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# LEADERSHIP, EMPLOYEE NEEDS

## AND MOTIVATION

## DISSERTATION

# Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohic State University

By

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The Ohio State University 1964

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# LIST OF TABLES

Table		Pa	.ge
1.	Kuder-Richardson Reliabilities (KR-8) of Four Leadership Behavior Description Questionnaire Subscales		35
2.	Intercorrelation Among Leadership Description Questionnaire Subscales (LBDQ)	3	35
3.	Kuder-Richardson Reliabilities (KR-8) for Five Preference Inventory Subscales	3	40
4.	Intercorrelations Among Maslow Needs as Measured by the Need Preference Subscales	•	40
5.	Kuder-Richardson Reliabilities (KR-8) of Four Ideal Leader Behavior Questionnaire Subscales	e	43
6.	Intercorrelations Among Ideal Leader Behavior Description Questionnaire Subscales (ILEQ)	•	43
7.	Intercorrelations Between Preference Inventory and Ideal Leader Behavior Questionnaire Subscales	\$	44
8.	Kuder-Richardson Reliabilities (KR-8) for Five Job Inventory Subscales	•	46
9.	Intercorrelations Among Job Inventory Subscales	•	46
10.	Intercorrelations Among Need Satisfaction Dimensions	•	48
11.	Intercorrelations Among Leadership Satisfaction Dimensions	•	48
12.	Validity Coefficients for Three Self-Description Inventory Subscales	•	52
13.	Kuder-Richardson Reliabilities (KR-8) for Three Self-Description Inventory Subscales	•	57
14.	Intercorrelations Among 35 Variables	0	61

# LIST OF TABLES--Continued

....-

Table	Page	)
15.	Rotated Factor Loadings	3
16.	Pearson Product Moment Correlations Between Leadership Behavior and Motivation	3
17.	Pearson Product Moment Correlations Between Leadership Behavior and Motivation, for 44 Clerical Employees Doing Non-Routine Work	L
18.	Pearson Product Moment Correlations Between Leadership Behavior and Worker Perceived Opportunity for Need Satisfaction	5
19.	Correlations Between Leadership Behavior and Worker Need Satisfaction	5
20.	Correlations Between Perceived Opportunity for Need Satisfaction and Motivation	9
21.	Pearson Product Moment Correlations Between Need Satisfaction and Motivation	9
22.	The Relationship Between Motivation and Satisfaction with Leadership Behavior 9	1
23.	Correlations Between Initiating Structure and the Dependent Variables of Motivation and Perceived Opportunity for Need Satisfaction for High, Moderate, and Low Need Grouss	4
24.	Correlations Between Freedom of Action and the Dependent Variables of Motivation and Perceived Opportunity for Need Satisfaction for High, Moderate, and Low Need Groups	7
25.	Correlations Between Consideration and the Dependent Variables of Motivation and Perceived Opportunity for Need Satisfaction for High, Moderate, and Low Need Groups	9
26.	Correlations Between Production Emphasis and the Dependent Variables of Motivation and Perceived Opportunity for Need Satisfaction for High, Moderate, and Low Need Groups	1

.

# LIST OF TABLES -- Continued

Table		Page
27.	Pearson Product Moment Correlations Between Initiating Structure and Motivation for High, Moderate, and Low Leadership Expectation Groups	
28.	Pearson Product Moment Correlations Between Freedom of Action and Motivation for High, Moderate, and Low Leadership Expectation Groups	106
29.	Pearson Product Moment Correlations Between Consideration and Motivation for High, Moderate, and Low Leadership Expectation Groups	108
30.	Pearson Product Moment Correlations Between Production Emphasis and Motivation for High, Moderate, and Low Leadership Expectation Groups	109
31.	Comparison of Theoretical and Exact Probabilities of Obtaining Significant Correlations and Differences Between Correlations	113
32.	Correlations Between Initiating Structure and Three Dimensions of Motivation for High, Moderate, and Low Consideration	115
33.	Correlations Between Freedom of Action and Three Dimensions of Motivation for High, Moderate, and Low Initiating Structure	117

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#### INTRODUCTION

#### Historical perspective

The concern with leadership and scientific management in industry had its formal beginning in the writings of Taylor (1911) and Fayol (1930). These writers and others like them have commonly been referred to as the Functional School of Management. They were primarily concerned with the formal aspects of organization, leadership, and supervision and, hence, concentrated on formal authority and control as important facets of management. To them, employment in industry meant a legal contract between the worker and his employer. In return for economic gain, the worker owed management obedience to authority. Furthermore, good management provided for the division of labor by "function," unity of command, and an optimum span of control.

In more recent times this approach to management is reflected in the writings of Brown (1947) and Davis (1951). Brown views proper management as attention to lines of responsibility. Responsibility, to him, is the obligation incurred by the worker in return for financial renumeration. In addition, good supervision means delegation of responsibility with the proper accompanying authority and no overlap between the responsibilities of any two workers. To Davis, executive leadership involves planning, organizing, and controlling men and materials with only scant attention to the problem of morale. In

summary, the Functional School views executive leadership in highly legalistic, formal, and mechanical terms.

Behind these approaches to management lies the concept of "economic man" motivated by monetary incentives and bound legally to accept the authority of management in return for such renumeration. The model of "economic man" did not allow for social and psychological forces acting upon workers. It assumed that management could organize and control employees to enhance organizational goals, and that such manipulations would be accepted by workers without any effect on their attitudes and motivation to work.

These formulations of management theory were aimed primarily at prescription. That they were based on armchair philosophizing and little or no research became clear in time.

With Elton Mayo and the Hawthorne studies (1933), the realization came that man is motivated by social and psychological forces as well as economic forces. Productivity can be effected by workers' perception that management is interested in them, and production is restricted by social pressures to conform to certain standards.

The Hawthorne studies gave birth to the Human Relations Movement. The concern with people in industry--their needs, perceptions, attitudes, and motives--resulted in a prolifieration of research on the psychological and sociological forces in industrial organizations. Morale and job satisfaction became the watchwords of social scientists in industry, while morale and attitude surveys became common and accepted tools. Among the many studies conducted in every type of

industrial and business organization, literally hundreds were performed in an attempt to show a relationship between workers' attitudes and various dependent variables such as absenteeism, turnover, and production. And these were only a fraction of the studies performed under the banner of the Human Relations School.

To its critics, the Human Relations Movement symbolized a concern for people without organization, as the Functional School represented to its detractors a concern for organization without people. In a sense, both these criticisms were justified. The Functional School of management had been too concerned with the legal and formal aspects of organization. Their concept of "economic man" was certainly an oversimplified model of worker motivation. On the other hand, the Human Relations School had lost sight of the main goals and objectives of an industrial organization. It had not paid sufficient attention to the formal aspects of organization such as the necessity for supervision and organization of work. It forgot too quickly that motivation of the worker through non-financial incentives must still occur within the framework of a formal organization and in support of its goals.

Thesis and antithesis led to synthesis. The recognition came that economic as well as sociological and psychological forces effect worker behavior and production. It became clear that satisfaction and morale are not necessarily related to production (Brayfield and Crockett 1955), and that favorable attitudes toward management cannot be sought to the exclusion of the organization's objectives (Bennis 1959). Theory and research began to concentrate on the study of

worker attitudes and production within the framework of an organizational and leadership climate.

Several new theories of organization and management emerged which recognized the formal structure of organization and its objectives as well as the social and psychological forces that operate within this formal structure. Some of these theories have originated in empirical research, while others represent an application of broader psychological theories to the work environment. They will be reviewed briefly in an attempt to set the stage for the present study.

#### Theoretical background

Argyris (1958) views man's psychological development as an evolution from dependence to independence, passivity to activity, inflexibility to flexibility, and from subordinate to superordinate positions. His theory holds that these developments lead to a "total," healthy and "self-actualized" personality.

On the other hand, formal organizations are characterized by a chain of command, task specialization, and various devices to control its members behavior. This makes it impossible for the individual to develop into a healthy self-actualized individual. The individual's needs and the organization's demands are basically incompatible. The outcome is the attenuation of organizational goals, because defense mechanisms employed by workers reduce motivation to work.

Although Argyris has no panacea for the dilemma he poses, he does suggest that job enlargement, employee-centered supervision, and a reduction of controls might diminish the conflict between man

and organization. The implication throughout is that greater freedom will allow workers fuller personal development and self-actualization, which in turn will result in more goal-oriented behavior on the part of workers. The empirical evidence for this viewpoint is largely nonexistent (although some few studies are reported (Argyris 1959), particularly with respect to the suggestion that greater freedom from controls and structure will allow fuller development of personality and, hence, greater motivation.

Likert (1960) has developed a theory of management and organization that is motivational in its orientation. The central theme of the theory is that employee motivation and satisfaction can best be achieved through employee-centered and participative supervision. This conclusion stems from early research in group dynamics performed by Lewin and his associates as well as research conducted in industry. The research has shown that effective supervisors tend to be employeecentered rather than production-centered.

However, Likert's conclusions that satisfaction and production will always be the simultaneous result of employee-centered supervision, and that such supervision causes higher motivation are not well founded. None of the studies on which the theory is based have measured motivation directly. For this reason, Likert's conclusion that employee-centered supervision leads to higher levels of motivation is not empirically based. There is also no evidence for his conclusion that higher order need satisfaction under employee-centered supervision will result in higher motivation.

McGregor (1960) in the <u>Human Side of the Enterprise</u> recognizes the basic conflict between the worker and the formal organization. He seems aware that neither can achieve its objectives completely, but a compromise may be possible.

The theory is based on Maslow's theory of motivation (1954) which uses as its central theme the prepotency of needs. When man has satisfied lower level needs (physiological and safety), they no longer are strong motivators. Instead, higher level needs (autonomy, esteem, and self-actualization) become the main source of motivation.

Twentieth-century man, says McGregor, has by and large satisfied financial and security needs, and, since satisfied needs are not motivators, industry's attempt to motivate workers through higher pay and more benefits seems futile. But, if opportunities for the satisfaction of higher order needs can be provided the worker as part of his job, the result will be more motivated job behavior as well as higher satisfaction. That is, internalization of standards and resulting motivation will occur to the extent that control comes from within the person. Such "self-control" can be achieved under employeecentered supervision in which the worker is allowed to satisfy needs for autonomy, esteem, and self-actualization while participating in job decisions and performing his job tasks. Thus, motivated behavior will occur not because the superior orders workers to do something on the basis of reward or punishment schedules, but because the task requirements have set off autonomous motivation to do the job.

Although it seems logical to assume that ego needs are more readily satisfied under employee-centered and considerate supervision, there is no evidence to support this position. Furthermore, there is no evidence to suggest that the satisfaction of ego needs will result in higher employee motivation.

Herzberg <u>et al</u>. (1959) use empirical evidence to build a theory of employee motivation, but the gap between their empirical evidence and their conclusion is never bridged. They conclude that the factors which cause satisfaction are not the same factors which cause dissatisfaction. The satisfiers, as the former are called, are recognition, achievement, and other task and ego-oriented factors in the work environment. According to their findings, these satisfiers are often associated (in post hoc interviews) with high performance periods. From this post hoc evidence they conclude that the satisfaction of higher order needs, such as the need for recognition and achievement, results in high performance and, by implication, motivation.

Although their statement that higher order needs will be satisfied best under participative supervision seems logical, their evidence that such supervision will also result in motivation is non-existent.

In contrast to all of the above theories, Stogdill (1959) developed a theory of <u>Individual Behavior and Group Achievement</u> which is solidly steeped in research findings. It is a painstaking job of piecing research together in an attempt to identify emerging patterns. The result is a theory that, in this writer's opinion,

successfully explains some of the conflicting results that have been obtained in investigations of job satisfaction and production.

The output of organizations are group integration, production, and morale. Satisfaction of member expectations leads to group integration and conesiveness but is not related to production. Rather, production is a function of group structure as is morale (defined as group enthusiasm to achieve group goals). Thus, morale and production are positively related to satisfaction only when conditions that lead to high morale and production, namely freedom of action for group members, lead to the reinforcement of worker expectations. It is evident that Stogdill recognizes a complexity in the relationship between production, satisfaction, and morale that none of the other theorists recognize. In doing so, he does not employ Maslow's theory of motivation.

## Brief statement of problem

Most of the theories suggest, directly or indirectly, that employee-centered, participative, considerate, and relatively nonrestricted supervision<sup>1</sup> lead to the satisfaction of higher needs and

<sup>&</sup>lt;sup>1</sup>Some of these terms have been used interchangeably because they are felt to be similar conceptually and have often been used interchangeably by theorists. The leadership styles that serve as independent variables in this research are defined operationally by questionnaire items on Ohio State Leadership Scales. The dimensions to be used are Initiating Structure, Consideration, Freedom of Action, and Production Emphasis.

in turn higher employee motivation and production. Despite the unanimity of the theories, no single study has shown that these theoretical relationships really exist. Certainly, no study has presented conclusive evidence on the relationship of leadership behavior to specific need satisfactions and motivation. Maslow's theory of motivation is frequently invoked in theoretical formulations that attempt to explain why participative leadership would be most effective in motivating workers, but no rigorous evidence exists on the matter.

