinates comes from this same study. It was found that those superiors who take time to train subordinates for better jobs achieve a higher level of performance than those supervisors who feel that this is a waste of time or that it may result in losing able subordinates through promotion. Similarly, sincere concern by a superior in the personal problems of his subordinates is associated with high performance. It is often assumed that anything which takes a worker away from his job will reduce the amount of work he turns out. This is not always the case. Time taken from the subordinate's job to discuss his personal problems with a sympathetic superior is time well spent. It results in improved performance if the interest of the boss is viewed by the subordinate as genuine and not as an intrusion on privacy. These results are typical of the findings from many studies.

Figures 2-1 to 2-4 and Table 2-1 are based on measurements taken at a particular point in time. Consequently, they show that a relationship exists, but do not tell the extent to which one or the other variable is causal. A high-producing section, for example, may make the supervisor employee-centered, whereas a low-producing section may cause him to be job-centered. Or it may be that employee-centered supervision causes a high level of productivity. Or it may partly cause high productivity and in part be caused by it. The data in the figures do not answer this question.

Other evidence, however, suggests a tentative explanation. As supervisors are shifted from job to job, they tend to carry with them their habitual attitudes toward the supervisory processes and toward their subordinates. For example, in one of the companies involved in this research program, it was found that switching managers of high- and low-production divisions produced some interesting results. The high-production managers were found to raise the productivity of the low-production divisions faster than the former high-production divisions slipped under the low-production managers. The company, as a consequence, endeavored to raise the general level of productivity by periodically shifting the managers. It was found that each of the managers, when shifted, tended to adhere to his habitual orientation toward his subordinates, irrespective of the productivity level of his division at the time. High-producing managers maintained their employee-centered, general supervision. Low-producing managers, even when placed in charge of high-producing divisions, continued to use job-centered, close supervision. These results and data from field experiments indicate that supervisory attitudes and behavior tend to be major causal influences.