The problem of leadership in industry is a complex one as is apparent by now. The importance of research in this area can not be underestimated. The productivity of American industry is in part dependent on effective leadership and supervision. Certainly, the satisfaction and, perhaps, the mental health of workers is dependent to some extent on the type of supervision they receive. It is, therefore, important to determine if certain types of supervision can produce motivated behavior while at the same time providing an opportunity for the satisfaction of certain needs.

The present study will attempt to ascertain whether higher order needs, as defined by Maslow (1954), are actually better satisfied under considerate and relatively non-restrictive supervision as compared to supervision that emphasizes structure and production. Furthermore, it will attempt to find whether satisfaction of these needs results in higher motivation. Since motivation will be measured directly, this aspect of the study should be a direct test of some of the theories and concepts mentioned above and of the Maslow need

hierarchy as a useful concept in a theory of industrial motivation.

Before a more detailed statement of the problem can be made, a review is necessary of empirical literature bearing on the problem of leadership, job satisfaction, production, and motivation. There is a plethora of such research and an attempt has been made to discuss only the most important studies.

# SURVEY OF LITERATURE AND PROBLEM

It can be said that modern day leadership theory and research had its beginning with the now famous and widely quoted research conducted by Lewin, Lippitt, and White (1939). In this study the researchers used children as subjects, and found that groups under democratic leadership showed less conflict and higher sustained productivity than the groups under "laissez-faire" and autocratic leadership. However, the groups under autocratic leadership were capable of high production when the leader was present. This implies that democratic leadership, which provides some structure but places a high degree of responsibility upon group members for task decision and action, results in higher levels of internal control and motivation.

This study, because of its limited generality, should hardly be viewed as the last word in methods of industrial supervision. Yet, it has set a pattern in the thinking of some industrial psychologists who, despite some subsequent confusing and tenuous research findings, believe that "democratic" leadership and supervision is the optimum for all workers.

The translation of the Lewin, Lippitt, and White findings into an industrial setting came with Coch and French (1948) and their investigation of resistence to change at the Harwood Manufacturing

Company. These researchers had been associated with Kurt Lewin, and their research is the first reported effort to apply group dynamics techniques to industry. Their study has been the forerunner of much subsequent research into the effects of participative techniques on the performance and job satisfaction of workers.

The Harwood Manufacturing Company had been having considerable problems in making production line changes which are a frequent necessity in the garment industry. Such changes would often lead to worker resistence in the form of slow learning of the new techniques and low production for long periods after the change.

The investigators decided to employ group discussion sessions at which workers could participate in discussing and making suggestions concerning the new production line changes. Actually, there were three experimental treatments: participation groups in which workers themselves joined in the discussions, groups of representatives from different departments who were the only ones to join in the discussions, and control groups who had no participation of any kind.

The results clearly showed that workers directly involved in group participation sessions learned the new techniques faster and reached standard production levels quicker than either the workers who were represented in the participation sessions or the control groups. These results have led to endless attempts to translate the findings into some broader guidelines for supervision in business and industry. Some of these have been successful and others have not, as the discussion that follows indicates. Too often researchers have

overlooked the fact that participation in the Coch and French study was used in a particular instance of technical change which undoubtedly also led to social changes in the plant. Whether participative techniques, as used in that study, can be translated effectively and with similar results into a permanent employee-centered style of supervision is open to question.

## Leadership, group effectiveness and attitudes

One of the most extensive and rigorous studies of supervision in industry was performed by Fleishman, Harris, and Burtt (1955) at the International Harvester Company. The independent variables in this study were the supervisory climates of Consideration and Initiating Structure as measured by the Leadership Behavior Description Questionnaire. This questionnaire contains descriptions of leadership behavior to which workers respond about their supervisors. Objective criteria of absenteeism, accidents, turnover and grievances, and nonobjective criteria of attitudes toward foremen and superior performance ratings were used as the dependent variables.

The most significant results were that Consideration leads to more favorable attitudes toward foremen, lower grievance rates, and lower absenteeism (Initiating Structure had the opposite effect). However, Consideration was not associated with higher performance ratings of supervisors in all cases. Actually, Consideration was only positively associated with foremen's performance ratings (which were assumed to reflect group performance), in non-production

departments. For production departments, Initiating Structure as a style of supervision was positively related to foremen's performance ratings. This appeared to be in part related to the "demandingness" of the time schedule. That is, the more demanding the work schedule (as rated by superiors), the more Initiating Structure was used and the higher the relationship between Initiating Structure and foreman proficiency. It is possible, of course, that foremen performance ratings may only have reflected the bias of superiors and not the overall performance of the group.

In a more recent study, Fleishman and Harris (1962) replicated their findings concerning grievances. They also found a positive relationship between Initiating Structure and turnover with the opposite effects under Consideration. Furthermore, they demonstrated that these relationships are not linear but hyperbolic with extremely low Initiating Structure and Consideration not having much effect on turnover and grievances. Finally, they found an interaction between Consideration and Initiating Structure. Apparently both turnover and grievances are highest under supervisors who combine high Initiating Structure and low Consideration, while a moderate amount of Structure and high Consideration do not result in a high rate of grievances and turnover. This would seem encouraging in view of the fact that Structure was associated with high performance in the study reported earlier.

Comery, Pfiffner, and Beem (1952) found that job satisfaction and personal competence of the supervisor are not related to

organizational effectiveness in the U.S. Forest Service. But, effectiveness (as measured through ratings) was associated with supervision which is sympathetic, democratic, and keeps subordinates informed. Generally, highly effective forests were run in a businesslike and efficient manner, but not in an autocratic manner. Bass (1958), in a replication of the above study, found that supervisors who scored high on the Consideration dimension of the Ohio State Leadership Opinion Questionnaire were subsequently rated higher in effectiveness than those who were low in Consideration.

One of the most prolific sources of leadership research is the Survey Research Center at the University of Michigan. Katz, Maccoby, and Morse (1950) and Katz, Maccoby, Gurin, and Floor (1951) conducted extensive studies of leadership and supervision in an insurance company and among railroad workers. Working conditions among groups was similar; therefore, differences in productivity could only be accounted for by social factors or leadership. The leadership factors that differentiated high from low performance groups were <u>role</u> <u>differentiation</u> (more time spent on interpersonal process and none in close supervision), <u>delegation</u> (worker autonomy and relative selfdetermination), and <u>employee orientation</u> (more concern for individual goals than production). Delegation was not a statistically significant factor in the railroad study.

In a study of 742 clerical workers Morse (1953) found that superiors who supervise closely do not allow an opportunity for developing improved skills and higher aspirations. As a result,

their subordinates are better satisfied with pay and the company in general but not with the immediate work group. Furthermore, productivity was higher under supervisors who delegate, give freedom of action, exert no pressure for production, and treat subordinates in an understanding way. However, general supervision (non-close supervision) was not related to productivity in sections doing routine and monotonous work. Satisfaction was positively related to general supervision and freedom of action when workers were able to fulfill higher expectations arising from a greater degree of freedom.

Morse and Reimer (1956) tested the relationship between level of decision making in a company (the divisions used in the study were doing clerical work) and employee satisfaction and productivity. Two divisions of the company were reorganized to increase the role of the rank-and-file in decision making (autonomy program). Two other divisions were reorganized to increase the role of upper management in the decision making process (centralization program). Both treatments increased productivity, but the autonomy program increased employee satisfaction while the centralization program decreased it. Also, perceived opportunity for self-actualization increased in the groups that were given more decision making powers.

Likert (1961) found that supervisors who use group methods of supervision and have favorable attitudes toward their men achieve higher performance than supervisors who do not use such methods and have unfavorable attitudes toward their men. Indik, Georgopoulos, and Seashore (1961) found similar effects on performance under

supervisors who "go to bat" for their subordinates, recognize good performance, and communicate with them.

Schachter, Festinger, Willerman, and Hyman (1961) found that irritating and threatening treatment by superiors effected production on small parts assembly work negatively, while out of the ordinary friendliness and help had the opposite effect. These two treatments had their greatest effect when a change-over in jobs occurred. Argyle, Gardner, and Cioffi (1958) found that threatening and punitive supervision was negatively related to absenteeism and turnover. DeCharms and Bridgeman (1961), and Day and Hamblin (1961) found similar relationships between punitive and non-punitive supervision and the dependent variables of production and satisfaction.

Lawrence and Smith (1955), Mann and Baumgartel (1952), Mann and Baumgartel (1954), and Wickert (1951) found that participation and ego-involvement (similar conceptually) increased production, decreased absences, increased concern with costs, and decreased turnover respectively.

Group participation as a technique rather than a leadership style has been used in a variety of situations. It has been effective in stimulating group members to more inventive solutions in problem solving situations (Maier 1950), and in reducing halo effects in performance ratings of supervisors (Levine and Butler 1955).

In addition to those already mentioned, other researchers have found employee-centered, considerate, or participative supervision does not always lead to higher production and satisfaction, and that

structured supervision may have effects not previously anticipated. Parker (1963) reports that Consideration and Initiating Structure, as measured by the Ohio State Leadership Scales, are not related to performance (as measured by the number of pieces produced, and number of errors), but are positively related to worker attitudes. Rambo (1958) constructed a new measure of Consideration and found no relationship with rankings of supervisory effectiveness.

Dunteman and Bass (1963) found that "Task Oriented" supervisors (conceptually similar to Initiating Structure) are rated as more effective supervisors than those who are "Interaction Oriented" (conceptually similar to Consideration). Close supervision and pressure for efficiency are reported, by Patchen (1962), to increase group performance when the supervisor "goes to bat" for his workers, and when he is the source of rewards. Patchen states that close supervision may be perceived by subordinates as a demonstration of the supervisor's interest in their welfare. His findings suggest that the various measures of participative or employee-centered supervision may not always be comparable in the sense that such supervision may be perceived differently when it is accompanied by other interacting supervisory styles. Oaklander and Fleishman (1964) determined that Consideration reduces intra-unit stress and serves to harmonize relationships within the group. The exercise of Initiating Structure by the supervisor served to prevent tension and conflict arising between groups and in the case of larger organizations within groups as well. Thus, Initiating Structure can be interpreted not only as

a means of encouraging production, but also as a means of reducing intra-group stress and of protecting workers from outside interference, political influences, and arbitrary rule by higher authority.

Finally, Hutchins and Fiedler (1960) found that effective leaders of military units maintain greater psychological distance between themselves and their group.

#### Leadership and motivation

There is only one study that has attempted to measure directly the effects of leadership style on motivation. Baumgartel (1956) classified laboratory chiefs in a scientific organization into directive, participative, and "laissez-faire" groups, depending on what leadership style they displayed. They were also grouped according to task relevance, meaning the fit of the leader's skills and motivation with the primary goals of the organization. Task relevance and a participatory pattern of supervision were associated with higher motivation as measured directly by means of a four item questionnaire. Reliability and validity of the questionnaire were not discussed.

Vroom (1960) found that motivation, as measured by various supervisory ratings, was positively related to participation. The relationships were low but significant for most of the performance dimensions. However, only the performance dimension of drive seems to be conceptually related to motivation and its measurement was indirect.

# The interaction of employee expectations and leadership

Recent research seems to indicate that leadership may be subject to interaction with group member needs and expectations. Gibb (1954) concludes that leadership cannot be regarded as a unitary trait. It must be evaluated in terms of the needs, attitudes, and expectations of the followers. Effective leadership of people with certain need patterns will differ from effective leadership of people who have different need and personality patterns.

Vroom (1960) found an interaction between participation and workers' authoritarianism and need for independence. His findings were that individuals high in independence were significantly more motivated and satisfied under participative supervision than individuals low in independence. Individuals high in authoritarianism tended to be less satisfied and less motivated under participation than individuals low in authoritarianism. However, his measure of motivation leaves some doubt about his findings. In a similar study, Tannenbaum (1958) reports that subordinates response to the behavior of their superiors was influenced by their personality predisposition. Workers whose predisposition reflected a desire to participate in decisions affecting them responded favorably to an increase in participation. Those who were oriented toward dependence reacted adversely to the increase of participation.

Foa (1957) reports that worker expectations affect satisfaction with different leadership climates. Autocratic supervision was negatively related, and participative leadership was positively related to satisfaction with the supervisor. However, leaders who conformed to the expectations of their subordinates were more likely to have satisfied workers than either autocratic or democratic leaders, even when the subordinate expected and received autocratic leadership. French, Israel, and As (1960) found a similar interaction between participation and the degree to which Norwegian factory workers felt that it was "legitimate." Legitimacy effected acceptance of participation in decision-making and had subsequent effects on employee-management relations.

# The relationship between satisfaction and production

In an extensive review of past research aimed at establishing a relationship between job satisfaction and production, Brayfield and Crockett (1955) conclude that no consistent relationship exists. Some studies report positive relationships, others negative, and some no relationship. Although the investigations used a variety of measures, such varying results would not be expected if a cause and effect relationship between satisfaction and production really existed. Since no research results are available on the relationship between satisfaction of needs and motivation, studies using production as the dependent variable are the best available clue to such a relationship.

Barrett's findings (1963) indicate that "Role Agreement" (agreement between worker's and supervisor's perception of role to be played by worker) is correlated positively with job satisfaction and satisfaction with the supervisor. But, Role Agreement was not related to Performance Suitability (agreement between supervisor and worker on the way work should be done). Since Performance Suitability is conceptually related to motivation and performance, it seems clear that these are independent of satisfaction with work and the supervisor.

Katz <u>et al</u>. (1950, 1951) found that job satisfaction was negatively related to productivity among railroad workers but not significantly so in the clerical situation. Satisfaction with company and rewards was not related to productivity. Morse and Reimer (1956) also found that satisfaction and productivity were not necessarily related. In the divisions that were decentralized they found that both satisfaction and productivity went up, while in the centralized divisions productivity went up but satisfaction went down.

Georgopoulos, Mahoney, and Jones (1957) found that workers who see high production as a path to goal attainment tend to be higher producers. This relationship was even better when the goal is rated high in importance, and the worker is in a fairly free environment. Parker (1963) found that worker perception that job performance is instrumental to job security was related to productivity.

Stagner (1958) states that if morale is defined as the identity of individual and group goals, high morale will result in high motivation and production. Stogdill (1959), as it will be recalled, concluded that satisfaction and morale will be related only when the same conditions (freedom of action) that lead to morale also lead to satisfaction of worker expectations.

Thus, it seems fair to conclude that motivation and satisfaction will be positively related only when group structure and leadership climate are such that satisfaction of higher order needs can be accomplished through task oriented work.

# Studies which employ the Maslow need hierarchy

Since the present study uses the Maslow need hierarchy as a continuum of worker needs it seems appropriate to cite recent studies that have used this concept.

Porter (1962, 1963) has determined that the higher order needs of esteem, autonomy, and self-actualization tend to be viewed as more important by upper-management personnel. He also reports that satisfaction of esteem, autonomy, and self-actualization is related to level of management, whereas satisfaction of security and social needs are not so related. Self-actualization and autonomy needs seem to be the least satisfied needs at all levels of management.

Several factors could be responsible for the differences in need satisfaction between levels of management. Job complexity and scope certainly is one such factor. However, freedom of action and a tendency toward more participative supervision at higher levels of management may also be an important variable. If this latter assumption is warranted, then, differences in patterns of need satisfaction can also be expected across leadership climates at any given organizational level.

# Summary of research findings

A pattern of relationships emerges from the studies cited above even though researchers have used different subjects and different measuring instruments.

Consideration and conceptually similar supervisory styles almost always lead to job satisfaction, satisfaction with supervision, and lower absenteeism, turnover, and grievances. All these variables have been shown to be related and can be summarized as a favorable attitude toward work. Initiating Structure and similar types of supervision lead to the opposite effects. However, Consideration does not always lead to higher production, and in some types of jobs (production jobs) is negatively related to production. On the other hand, Initiating Structure and similar types of supervision have been found to be positively related to performance in certain types of settings. Certainly, the type of job may be an important determiner of which supervisory style will be most effective. Finally, there appears to be an interaction between Consideration and Initiating Structure (to use Ohio State terminology) with respect to turnover and grievances and perhaps production and motivation, although the latter has not been determined to date.

Participation may be related to motivation and there is one study that has shown this directly. Of course, all studies that show production to be a function of supervision are indirect evidence that motivation may be similarly effected. There appears to be an interaction between supervisory behavior and employee expectations which effects both satisfaction and motivation. Thus, any study dealing with the main variables has to take employee needs into consideration.

Job satisfaction is not necessarily related to production, and, therefore, satisfaction is probably not directly related to motivation. Instead, the evidence suggests that only the satisfaction of needs which could conceivably be satisfied in the process of taskoriented performance will be related to motivation and production.

Therefore, it seems reasonable to assume that only supervision which provides an opportunity for performance that is instrumental to the satisfaction of certain needs will lead to high motivation, production, and satisfaction. Other supervisory styles may result in high production or need satisfaction but not in both and certainly not in motivation. It has been suggested that considerate, participative, and non-restrictive supervision provides the opportunity for performance that is instrumental to the satisfaction of higher order needs (autonomy, esteem, self-actualization). Indeed, that has been the explanation for the relationship between such supervision and production.

There is some evidence that the satisfaction of higher order needs does tend to be greater in decentralized and non-restrictive organizational settings and at upper levels of management (which probably provide such a climate). But, no investigation has shown that higher order needs are satisfied to a greater extent under

considerate and non-restrictive supervision, and certainly no study has shown that this results in higher motivation.

## Statement of the problem

The main purpose of this study is to determine the relationships between four leadership climates (Initiating Structure, Consideration, Freedom of Action, and Production Emphasis), motivation, and the perceived opportunity for and actual satisfaction of needs on the Maslow need hierarchy (security, social, esteem, autonomy, and selfactualization). It is hypothesized that workers will perceive a greater opportunity for the satisfaction of higher order needs under Consideration and Freedom of Action than under the other two dimensions of leadership. For this reason it is also hypothesized that Consideration and Freedom of Action will be positively related to motivation. However, the actual satisfaction of needs may not be related to leadership behavior because actual satisfaction is independent of the individual's original level of expectation.

The relationship between perceived opportunity for need satisfaction and motivation will be determined as will be the relationship between actual satisfaction and motivation. Perceived opportunity for the satisfaction of higher order needs should be positively related to motivation. However, actual satisfaction of a higher order need should not be related to motivation since need satisfaction, as stated previously, is independent of the original level of the need. That is, someone may be satisfied with the amount of independence he obtains, but his need for independence may not be high enough for the need to be translated into effective motivation. On the other hand, perceived opportunity for lower level need satisfaction should not be related to motivation since the process of satisfying these needs is not instrumental to motivated performance.

It appears that the needs of workers interact with the leadership to which they are exposed. Therefore, these interactions will be subject to analysis. The interaction of each of the Maslow needs (security, social etc.) with the leadership styles will be determined. Similarly, employee expectations of specific leadership styles and their interaction with leadership behavior will also be determined. The effects of these interactions on perceived opportunity for specific need satisfactions and motivation will be measured. It is hypothesized, for instance, that individuals having a high independence need and under non-restrictive leadership will perceive a greater opportunity for the satisfaction of independence, and will also be more motivated than workers low in need for independence. On the other hand, individuals with a high need for security and under Initiating Structure will perceive more opportunity for the satisfaction security than workers low on security. However, they will not necessarily be more motivated than workers low on security because the satisfaction of security is probably not instrumental to motivated performance.

Motivation is not an easy construct to define, and there have not been many altempts to measure it directly. However, this study has attempted to do so by means of some existing scales that measure

initiative, self-assurance, and perceived occupational level. The latter is conceptually similar to level of aspiration. Most books on motivation use these terms in one form or another in their discussion of motivation. Although initiative has been shown to be related to performance in an office situation, it is not necessarily assumed that all three dimensions are highly related to performance in the jobs under consideration in this study.

Although the above are the a priori hypotheses of this study, several a posteriori analyses have been performed wherever it seemed of interest to do so. For instance, it was noted in the review of literature that Consideration and Initiating Structure have been found to interact with respect to turnover and grievances. The present study has attempted to determine whether a similar interaction exists with respect to motivation.

#### PROCEDURE AND MEASURING INSTRUMENTS

The concepts of current motivational theory provide an indispensable framework for systematic research on motives in industry and on the values of particular incentives. However, the solution to the problem of motivation (as to other psychological problems) is to be found not in theory, but in systematically designed experimental studies conducted, in so far as possible, in the industrial plant. (Viteles, 1953, p. 179)

Viteles' statement has been a guideline in this research. Maslow's theory of motivation and its adaptation by modern organizational theorists has been used as the framework of the study which was conducted in industry. It is a survey study, and questionnaires were utilized to gather all data. As such, the measures are "post hoc" and the usual problems of establishing causality are inherent in this investigation as they are in all similar research. Again, like other studies of this type, the opportunity to collect data in industry has been tempting enough to result in the inclusion of a large number of variables. Easically, however, these variables can be reduced to four broad categories: leadership behavior, worker needs and expectations, need satisfaction, and motivation.

### Setting and subjects

The study was conducted at the Nationwide Insurance Company, Columbus, Ohio. Nationwide is the second largest auto casualty company in the United States. As such it employs about 15,000

employees of which close to half are insurance agents operating in the field. This study was only concerned with the clerical force in the company.

These employees are largely female, and there were thirty different job titles in the sample of workers used. Jobs ranged from various clerking duties to key punching and secretarial work. The amount of time employees had been with the company varied from one month to twenty years; although, the largest portion of the sample had been with the company an average of one to two years.

The sample was drawn from three separate geographical locations, and was approximately evenly divided between the company's headquarters and two operating divisions in the Columbus area. It had been intended that 150 employees participate in the study, and that many questionnaires were distributed by the company's Personnel Training Department. However, only 136 of these questionnaires were returned, and of these only 129 were sufficiently complete to be used in the study. This was a large enough number to prevent any problems of bias.

The various questionnaires (see Appendix) were grouped together into a package which employees received at their desk from their supervisor or someone appointed by him. The package contained an instruction sheet informing the employee about the nature of the study and that it was being performed in cooperation with Ohio State University. Furthermore, the subject was not required to place his name, his supervisor's name, or department name on the questionnaire. Finally, upon completion each employee placed his questionnaires in

an envelope and sent them to the Personnel Training Department via the company mail. These procedures, it was felt, would assure employees that their responses would be strictly anonymous, and that the results of the study would not be used against them. Of course, certain other problems were encountered as a result of this procedure.

Due to the method of return, it was impossible to classify subjects according to work groups and supervisors. For this reason, all findings were analyzed on an individual basis. For instance, the worker's description of his supervisor's behavior was the only measure of his leadership climate. Therefore, it represents his perception of the supervisor's behavior rather than some average of several workers' perceptions. This was not felt to be a serious handicap since it is the employee's perception of the leadership climate that is most likely to affect his attitudes and behavior. Furthermore, Baumgartel (1956) conducted a study similar to this one and found that results based on group and individual analysis did not differ significantly.

One further problem was incurred due to the procedure employed. Since there was no way to identify the supervisor being described by a given employee, it was impossible to determine if the person being described was actually the person's formal supervisor (as indicated on the organization chart) or some other person further up in the chain of command, lower in chain, or in some horizontal position in relation to the formal supervisor. Such a phenomenon was observed by Fleishman, Harris, and Burtt (1955). When they asked workers to describe their supervisor, the formal leader was not always chosen as the object of description. An analysis of foremen not "bypassed" showed that they tended to stand behind their men when they were in trouble, encouraged both quantity and quality, explained the reasons for what they did, and took account of the ideas presented by workers in the group. However, the results and conclusions of Fleishman  $\underline{et \ al}$ . (1955) were based on an analysis of all foremens' behavior and not just those who were not bypassed.

This writer was warned ahead of time that such a phenomenon might also be observed in this company. It was felt by company personnel that some workers might bypass their immediate supervisor and describe the second level supervisor. They felt that in cases where this would occur the second level supervisor was probably the defacto supervisor in the sense that he distributed the work and had actual contact with the workers in day to day operations. This being the case, it was felt that no special problem would be created because the leader of interest in this study is the defacto leader whose behavior is likely to influence the dependent variables in the study, and not the formal leader who is likely to have no affect on the workers.

The biographical portion of the questionnaire had asked workers to list the number of individuals in their department. This was some indication of the number of subjects that described a second level supervisor, since only they are likely to have a large number of employees under them. Only a few individuals reported a large number of workers in their group indicating that only a few described second level supervisors.

The actual number of formal supervisors in the sample was eighteen, giving some assurance that a good cross-section of leadership behavior was obtained. The distribution of leadership behavior scores confirmed this.

As mentioned above, all data was obtained by means of questionnaires. Most of the measures used were already in existence at the time of the study. However, measures of employee needs and employee need satisfaction were developed for the purpose of this study. This was done because no carefully constructed scales of employee needs which use the Maslow paradign were in existence. The measures used, their reliabilities and validities, are discussed below.

### Leadership behavior measures

The Leadership Behavior Description Questionnaire (LEDQ)-Form XII, developed at Ohio State by Stogdill (1963), was used to measure leadership behavior exhibited by supervisors. It is an experimental revision of the leadership questionnaire used in the Ohio State Leadership Studies, and it measures twelve dimensions of leadership behavior. The earlier scale measured two dimensions, Consideration and Initiating Structure. The questionnaires were filled out by workers about the person they perceived to be their supervisor. The scores on the questionnaire then served as the estimate of that person's leadership climate. As stated earlier, this does not constitute an objective measure of leadership climate but is the employee's perceived leadership climate. The value of this kind of measure has been previously discussed.

For the purpose of this study only four dimensions of leadership behavior were measured. Their definitions follow:

- <u>Initiating Structure</u> Clearly defines own role and lets followers know what is expected.
- 2. <u>Production Emphasis</u> Applies pressure for production and output.
- <u>Consideration</u> Regards comfort, well being, status and contributions of followers.
- 4. <u>Freedom of Action</u> Allows followers scope for initiative, decision and action.

Each of the subscales measuring these leadership dimensions has ten items (Appendix A) and their reliabilities, for the present sample, are presented in Table 1. The intercorrelations of the scales, for this sample, are presented in Table 2. As is clear from the table, Freedom of Action and Consideration are not independent. The same is true of Initiating Structure and Production Emphasis, but the correlation of .37 is not too high when compared with the same relationship obtained in other studies. There is an interesting relationship between Initiating Structure and Consideration. These dimensions are generally unrelated or negatively related. However, in this situation supervisors who tend toward Initiating Structure also seem to be somewhat Considerate, but the relationship is not high. Because of the positive effects of Consideration on job satisfaction and the positive effects of Initiating Structure on production, this is a behavior pattern often aimed at by management training courses.

### KUDER-RICHARDSON RELIABILITIES (KR-8) OF FOUR LEADERSHIP BEHAVIOR DESCRIP-TION QUESTIONNAIRE SUBSCALES\*

Subscales	Reliabilities
Initiating Structure	•73
Freedom of Action	•76
Consideration	•83
Production Emphasis	•76

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\* Reliabilities were computed on the sample of 129 clerical employees used as subjects in this study.

### TABLE 2

# INTERCORRELATION AMONG LEADERSHIP BEHAVIOR DESCRIPTION QUESTIONNAIRE SUBSCALES (LEDQ)

		Subscales						
	Subscales	1	2	3	4	Mean	Standard Deviation	
1. 2. 3. 4.	Initiating Structure Freedom of Action Consideration Production Emphasis		.14	.22 .50	.37 16 20	41.4 35.6 37.6 36.3	4.5 5.9 6.7 6.4	

### Measures of employee needs and expectations

Expectation is defined by Stogdill (1959) as readiness for reinforcement. In this respect the concept is quite similar to the usual definition of the term need. However, to this writer need has a broader connotation and does not necessarily imply specific goals. On the other hand, the term expectation implies a need for a specific reinforcer. Using these two terms in the manner just described, measures of both needs and expectations were utilized in this study.

### Development of a Maslow Need Scale

Lists of worker needs have been used by many previous researchers in industry. The problem has been that such lists can be unending and usually differ from investigation to investigation. Maslow (1954) has simplified the concept of needs by dividing needs into categories or levels in a need hierarchy. This hierarchy is central to his theory which states that lower level needs must be satisfied before higher needs on the hierarchy become effective energizers of behavior. This prepotency paradigm has been used in several theories of industrial motivation as was pointed out earlier. But, good measures of these needs do not exist. Porter (1962) has developed a twelve item scale which has some face validity. However, no reliabilities are reported, and indeed one need is measured by only a single item.

A Preference Inventory (Appendix B) was developed which measures needs on the Maslow need hierarchy. The scale is composed of five subscales, each measuring one need in the Maslow hierarchy and each containing six items.

A large list of items was compiled from various studies of worker needs and attitudes including Porter (1962) and Herzberg <u>et al.</u> (1957, 1959). In modified form, these items served as a pool from which the final set of items were drawn. Seven graduate students in psychology were employed as judges and were asked to group the items into five categories representing a modified Maslow need hierarchy. Whereas Maslow describes a physiological need level, it was felt that these needs are not of any great importance to a theory of industrial motivation. For this reason, the category was dropped. On the other hand, the category of ego needs was divided into two categories, esteem and autonomy needs.

The judges were presented with the following definitions of the need categories (Maslow, 1954):

<u>Security Needs</u>: The desire for a predictable, structured, and reliable environment. The desire for "fairness," and a familiar non-threatening environment.

<u>Social Needs</u>: The desire for belonging. The desire for association, for acceptance by one's fellows, for giving and receiving friendship and love.

Esteem Needs: The desire for reputation or prestige (defining it as respect or esteem from other people), status, dominance, recognition, attention, importance, or appreciation. A desire for esteem from others. <u>Autonomy Needs</u>: The desire for independence and freedom. The desire for achievement, competence, mastery, adequacy, and confidence. The desire for self-respect and self-esteem based on one's own opinion of oneself as reflected in the specific factors just listed.

<u>Need for Self-Actualization</u>: The desire to realize one's own potential. The desire for growth and self-development, and the desire to become everything that one is capable of becoming.

When judges were unable to place an item in one of the five categories, they were permitted to leave it unclassified. Despite the fact that the items reflected the work situation only, few judges had difficulty classifying the items into the general categories defined above. Seventy items, out of the original 100 or more items, were retained on the basis that six out of seven or all of the judges had agreed on its classification.

It had been decided earlier that some sort of ranking procedure would be used on the final scale so that variability in each of the need dimensions would be insured. People might have the tendency to say that all needs are equally important to them. Ranking, it was felt, would force meaningful variability that might otherwise not be obtained. Furthermore, Maslow's theory assumes a prepotency of needs, and this procedure would be appropriate on theoretical grounds.

For these reasons, it was decided to arrange items into sets of five with each item in the set representing a different need level. Since it was important that the items in each set be ranked on the

basis of the need they represent rather than their general desirability and preference value, some procedure had to be devised for equating items according to desirability. That is, even though items were part of the same need classification it did not mean that they were also equal in their importance to workers.

To obtain an estimate of item desirability, eight judges were asked to rate each of the remaining seventy items in terms of the percentage of clerical workers that they felt would select the item as being very important to them. An estimate of rater agreement was obtained by intercorrelating the ratings of the eight judges, obtaining an average correlation by means of the Fisher transformation, and "stepping" this up by means of the Spearman-Brown Prophecy Formula. The average correlation among raters, "stepped" up eight times, was .87.

The final items were selected in a way that made it possible to group them into sets that were fairly homogeneous in mean preference value. Where possible, items that had high variability were discarded. Thus, the final items represent those on which raters could agree in terms of need classification and desirability value. Items in each set, therefore, represent the five different need categories, but they are homogeneous in terms of degree of importance to workers. Subjects were asked to rank the items in each set according to their importance to them. Subscale total scores were computed by adding the ranks assigned to the items in each need category.

Reliabilities, computed by Kuder-Richardson Formula 8, are reported in Table 3. These were computed on the sample of clerical

### KUDER-RICHARDSON RELIABILITIES (KR-8) FOR FIVE PREFERENCE INVENTORY SUBSCALES\*

Subscales	Reliabilities
Security	.71
Social	•75
Esteen	.67
Autonomy	•74
Self-Actualization	•74

\* Reliabilities were computed on this study's sample of 127 clerical employees.

### TABLE 4

### INTERCORRELATIONS AMONG MASLOW NEEDS AS MEASURED BY THE NEED PREFERENCE SUBSCALES\*

				Subsca		Standard		
مىرىن <del>مەر</del> ىچى	Subscales	1	2	3	4	5	Means	Deviations
1.	Security		19	27	16	37	21.7	4.2
2.	Social			.39	.07	29	19.5	4.1
3.	Esteem				43	.02	20.0	4.5
4.	Autonomy					34	16.9	4.2
5.	Self-Actualization						11.9	4.0

\* Low scores mean a higher level of need.

workers used in this study. The intercorrelations of the five Preference Inventory subscales are presented in Table 4. By and large these subscales are fairly independent. It should be remembered that subjects were forced to rank items in each set. This is responsible for the negative correlations that appear in Table 4. It is possible that a technique that did not force subjects to rank items would result in completely orthogonal subscales. In any case the magnitude of these correlations should not be taken as a final indication of the relationships between these a priori factors. However, it is interesting to note that, with few exceptions, the forced relationships are in the expected direction. The lowest need and the highest need level have the highest negative correlation and so on. An exception is the correlation between the Esteem and Autonomy subscales which have the highest negative correlation in the table. Generally, it would appear that workers who are forced to arrange needs in a hierarchy do tend to arrange them in the way Maslow predicts they would.

### Measuring Expectations of Leadership Behavior

Expectations of specific leadership styles were measured by means of the Ideal Leader Behavior Questionnaire (ILEQ). This questionnaire (Appendix C) utilizes the same items found in the LBDQ. But, the wording of the items is changed a little to reflect the purpose of the questionnaire, namely, to ascertain what the worker perceives as ideal leadership. Thus, this questionnaire provided a means of determining workers' expectations with respect to the four leadership dimensions of interest in this study. It

was thought that these expectations would interact with the actual leadership behavior perceived by the worker, and that they could be more easily interpreted than the interaction between Maslow needs and leadership behavior. Reliabilities of the ILEQ subscales are shown in Table 5. Intercorrelations among the ILEQ subscales are presented in Table 6. The pattern of these intercorrelations is quite similar to that obtained in the correlation matrix of the LEDQ subscales.

#### Correlating Expectations and Needs

From the correlations between the ILBQ subscales and those of the Preference Inventory (Table 7), it is evident that they are largely independent of each other. The only exceptions of interest are the correlations between Autonomy and Freedom of Action which, as one might expect, correlate .31, Freedom of Action and Security which correlate -.22, and Initiating Structure and Security which correlate .19. On the whole, the expectations and needs measured in this study are independent and might be expected to interact differently with the four dimensions of leadership behavior.

#### Measures of satisfaction

Two types of satisfaction measures were employed in the present study. The first is the perceived opportunity to satisfy needs, and the second is the actual satisfaction of needs.

Perceived opportunity to satisfy Maslow needs is measured by the Job Inventory (Appendix D). This questionnaire is basically the same as the Preference Inventory which was developed to measure

### KUDER-RICHARDSON RELIABILITIES (KR-8) OF FOUR IDEAL LEADER BEHAVIOR QUESTIONNAIRE SUBSCALES\*

Subscales	Reliabilities
Initiating Structure	.76
Freedom of Action	.72
Consideration	.70
Production Emphasis	.73

\* Reliabilities were computed on the sample of 129 clerical workers used as subjects in this study.

### TABLE 6

# INTERCORRELATIONS AMONG IDEAL LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE SUBSCALES (ILBQ)

		Subscales						
	Subscales	1	2	3	4	Mean	Standard Deviation	
1. 2. 3. 4.	Initiating Structure Freedom of Action Consideration Production Emphasis		.13	.18 .38	.45 .18 .08	44.3 36.6 42.9 37.0	3•4 5•4 4•6 5•0	

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# INTERCORRELATIONS BETWEEN PREFERENCE INVENTORY AND IDEAL LEADER BEHAVIOR QUESTIONNAIRE SUBSCALES

Subscales	Security	Social	Esteen	Autonomy	Self- Actualization
Initiating Structure	.19	30	.07	04	•06
Freedom of Action	22	03	07	.31	.00
Consideration	16	.01	.07	•05	.01
Production Emphasis	<b>.</b> 06	13	.11	10	•06

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employee needs. The wording of the items was changed to reflect the situation on the job rather than the abstract need. Workers were asked to rank items in each set according to the degree to which they reflected the job situation. The total score for each need category is the sum of the ranks assigned to items in that category.

Reliabilities of the Job Inventory subscales were computed by means of Kuder-Richardson Formula 8 and are reported in Table 8. Intercorrelations among the subscales are reported in Table 9. The pattern of correlations is similar to that of the Preference Inventory subscales, but the correlations are generally higher. Thus, the perceived satisfaction dimensions are not independent. Again, it will be recalled that workers had to rank items, and that this resulted in the lack of independence between certain need satisfaction dimensions. Therefore, the magnitude of the correlations should not be generalized outside the immediate bounds of this study. Another procedure that did not force ranking might have resulted in a different set of relationships.

Once again, it is interesting to note that when subjects were forced to rank the needs in terms of satisfaction the resulting pattern of correlations is what would have been predicted. That is, perceived opportunity to satisfy the lowest level need and perceived opportunity to satisfy the highest level need show the highest negative correlation and so on.

A measure of actual satisfaction of needs and expectations was obtained by subtracting the need and expectation scores from the

# KUDER-RICHARDSON RELIABILITIES (KR-8) FOR FIVE JOB INVENTORY SUBSCALES\*

Subscales	Reliabilities
Security	•65
Social	.77
Esteen	.68
Autonomy	.67
Self-Actualization	.78

\* Reliabilities were computed on this study's sample of 127 clerical employees.

### TABLE 9

# INTERCORRELATIONS AMONG JOB INVENTORY SUBSCALES\*

			Standard					
	Subscales	1	2	3	4	5	Means	Deviations
1.	Security		.11	34	21	51	19.9	4.4
2.	Social		•	43		52	17.9	4.9
3.	Esteen				30	80.	20.4	4.3
4.	Autonomy					21	15.2	4.0
5.	Self-Actualization						16.5	5.4

\* Low scores mean a higher level of need.

scores representing perceived opportunity for their satisfaction. This gave a difference score that represents need deficiency or satisfaction.

The value of such difference scores as measures of satisfaction is obvious. Perceived satisfaction measures are open to intentional and unintentional bias. Someone may perceive to be satisfied with certain aspects of the job because of recent events, but a need deficiency may still be present that does not show up at the time. The difficulty in faking an actual satisfaction score is also clear, since the subject would have to know that such a score will be computed. Furthermore, the person would have to have a good memory since two questionnaires are involved.

The correlation matrix of the need satisfaction dimensions is presented in Table 10. The matrix for the scores representing satisfaction with leadership behavior is presented in Table 11. The actual satisfaction dimensions are considerably more independent than the dimensions of perceived opportunity for satisfaction.

### Measures of motivation

The Self-Description Inventory developed by Ghiselli (1954) was the criterion measure of employee motivation. It is a forced choice adjectival scale which measures five dimensions that have been shown to correlate with managerial success. Furthermore, scores on the five dimensions and their validities have been shown to increase with management level (Ghiselli, 1963 a). For this reason it has been suggested that the traits measured by the scale represent broad

### INTERCORRELATIONS AMONG NEED SATISFACTION DIMENSIONS\*

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	Dimensions	1	2	3	4	5	Means	Deviations
1. 2.	Security Social		.25		19	55	51.0 51.7	7.8 4.3
5. 4. 5.	Esteem Autonomy Self-Actualization				16	03 17	49.7 51.4 45.4	3.9 4.6 6.0

\* Satisfaction scores were obtained by subtracting Preference Inventory scores from Job Inventory scores and adding a constant of 50.

### TABLE 11

# INTERCORRELATIONS AMONG LEADERSHIP SATISFACTION DIMENSIONS\*

		Dimensions					
	Dimensions		2	3	4	Mean	Standard Deviations
1. 2. 3. 4.	Initiating Structure Freedom of Action Consideration Production Emphasis		.03	•14 •54	.24 .17 .21	46.9 48.9 44.8 49.1	5.9 5.9 6.3 5.9

\* Satisfaction scores were obtained by subtracting ILBQ scores from LBDQ scores and adding a constant of 50.

leadership traits that are a prerequisite for managerial success in a wide variety of situations.

It seemed to this writer that three dimensions, initiative, selfassurance, and perceived occupational level, measure different aspects of motivation. The initiative subscale was developed to measure a self-generative capacity, but the other two subscales also seemed relevant to the concept of motivation theoretically and by virtue of the procedure used in validating the subscales. The fact that all three subscales were useful in predicting managerial success appeared to be further evidence that these dimensions are measuring some broad motivational dimension of personality. Motivation and desire for achievement are probably among the important factors that differentiate the successful from the unsuccessful manager and the person with managerial potential from one who does not have such potential.

The Self-Description Inventory was adapted for use in this study by a slight change in the instructions. Workers were asked to check one adjective in each pair that best described their feeling and behavior on the job. This differs from the usual instructions which do not specify that only job behavior be considered in answering the questionnaire. It was felt that there was some justification for the assumption that self-image and behavior patterns change according to the situation in which individuals find themselves. Mead (1934) states that self is developed through social interaction. As the process goes on through life a person develops an attitude toward himself which constitutes his self-image. Mead then goes on to suggest that many selves are formed. Each self constitutes a separate set of responses learned, in the manner described above, from various groups. Thus, a school self, family self, and job self may be developed. By asking employees to describe themselves as they are on the job, it was felt that any influence the leadership climate might have on the motivational dimensions being measured would come out. Finally, Porter (1957, 1958, 1959) has used the Self-Description Inventory in assessing the self-image of individuals at different organizational levels. Differences were found between organizational levels. Whether these differences are due to a stable personality pattern brought to the job, or whether they might be due in part to different job environments is not known.

### Initiative Scale

Ghiselli (1955) states that initiative has two aspects. One is motivational and involves the beginning of action. The other is cognitive and involves the ability to discover new means of goal achievement. The first involves the ability to initiate action. The second aspect involves the capacity to see new courses of action. Both aspects have the property of being self-generative. Initiative, Ghiselli states, does not imply the capacity to withstand frustration. It does not imply the ability to perseverate in the face of barriers blocking a goal. In this sense, the Initiative Scale only measures one dimension of motivation.

The scale was developed against a criterion group of 324 undergraduate students. They were asked to fill out an inventory in which they evaluated their motivations with respect to the nature of the job they desired. Eight types of jobs were presented to them involving steady employment, chance to show initiative, high pay, opportunity for promotion, fair and considerate supervision, chance to express own ideas and skills, chance to make a name for one's self or become famous, and opportunity to become boss. These types of jobs were presented by the paired comparison method. By this means a ranking of job needs was obtained for each subject. Two extreme groups were selected for the item analysis. Thus, the items have some construct validity.

Further validiation was obtained in several ways (Ghiselli, 1956 b). The scale correlated .57 (biserial) with ratings of individuals' initiative by their superiors. Twenty-five men who were candidates for management positions were rated for initiative on the basis of their work histories and were classified as being either high or low in the trait. The biserial correlation between scores and ratings was .50.

Furthermore, scores on the scale are related to occupational level. The scale correlated .35 with occupational success in management and -.29 with success in a line position. These relationships are ones that would be expected of a scale measuring initiative. Further validity coefficients are presented in Table 12.

# VALIDITY COEFFICIENTS FOR THREE SELF DESCRIPTION INVENTORY SUBSCALES\*

Group	No. of Cases	Initiative	Self-Assurance	Perceived Occupational Level
District managers, insurance co.	89	.23	.17	•36
Personnel officers, insurance co.	21	.12	.22	.46
Office managers	25	.38	.00	.11
Supervisors, food processing plant	20	.03	.15	.04
Supervisors, chemical plant	22	.10	.35	.24
Foremen, oil refinery	63	25	.22	04
Foremen, metal plant	24	25	.18	09
Skilled machine operators	14	06	.00	08
Office workers	42	.29	13	.06
Skilled workers, metal plant	64	.10	.10	.06
Unskilled workers, metal plant	32	.04	.10	35

\* These validity coefficients are reported by Ghiselli in the Self Description Inventory Manual. The criteria were ratings of job proficiency.

### Self-Assurance Scale

Ghiselli defines self-assurance as the extent to which the individual perceives himself to be effective in dealing with the problems that confront him. Some people see themselves as being sound in judgment and able to cope with almost any situation. Others think of themselves as being slow to grasp things, making many mistakes, and being generally inept.

In this writer's opinion, self-assurance as described above seemed to be a dimension of motivation. Self-confidence is certainly related to one's determination and success in handling situations. Rethlingshafer (1963) states that self-esteem is probably a variable in determining persistence to a fixed goal. Thus, self-assurance seemed to be the frustration tolerance dimension of motivation that the concept of initiative did not encompass.

The Self-Assurance Scale was developed in the same way as the Initiative Scale. A self-descriptive questionnaire, containing items scaled by the Thurstone method, was developed to reflect effectiveness of behavior in an occupational setting. It was administered to a large group of subjects which served as the criterion group for the item analysis. Thus, items had some sort of construct validity if they were included in the scale.

The scale was validated in several ways. Personnel officers rated themselves in terms of their job effectiveness. The correlation between these ratings and scale scores was .37. A correlation of .66 was obtained between life histories rated for general effectiveness

in dealing with occupational problems and scale scores. Occupational level was also related to scale scores. Other Validity coefficients are presented in Table 12. These show some relationship between scale scores and job proficiency ratings, particularly in higher level jobs. If self-assurance is a dimension of motivation some relationship with job performance ratings would be expected, but that relationship need not necessarily be high. Ratings do not always reflect performance, and, in some instances, motivated behavior may actually be viewed as undesirable.

#### Perceived Occupational Level Scale

People at different occupational levels differ in the way in which they perceive themselves. Ghiselli (1956 a) developed a scale that differentiates occupational levels. Such scales are generally considered to measure level of aspiration. A person who is placed high on a scale of perceived occupational level is regarded as one who wants the responsibility and prestige associated with higher level jobs, and an individual who is placed low on the scale is one who is content with less rewards and status.

It has been shown in previous research that level of aspiration is a function of previous success and failure experiences as well as self-confidence. Thus, it might be expected that supervisory styles would affect level of aspiration. It was also assumed that level of aspiration is an element of motivation. Certainly,

individuals who set a high occupational level of aspiration would be expected to work harder at their job in the hope of obtaining promotions.

The criterion group that was used in the item analysis consisted of men and women holding professional and managerial jobs, and semiskilled and unskilled workers. Items were selected that differentiated occupational groups for both sexes.

Validation was obtained in a number of ways. The scale differentiates occupational levels. Furthermore, the scale was correlated against ratings of job proficiency. For managers, the correlation coefficient between occupational level scores and ratings was .30, and for industrial workers it was -.33. This is further validation. It would be expected that people high in level of aspiration would do better in top jobs. They would do peorly in low jobs because of adjustment problems, or because they would be regarded unfavorably by their supervisor. Table 12 contains further validity coefficients for various occupational groups.

### **Reliabilities and Intercorrelations**

Table 13 contains reliabilities of three Self-Description Inventory subscales. These were computed on the sample of clerical workers used in this study. The reliabilities are substantially lower than those reported by Ghiselli (Self-Description Inventory Manual). It is possible the change in instructions resulted in these lower reliabilities. The revised instructions asked workers to describe themselves as they are on the job rather than as they view themselves in general.

It should be remembered, however, that fairly high correlations were still possible between the three measures of motivation and some of the predictors discussed above. For instance, a maximum correlation of .49 may be obtained between an independent variable that has a reliability of .65 and the criterion of initiative which has a reliability of .37. These reliabilities represent the lowest values obtained among any of the independent and dependent variables. As will be seen in the next chapter, none of the correlations between the independent variables and the dependent variables of motivation approached this value. Thus, the unreliability of the motivation measures did not obscure relationships that may actually exist. On the other hand, the relationships that were obtained might have been higher had the motivation measures been more reliable.

The intercorrelations of the three motivation measures were reported (Ghiselli, Self-Description Inventory Manual) to range between .50 and .60. The intercorrelations obtained in the present

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# KUDER-RICHARDSON RELIABILITIES (KR-8) FOR THREE SELF DESCRIPTION INVENTORY SUBSCALES\*

Subscales	Reliabilities
Initiative	•37
Self-Assurance	.42
Perceived Occupational Level	.43

\* Reliabilities computed on 130 clerical workers used as the sample in this study. e

study also fall between these values. This lack of empirical independence is to be expected in view of some lack of conceptual independence between the measures and in view of the fact that the three subscales contain some common items.

#### Analysis of data

The data were analyzed on the basis of individual scores. As indicated previously, no group analysis was possible due to the procedure used in collecting data. Correlational analysis was used in determining relationships between independent and dependent variables. The amount of data and its form made this the most efficient statistical procedure. The data were plotted, and an examination showed that they meet the assumption of linearity.

Interactions between leadership climates and individual needs and expectations were determined by means of the moderator variable technique described by Ghiselli (1963 b). The sample was divided into high, moderate, and low need groups for each need and expectation. A difference in correlations was taken to indicate an interaction between a need and the leadership climate. All correlations and differences between correlations were statistically tested with a two tailed test.

The analyses just described constituted a priori analyses. However, several a posteriori analyses were performed. These included interactive effects of different leadership styles as well as the interaction of leadership with job complexity. Unfortunately the sample was not large enough to allow a test of all the hypotheses for various sub-samples such as type of job. These might have yielded some interesting results as will be seen shortly.

A Factor Analysis of all the variables was performed in an attempt to determine the basic underlying dimensions. This analysis provided an opportunity to see if the independent and dependent variables utilized in the study were empirically independent. It was particularly important to see if the Maslow needs would emerge as empirically independent dimensions. The factor analysis was also helpful in the initial stages of the study as a means of determining where possible interactions between variables might occur.

#### RESULTS AND DISCUSSION

#### Factor analysis

A Thurstone Centroid Factor Analysis (Thurstone, 1947), with iterations to stabilize communalities, was performed on all thirtyfive variables in the study. A varimax rotational procedure was used to obtain orthogonal factors. The matrix of intercorrelations is presented in Table 14. The means and standard deviations of all the variables are also presented in Table 14. The rotated factor loadings are presented in Table 15. Nineteen factors resulted from this analysis, and they are described below.

Factor I appears with a loading of .88 on Perceived Satisfaction of Self-Actualization, and .78 on Satisfaction of Self-Actualization. Perceived Satisfaction of Security and Social needs have loadings of -.72, and -.29 respectively. Satisfaction of Security and Social needs have loadings of -.47, and -.34 respectively. This is not surprising in view of the fact that these need categories are conceptually quite opposite to the need for self-actualization as measured in this study. Maslow would have predicted this pattern of loadings. It should be kept in mind that subjects were forced to rank their need satisfactions from high to low, but it is still of interest to see that the predicted pattern emerged. Factor I can be called satisfaction of the self-actualization need.

TABLE	14
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Variables						
	Variables	1	2	3	4	5
Leade	r Behavior					
1.	Initiating Structure		.14	.22	.37	.30
2.	Freedom of Action	.14		.50	16	.11
3.	Consideration	.22	.50		20	.10
4.	Production Emphasis	.37	16	20		.12
Ideal	Leader Behavior					
5.	Initiating Structure	.30	.11	.10	.12	
6.	Freedom of Action	.13	.46	.14	.10	.13
7.	Consideration	01	.16			
8.	Production Emphasis	.23	.09			
	faction with Leader Behavior					
9.		•54	<b>。</b> 09	.12	.16	39
10.	Freedom of Action	.02				
11.	Consideration	.22				
12.	Production Emphasis	.21			.64	
	w Needs	÷	-		•	
13.		02	15	13	01	.19
	Social	.10	.01		.06	
	Esteem	11				.07
	Autonomy	<b>.</b> 08				
17.	Self-Actualization	05	•04			
	ived Opportunity for		• • •	• • •	-	-
	Satisfaction					
18.		20	21	-,22	.09	.04
19.	Social	.14	16			24
	Esteem .	04		.17	.01	
21.	Autonomy	.13	.39			
22.	Self-Actualization	04	02	.21		.00
	faction of Needs	• • •			•••	
23.		.06	08	07	.01	18
	Social	08				.00
	Esteem	08				
	Autonomy	02	.27	.12		
27.	Self-Actualization	05	04	.12	07	
	ation	~•••)	- • 04	**~	- 001	
28.	Initiative	.12	.06	06	06	.13
29.	Self-Assurance	.05				
30.	Perceived Occupational Level	.03	-,02			.13
	aphical Data	•••	-002	80J	00	• 1 /
31.	Age	<b>,</b> 22	<b>.</b> 22	.14	10	.22
32.	Months with the Company	.15	.13			
33.	Months with the Supervisor	.14	.11			
	-					04
34. 35.	Number of Workers in Department Sex of Supervisor	.10 11	.01 10		05	.04
J7•		-•*T		-•1)	0)	<del>،</del> 04
$\frac{(same = 0, diff. = 1)}{Means}$ 41.4 35.6 37.6 36.3 44.3						
Means	ard Deviations	41.4	35.6	37.6	<u> </u>	7 2
DUBUG	ard Destructous	4.5	5.9	0.1	004	J.U

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INTERCORRELATIONS AMONG 35 VARIABLES

TABLE 14--Continued

		Variables				
	Variables	6	7	8	9	10
Leade	r Behavior					
1.		.13	01	.23	•54	.02
-	Freedom of Action	.46	.16	.09	.09	,58
3.	Consideration	,14	.41		,12	
4.	Production Emphasis	.10	.08			26
•	Leader Behavior	•	•		-	-
5.		.13	.18	•45	39	.00
· · ·	Freedom of Action	•	.38	.18		45
7.	Consideration	.38	•2 -	.08		17
8.	Production Emphasis	.18	.08		10	07
	faction with Leader Behavior	• <b>-</b> - U	.00		0.00	
9.	Initiating Structure	.05	03	10		.03
10.	Freedom of Action	45	17		.03	•••
11.	Consideration	14				•54
12.		03	.02			18
	Production Emphasis w Needs	<b>⊷</b> ₀∪)	•02	-• <i>•</i> <0	•~4	- • ±0
			74	04	, د	05
13.	Security	22				.05
14.		03	-		.04	.03
	Esteem	07	.07		.06	.05
16.	Autonomy	.31	.05	10		15
_17.	Self-Actualization	•00	01	•06	.07	.03
	ived Opportunity for					
	Satisfaction					
18.	v v	04				17
19.		•09	02			23
20.		15	07			.19
21.		.22	•03	•08		.21
22.	Self-Actualization	.10	.02	04	•03	.04
Satis	faction of Needs					
23.	Security	.01	01	16	.20	<b>-</b> _08
24.	Social	。12	02	01	01	29
25.	Esteem	09	01	.07	14	.11
26.	Autonomy	.11	06	.11	10	.38
27.	Self-Actualization	04	.03	09	05	.02
	ation					
28.		.13	09	06	.10	.04
-	Self-Assurance		01			
	Perceived Occupational Level	.13				08
	aphical Data	•	0.000		••••	•
31.	-	.22	.01	04	08	.06
32.		.17		- •		
33.		.17	-	•		.02
	-					.08
34.	-	-04 •04				.00
35.		•04	•OT	<i>∽ر</i> •−		.00
Maana	(same = 0, diff. = 1)	36.6	42.9	37.0	46.9	48.9
Means					The second s	
Scand	ard Deviations	5.4	4.6	5.0	6.0	5.9

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TABLE 14--Continued

		Variables				<del>الدون يانتي</del>	
	Variables	11	12	13	14	15	
Leader Behavior							
1.	Initiating Structure	.22	.21	02	.10	11	
	Freedom of Action	.42					
	Consideration	.74		13			
	Production Emphasis			01			
	Leader Behavior	•~2	• • • •	••-		,	
	Initiating Structure	04	21	.19	30	.07	
	Freedom of Action	14			03		
	Consideration		.02		.01		
	Production Emphasis	04		.06			
	faction with Leader Behavior	- 4 0 -+		•00	-•->	g alvalu	
	Initiating Structure	.14	21.	14	•04	.06	
	Freedom of Action	• 54		.05			
	Consideration	• 74	,22	-			
-	Production Emphasis	22	•	01			
	w Needs	- <sub>0</sub> 22		01	*T0	UT	
	Security	03	01		10	.27	
	Social		.16		.19		
	Esteem			-		•39	
· · ·		.03		.27			
	Autonomy	07					
	Self-Actualization	•08	02	•37	.29	-,02	
	ived Opportunity for						
	Satisfaction	1.4			10		
	Security			37		.14	
19.		20					
	Esteem	.16		.13			
	Autonomy	.01		01		.26	
22.		.20	•03	.16	•06	09	
	faction of Needs						
	Security	05		.28			
	Social	21		05			
	Esteem	.12		18			
-	Autonomy	.19		16			
27.		.10	<b>.</b> 02	11	12	10	
	ation						
	Initiative	•00				12	
	Self-Assurance		<b>.</b> 03			03	
30.	•	.01	04	.15	.13	.03	
Biographical Data							
31.		.13	06	15	.15	07	
32.	Months with the Company	.11		13			
33.	Months with the Supervisor	.11	.03	14	07	.01	
34.	Number of Workers in Department	.18	.13	12	05	<b>.</b> 02	
35.				03			
(same = 0, diff. = 1)							
Means		44.8	49.1	21.7	19.5	20.0	
Stand	ard Deviations	6.3	5.8	4.2	4.1	4.5	

TABLE 14--Continued

	Variables					
	Variables	16	17	18	19	20
Leade	r Behavior					
1.	Initiating Structure	.08	05	20	.14	04
2.	Freedom of Action	.10	.04			.05
3.	Consideration	01	.07			.17
4.	Production Emphasis	14	-	.09	.10	.01
	Leader Behavior		-			
5.	Initiating Structure	04	.06	.04	24	.11
	Freedom of Action	.31	.00		.09	15
	Consideration	.05	01			.07
8	Production Emphasis	10		.04	-,12	
-	faction with Leader Behavior	•	•••	••••	•	•
	Initiating Structure	01	.07	.20	.03	10
	Freedom of Action	-,15			23	
	Consideration	07	.08		20	
12.		11			.15	
	w Needs	•				
	Security	.16	.37	37	.10	.13
	Social	.07		.12		
-	Esteem	.43	02		.32	
	Autonomy	• 72	.34	01		.29
17.	-	•34	824	.10	.13	
	ived Opportunity for	• >++		920	• ~ >	
	Satisfaction					
	Security	01	.10		11	•34
	Social	04				.43
	Esteem	.29			.43	
	Autonomy		.08			.30
22.	-	.11			.52	
+	faction of Needs	• * *	-•**	• / ±	• /~	
	Security	10	- 07	40	29	.10
	Social	09			61	
	Esteem	20			.16	
	Autonomy	20				
	Self-Actualization		20	.39		
	ation	10	•41	• 7 7	•77	
	Initiative	12	03	.08	06	04
	Self-Assurance	03				
	Perceived Occupational Level	03 .03				
		وں.	00	وں.	•07	•04
-	aphical Data	07	12	00	12	- 21
31.		07				-
32.		09				
33.		.01				
	Number of Workers in Department					
35.		.13	.00	.14	01	04
Nor-	(same = 0, diff. = 1)	14 0	11 0	10.0	17 0	20 1
Means	والمحاوي والمحاوي والمتحدين والمتحدين والمتحدين والمتصحية بجريك فستتلد من بتعلقه والتجري والمحديد والمحدية بتعادية بالتحا	16.9	11.9	19.9	17.9	20.4
Buano	ard Deviations	4.2	4.0	4.4	4.9	4.3

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TABLE 14--Continued

			V	ariabl	.03	
	Variables	21	22	23	24	25
Leade	r Behavior					
1.	Initiating Structure	.13	04	.06	08	08
2.	Freedom of Action	.39	02			.02
3.	Consideration	.04	.21		21	.09
4.		15		.01	.04	05
	Leader Behavior	•-/		••=		•••
5.		.11	.00	18	.00	08
6.	•	.22		.01	.12	
-	Consideration	<b>.</b> 03	.02		02	
• •	Production Emphasis	.08			01	
	faction with Leader Behavior	•00	04	10		•••
9.		16	<b>.</b> 03	20	01	14
	Freedom of Action	.21	.04		29	.11
11.		.01				
-	Production Emphasis	22			.01	
	w Needs	-•~~	•05	•07	• UT	•05
	Security	01	.16	24	05	٦¢
14.	0	01				
		.07		09		
	Esteem	.26			02	
	Autonomy	41			09	
17.		<b>°</b> 08	-•18	07	-•T>	03
	ived Opportunity for					
	Satisfaction					
18.	0	.21		•		
19.		.13	.52			
20.		.30	08		.19	
21.	Autonomy		.21	.22	.09	.01
22.	Self-Actualization	.21		•35	•53	•00
	faction of Needs					
	Security	.22			.25	
	Social	•09				24
	Esteem	.01	•00		24	
	Autonomy	47	.03	-,28	19	16
27.		<b>.</b> 16	76	35	55	03
Motiv	ration					
28.	Initiative	13	.00	06	.03	12
29.	Self-Assurance	11	.02	12	.10	12
30.	Perceived Occupational Level	21	.00	11	.01	•00
Biogr	aphical Data					
31.	Âge	08	.12	03	.00	,12
32.		13		09		
33.		-,08		11		
34.				17		
35.		01				.17
	(same = 0, diff. = 1)	• • • •		• •		• - •
Means		15.2	16.5	51.0	51.7	49.7
	ard Deviations	4.0	5.4	7.9	4.3	3.9
		- <b>+ + -</b>	2 V.T			

Variables 26 29 30 Variables 27 28 Leader Behavior 1. Initiating Structure .12 -.02 -.05 .05 .03 .06 -.02 2. Freedom of Action .27 -.04 -.02 .12 .12 -.03 3. Consideration -.06 .03 4. Production Emphasis -.02 -.07 -.07 -.06 -.06 Ideal Leader Behavior 5. Initiating Structure .11 -.04 .13 .09 .13 6. Freedom of Action .11 -.04 .13 .09 .13 7. Consideration -.06 .03 -.09 -.01 .04 -.10 8. Production Emphasis -.09 -.06 .11 -.07 Satisfaction with Leader Behavior 9. Initiating Structure -.10 -.05 .10 .12 -,02 10. Freedom of Action -.08 .02 .01 .38 .04 .19 .01 11. Consideration .10 .00 .00 12. Production Emphasis -.06 -.12 .02 **°**03 -.04 Maslow Needs 13. Security -.16 -.11 .13 .06 .15 14. Social -.12 .11 .15 .13 .05 15. Esteem -.12 -.03 -.20 -.10 .03 -.12 .03 16. Autonomy ~.20 -.03 -.10 17. Self-Actualization ~.20 .47 -.03 -.01 -.08 Perceived Opportunity for Need Satisfaction •39 .00 18. Security **.**21 .08 .03 .22 19. Social .39 .06 .02 .09 -.05 20. Esteem -.07 -.04 .07 .04 ,16 -.13 21. Autonomy -.47 -.11 -.21 22. Self-Actualization .02 .00 .03 -.76 .00 Satisfaction of Needs 23. Security -.06 -.12 -.11 .28 -.35 .03 -.55 .10 24. Social -.19 .01 -.03 -.12 25. Esteem -.16 -.12 .00 26. Autonomy .06 .03 -.05 -.17 -.07 27。 Self-Actualization -.04 -.03 -.17 Motivation 28. Initiative .06 .56 -.04 .53 29. Self-Assurance .03 -.03 •53 •53 30. Perceived Occupational Level .56 •53 -.05 -.07 Biographical Data .05 .08 -.03 -.04 .09 31. Age -.01 -.13 32. Months with the Company .18 .04 -.18 .03 -.15 33. Months with the Supervisor .12 .04 -.08 Number of Workers in Department .06 .00 .00 -.02 34。 .20 35. -.05 Sex of Supervisor -.11 .04 -.05 -.08 (same = 0, diff. = 1)28.5 Means 51.4 45.4 26.7 25.6 8.7 Standard Deviations 4.6 6.0 6.1 5.2

TABLE 14--Continued

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TABLE 14--Continued

			1	[ariab]	les	
	Variables	31	32	33	34	35
Leade	r Behavior					
l.	Initiating Structure	.22	.15	.14	<b>.</b> 1.0	11
	Freedom of Action	,22	.13		.01	10
3.	Consideration	.14	.08			
4.	Production Emphasis	-,10				
Ideal	Leader Behavior	-			-	
	Initiating Structure	,22	.17	.17	04	.04
6.	Freedom of Action	<b>.</b> 22	.17			.04
7.	Consideration	.01				
8.	Production Emphasis	04				
	faction with Leader Behavior					
9.		08	20	43	.11	20
10.	Freedom of Action	•06				
	Consideration	.13	<b>.</b> 11			
	Production Emphasis	06				.24
	w Needs				•-•	
13.	Security	15	13	14	12	03
-	Social	.15			05	
	Esteem	07	09	.01	.02	.13
	Autonomy	07		.01		
17.		.12				.00
	ived Opportunity for	•	•	•,	•	•
	Satisfaction					
	Security	.00	.02	.06	.11	.14
19.		.13	.07			
20.		21				
21.		08				
22.	0	,12		.09		
-	faction of Needs		•	•••	•••	•••
	Security	03	09	11	17	01
24.	•	.00				-
	Esteem	.12				
	Autonomy	.08				11
27.		03	01			.04
	ation		•••=			
	Initiative	.05	.04	.03	.00	05
29.		04		15		
• •	Perceived Occupational Level	.09				-
	aphical Data	.07	•=>			
31.			.71	•49	<b>.</b> 00	.11
32.		.71		•47		
33.		•49			04	.09
34.	▲ · · · · · · · · · · · · · · · · ·				-	.23
35.	•	.00				ر~ه
220	(same = 0, diff. = 1)	6 <del>-</del>	•T0	•07	•~)	
Means		26.2	54.3	25.3	19.8	.32
	ard Deviations	9.6	<u>59.2</u>	35.1	16.5	.46
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TABLE 15

		F	actors	
Variables	I	II	III	
Leader Behavior				
1. Initiating Structure	02	.07	.20	.23
2. Freedom of Action	<b>.</b> 01		•30	
3. Consideration	.12	.02	.85	.05
4. Production Emphasis	04	05	13	02
Ideal Leader Behavior	·			
5. Initiating Structure	.01	.14	04	.18
6. Freedom of Action			01	
7. Consideration			.02	
8. Production Emphasis			.01	
Satisfaction with Leader Behavior	•		•	
9. Initiating Structure	06	.05	.07	20
10. Freedom of Action			.30	
11. Consideration			•90	
12. Production Emphasis			14	
Maslow Needs		••••	•	•
13. Security	05	15	06	.13
14. Social			.02	
15. Esteem			.02	
16. Autonomy	.03	.09	06	.03
17. Self-Actualization			,10	
Perceived Opportunity for	•••	••-	<b>•</b> -•	•
Need Satisfaction				
18. Security	72		10	01
19. Social			06	
20. Esteem			.08	
21. Autonomy			02	
22. Self-Actualization	.88		.10	
Satisfaction of Needs	.00	6 <b>0</b> - 20	9244	• <b></b> ~
23. Security	- 47	13	.01	07
24. Social		.02		04
25. Esteen			.06	
26. Autonomy	.03	05	.08	.12
27. Self-Actualization	.78	05	.04	01
Motivation			0 V 4	ų vais
28. Initiative	<b></b> .01	.76	03	.03
29. Self-Assurance		.72		13
30. Perceived Occupational Level	01			
Biographical Data	-•0T	• [ 7	0 V H	
31. Age	06	.08	.05	.80
32. Months with the Company	03	200° ביו_	.01	.86
	03 .03		.08	.69
33. Months with the Supervisor	•05 •06	07	.18	•07 •04
34. Number of Workers in Department 35. Sex of Supervisor				.04
77º DET OT DITELATOOL	.04	-04	چھتد ہ 🗕	بكطن

				actors		
	Variables	VI	VII	VIII	IX	X
Leade	r Behavior					
	Initiating Structure	.58	.04	.00	.17	08
	Freedom of Action	.06	.38		.05	
	Consideration	.08			-	.02
-	Production Emphasis	.11			.49	
	Leader Behavior			-		
5。	Initiating Structure	26	.02	<b>_</b> 02	.36	02
	Freedom of Action	.02	.91		.10	
	Consideration	03			.03	
-	Production Emphasis	03	-	.06	.96	
	faction with Leader Behavior		- •		- •	
9.	Initiating Structure	•95	.05	01	08	08
-	Freedom of Action	.02		.07		
-	Consideration	.09		.05		
	Production Emphasis	.13		.01		
	w Needs		• • • •	•	• • •	• - • •
	Security	02	15	18	.02	.16
-	Social	.01	-		06	
• -	Esteem	.04		.76		
	Autonomy			22		
	Self-Actualization			.03		.03
-	vived Opportunity for		60-9			
	Satisfaction					
18.		.15	06	32	.02	18
-	Social		.06		05	
	Esteem		11			.26
-	Autonomy	-		29		.05
22.	•	.02		04		
-	faction of Needs	• • •~	00	4 ~~~		004
	Security	.11	00	05	15	11
	Social		.10		-,02	
-	Esteen	05			03	
	Autonomy		20		.06	
	Self-Actualization	01		.00		
	ation		8 U 4			
	Initiative	<b>。</b> 04	.01	<b>。</b> 09	02	06
	Self-Assurance			03		
	Perceived Occupational Level	03		06		
	aphical Data	-•U)	•••)	-,00	© √⊥	
	Age	٨Þ	10	•07		.07
	Months with the Company			.08		
	Months with the Supervisor			.00 .00		
	Number of Workers in Department					
	Sex of Supervisor			-,02		
<b>J</b> 70	(same = 0, diff = 1)	-•73	=•0×	-•V2	-0~7	ې <i>لىد</i> 6

TABLE 15-Continued

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Factors Variables XI XII XIII XIV XV Leader Behavior 1. Initiating Structure -.09 -.03 -.07 .05 .27 .21 -.08 2. Freedom of Action .15 .12 -.08 -.08 .01 3. Consideration .06 .41 -.12 4. Production Emphasis -.04 .03 -.09 .83 .04 Ideal Leader Behavior .18 .03 .03 -.02 -\_08 5. Initiating Structure .26 6. Freedom of Action <u>°</u>03 .05 .13 .03 00。 7. Consideration .94 -.01 -.01 03ء 8. Production Emphasis .02 .07 .01 -.02 -.04 Satisfaction with Leader Behavior 9. Initiating Structure -.07 -.03 -.01 .04 .13 10. Freedom of Action .20 -.10 -.11 .00 -.11 11. Consideration .02 -.28 -.07 .07 -.10 12. Production Emphasis -.07 .02 .02 -.04 **.**86 Maslow Needs -.32 13. Security .06 -.10 .01 -.04 14. Social -.03 .01 -.11 -.08 .07 .00 15. Esteem -.02 .05 -.04 .05 .02 -,20 16. Autonomy -.12 .10 -.06 .68 17. Self-Actualization .01 -.09 **.**08 -.01 Perceived Opportunity for Need Satisfaction -.33 .17 -.08 .02 18. Security -.04 .06 19. Social -.10 -.01 .68 -.06 -.11 20. Esteen -.09 .05 .04 .00 .86 .04 -.05 -.13 21. Autonomy -.08 22. Self-Actualization -.18 ~.03 -.30 **\_1**0 .02 Satisfaction of Needs -.02 -.28 -.06 .04 .04 23. Security **。**05 -.09 .00 .86 .00 24. Social .02 25. Esteem -.05 -.10 .02 .01 26. Autonomy •66 -.04 -.10 .29 -.02 27. Self-Actualization -.16 .00 -.34 -.44 -.05 Motivation -.07 .02 -.01 28. Initiative .01 -.05 -.01 29. Self-Assurance -.00 .05 -.06 .01 30. Perceived Occupational Level .09 -.06 .06 .05 -.04 Biographical Data .01 -.01 -.08 31. Age -.04 .07 -.06 -.02 32. Months with the Company .09 -.00 -.06 .02 -.06 33. Months with the Supervisor -.10 .13 .05 Number of Workers in Department -.07 .06 .13 34. .17 -.05 -.06 .09 Sex of Supervisor -.06 .03 35。 .01

(same = 0, diff. = 1)

TABLE 15-Continued

Factors						
	Variables	XVI	and the second	XVIII	XIX	h <sup>2</sup>
Tesde	r Behavior					
	Initiating Structure	.00	_ 06	<u>_</u> 04	.64	.96
	Freedom of Action	.08				
-	Consideration	.08		01		
	Production Emphasis	10		01	.08	
	Leader Behavior		•04	01	•00	077
	Initiating Structure	05	06	.12	•56	.68
	Freedom of Action	.04		05		
	Consideration	•04		05		
		.00		-09 -04		
	Production Emphasis faction with Leader Behavior	*OT	-•07	e 04	<del>ب</del> ند و	a 70
		.06	02	05	05	1.02
	Initiating Structure Freedom of Action			05 .01		
-	Consideration			.02		
	Production Emphasis		•Т)	.02	•00	.89
	w Needs	~	00	4	07	л ОО
	Security			.84		
	Social	.03		11		
	Esteen			09		.98
	Autonomy			36		
	Self-Actualization	<b>.</b> 05	01	-,12	.02	•54
	ived Opportunity for					
	Satisfaction	* 7			~	
	Security	11		.29		
-	Social			05		
	Esteen			04		
	Autonomy		-	13		
22.		02	•04	05	•03	•97
	faction of Needs					
	Security			30		
	Social			.01		
	Esteem			.05		
	Autonomy			.27		•77
	Self-Actualization	01	.01	<b>。</b> 06	03	•98
	ation					
	Initiative			01		
29.	Self-Assurance			.00		
30.	Perceived Occupational Level	09	04	05	02	.67
Biogr	aphical Data					
31.	Âge			.05		
32.	Months with the Company	.03	.07	02	.03	.80
	Months with the Supervisor	.00	07	.05	•09	.63
	Number of Workers in Department	05	.58	.14	08	.51
24.						
	Sex of Supervisor	.03	.61	10	.10	.59

TABLE 15--Continued

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Factor II has a loading of .76 on Initiative, .72 on Self-Assurance, and .79 on Perceived Occupational Level. These are the three measures of motivation, and so this factor can be identified as a motivation factor. It appears that the motivation scales are highly similar and at the same time independent of all other variables in the study.

Factor III shows a high loading on Consideration (.85), and Satisfaction with Considerate Leadership (.90). Freedom of Action as a style of leadership and Satisfaction with Freedom of Action also have positive loadings on this factor. This might be expected in view of the similarity of items on the Consideration and Freedom of Action scales. This factor is a satisfaction with Consideration factor.

In Factor IV, the biographical items of age, months with supervisor, and months with company, have loadings of .80, .69, and .86 respectively. It is not surprising to find these variables loading on the same factor.

Factor V has a loading of .93 on Social Need, and .59 on Perceived Satisfaction of Social Need. Satisfaction with Social Need has a loading of -.21. Apparently perceived opportunity for satisfaction of this need is not independent of the need itself. But, the actual satisfaction of the need is somewhat negatively related to this social need factor. That is, the higher the social need the less satisfied a person is likely to be with respect to the need. This is to be expected in view of the fact that actual satisfaction, as measured in this study, is a function of both need and opportunity for need satisfaction.

Factor VI has a loading of .95 on Satisfaction with Initiating Structure, and .58 on Initiating Structure as a style of supervision. This factor represents satisfaction with structured leadership.

In Factor VII the Expectation of Freedom of Action loads .91 and Freedom of Action loads .38. Evidently, the desire for tolerance of freedom in work is not completely independent of the perceived amount of freedom in the daily work routine.

Factor VIII was named perceived satisfaction with esteem. Perceived Satisfaction with Esteem loads .92 on this factor, and need for Esteem loads .76. Again, it appears that perceived opportunity for satisfaction of a need is not independent of the need itself.

Factor IX appears to have a loading of .96 on Production Emphasis as a desired dimension of leadership. It also has a loading of .49 on the leadership behavior of Production Emphasis. Once more, the expectation of a leadership style is not completely independent of the actual leadership style reported.

Factor X loads .94 on Satisfaction of Esteem. On the other hand, there is a loading of -.57 on Need for Esteem. Evidently, Satisfaction of Esteem is negatively related to amount of esteem desired. As previously stated, this is to be expected in view of the fact that satisfaction of esteem is a difference score reflecting the amount of esteem desired and perceived opportunity for satisfaction of esteem. Factor XI has a loading of .86 on Perceived Satisfaction of Autonomy and .66 on Satisfaction of Autonomy. Freedom of Action as a style of leadership and satisfaction with Freedom of Action also load on this factor (.21, and .20 respectively). This is to be expected in view of the similarity of the two concepts. It is interesting to note that satisfaction with autonomy is independent of the need itself. Factor XI represents satisfaction with autonomy.

In Factor XII, Ideal Leader Behavior of Consideration loads .94 and Leader Behavior of Consideration loads .41. Expectation of leadership that tolerates Freedom of Action also has a loading on this factor (.26). On the other hand, Satisfaction with Consideration loads -.28. Again, perceived leadership is not independent of expected leadership. But, satisfaction with a leadership style is negatively related to the expectation of that leadership behavior.

Factor XIII is identified as satisfaction with social needs. Social Need Satisfaction loads .86, and Perceived Social Need Satisfaction loads .68. Self-Actualization Need Satisfaction has a negative loading of -.34. Social Need did not load on this factor indicating that satisfaction of the need is independent of the need itself.

Factor XIV is not a very specific factor. The highest loading is .68 and that is on Need for Self-Actualization. Self-Actualization Satisfaction loads -.44 indicating that the higher the need the less it is satisfied. As might be expected, Need for Security loads -.32 on this factor. The factor is a need for self-actualization factor.

Factor XV is a Production Emphasis factor. Production Emphasis and Production Emphasis Satisfaction load .83 and .86 respectively.

Factor XVI appears to have its highest loading on Satisfaction with Freedom of Action (.76). As would be expected Satisfaction with Consideration has a loading of .22. These leadership styles loaded together on other factors. It is interesting to note that, contrary to the other leadership styles, Freedom of Action does not load highly on this Satisfaction with Freedom of Action factor. Evidently, satisfaction with Freedom of Action is more a function of low expectations than of large amounts of actual freedom in the work situation. This is not surprising considering the subjects of this study were clerical workers.

In Factor XVII, number of workers in a department and sex of supervisor load .58 and .61 respectively. This is an "organization" factor. The larger the work group the more likely it is that the sex of the supervisor will be different from that of his workers. Since almost all workers in the sample were female, this means that larger departments tend to be headed by male supervisors.

Factor XVIII has a loading of .84 on need for Security, -.30 on Satisfaction with Security, and -.36 on need for Autonomy. A high need for security is negatively related to a high need for autonomy as Maslow would predict. Furthermore, satisfaction with security is negatively related to the degree of need for security.

Factor XIX appears with a loading of .64 on Initiating Structure and .56 on Expectation of Initiating Structure. This factor reflects a considerable lack of independence between actual and ideal descriptions of Initiating Structure. To a lesser degree the other leadership factors reflected a similar lack of independence.

Certain interesting patterns emerged from the factor analysis. The four leadership dimensions emerged as independent factors. Satisfaction with a given leadership behavior, as measured by the difference between the LBDQ and ILBQ scores, loads on the appropriate leadership behavior dimension. It seems, therefore, that satisfaction with leadership behavior is primarily a function of perceived leadership behavior.

Each of the leadership expectation dimensions emerged as a separate factor. However, some leadership expectation dimensions did load on corresponding leadership behavior dimensions. This can be interpreted to mean that ideal leadership is not totally independent of perceived leadership behavior. The nature of the interaction between a worker's perception of leadership climate and his conception of ideal leadership is not known. Leadership expectations may be affected by leadership climate, or expectations may affect perception of leadership behavior. It is also possible that the relationship observed is an artifact of the data gathering procedure which required the subject to complete both ideal and actual leadership behavior description questionnaires.

The Maslow needs also showed up as separate factors. The one exception was the need for autonomy which had a high loading on the expectation of Freedom of Action factor. Likewise, there were separate satisfaction factors for each of the Maslow needs except security. Satisfaction of security had a high negative loading on the satisfaction of Self-Actualization factor. As with the leadership factors, the needs themselves were not completely independent of the perceived opportunity for need satisfaction.

Motivation emerged as a separate factor with high loadings on all three dimensions measured in this study. There were no other variables that had a significant weight on the factor.

All this would seem to indicate that the variables used in this study are not only independent concepts but also empirically independent factors. This was expected in the case of the leadership behavior dimensions, but it was not known whether the Maslow needs or the Maslow need satisfaction dimensions would emerge as separate factors. It remains to be seen whether the Maslow need hierarchy is a useful concept in the prediction of worker motivation and behavior.

#### Leadership and motivation

One of the key hypotheses of this study, based on current leadership and organizational theory, was that employee-centered, participative, and non-restrictive supervision will be positively related to motivation. On the other hand, it was hypothesized that supervision which pushes for production and provides a lot of structure would not be related to motivation or would be negatively related to motivation.

Table 16 shows the correlations between the four leadership dimensions and initiative, self-assurance, and perceived occupational level. None of these correlations are significant. The highest

Leadership Behavior	Initiative	Self- Assurance	Perceived Occupational Level	
Initiating Structure	.12	•05	.03	
Freedom of Action	.06	02	02	
Consideration	06	03	.03	
Production Emphasis	06	02	06	

PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN LEADERSHIP BEHAVIOR AND MOTIVATION

correlation is between Initiating Structure and initiative which is where one of the lowest correlations was expected. Therefore, the hypothesis that Consideration and Freedom of Action will motivate workers must be rejected. Furthermore, Initiating Structure and Production Emphasis have no effect on motivation. It must be concluded that the four dimensions of leadership are not related to worker motivation in this sample.

#### Type of Work as a Moderator Variable

One of the factors that could moderate the effects of leadership on motivation is type of work. It had been hoped, in the original plans for the study, that workers from several levels in the organization would be utilized as subjects. Unfortunately, this was not possible. It seemed, to this writer, that leadership would have increasing effects on motivation as jobs became more complex and allowed the individual to exercise some independence and motivation.

For this reason, forty-four subjects that were classified as having more complex jobs than the rest of the sample were separated as a sub-sample. The job titles in this sub-sample ranged from Policy Adjustment Clerk to Agents Commission Clerk. Three supervisors who had filled out questionnaires by mistake were also thrown into the sample. Thus, this sub-sample of workers held jobs in which motivation might be displayed more readily in contrast to the main sample of workers which included typists and key-punch operators.

Table 17 presents the correlations between leadership behavior and the three measures of motivation for the sub-sample just described. It is immediately apparent that type of job is an extremely important factor in the effect that supervision has on motivation. However, the relationships found are not all in the expected direction. Initiating Structure has the highest relationship to the three measures of motivation. The correlation between Initiating Structure and Initiative is significant at the .05 level. The relationships between Structure and the other two motivation measures are substantially higher than the same relationships computed for the whole sample, but they are not significant.

Consideration is positively related to self-assurance and perceived occupational level. These correlations are much larger than the same correlations for the overall sample and are in the expected direction. However, there is no change in the relationship between Consideration and initiative.

Production Emphasis also shows some larger correlations with self-assurance and perceived occupational level. These are negative as might be expected. However, none of these correlations are significant. This is not too surprising considering the sample size of forty-four.

The relationships observed in this secondary analysis are not all in the direction one would predict on the basis of theory, but they make sense. Initiating Structure, as the review of the literature showed, has been found to be related to performance in

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# PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN LEADERSHIP BEHAVIOR AND MOTIVATION, FOR 44 CLERICAL EMPLOYEES DOING NON-ROUTINE WORK

Leadership Behavior	Initiative	Self- Assurance	Perceived Occupational Level	
Initiating Structure	•31*	.20	.16	
Freedom of Action	01	<b>.</b> 05	04	
Consideration	03	.19	.22	
Production Emphasis	01	22	10	

\* Significant at p = .05.

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production departments (Fleishmann <u>et al.</u>, 1955). The clerical work performed in this insurance company constitutes the production work for the company. The output in this company is not products but policies and processed claims. Thus, clerical departments are production departments. Furthermore, the review of the literature also showed that structured supervision is not always viewed unfavorably, Oaklander and Fleishman (1964) and Patchen (1962). It may be, as these studies showed, that Structured supervision protects the workers from internal and external group pressures thereby allowing workers more freedom for motivated performance. Finally, it should be pointed out that Structured supervision provides a task-oriented work atmosphere which may be more conducive to motivation and performance than the other leadership climates.

Production Emphasis was negatively related to self-assurance and perceived occupational level. This was predicted. Constant emphasis for production and close supervision might very well tend to make individuals less confident in their ability to handle the job effectively. Lack of encouragement under high Production Emphasis might very well reduce one's personal pride in work and thereby reduce level of aspiration (perceived occupational level).

That Consideration is positively related to self-assurance and perceived occupational level is both in the predicted direction and reasonable. Supervision that consults workers on decisions and accepts suggestions would be expected to increase self-assurance and level of aspiration. The supportive aspects of such supervision

would also increase confidence and encourage the worker's desire to achieve higher occupational levels. The lack of relationship between Consideration and initiative is more difficult to explain. It may be due to a less task-oriented atmosphere than is found under Initiating Structure.

In summary, these results should lead to some doubt about current leadership theories. The lack of relationship between Freedom of Action and motivation is particularly surprising in view of the fact that such supervision was expected to have the largest relationship to motivation. The apparent importance of type of job and perhaps level of organization should be kept in mind in further studies of this type. Bennis (1959) has already warned researchers of this. He pointed out that McGregor's theory may hold up for complex and professional jobs that allow the development of internal standards of work but not for jobs in which external control from the supervisor is important in getting the job done. Finally, it should be emphasized that only one relationship is actually significant. Therefore, these results can only be viewed as indications of possible relationships and as guidelines for further research. The main point of interest is the apparent change in relationships when the type of job is taken into account.

#### Leadership and need satisfaction

A basic tenet of most leadership and organizational theories is that higher order needs (Maslow) are satisfied to a greater degree under employee-centered and non-restrictive supervision than under

structured and production oriented supervision. To test this notion, the relationships between leadership behavior and the dependent variables of perceived opportunity for need satisfaction and actual need satisfaction were determined. These relationships are presented in Tables 18 and 19 respectively.

The pattern of relationships is in the expected direction in both tables. They are generally higher when perceived opportunity for satisfaction is used as the dependent variable. This is because actual satisfaction is a function of the amount of need as well as the opportunity for its satisfaction. Therefore, only Table 18 will be discussed.

As expected, Initiating Structure is related to perceived satisfaction of security needs. It is not related significantly to the satisfaction of higher order needs. Freedom of Action is negatively related to perceived satisfaction of security needs and positively related to the perceived satisfaction of autonomy needs. The latter correlation is .39 and is significant at the .01 level. The satisfaction of other higher order needs is not related to Freedom of Action. Social need satisfaction is negatively related to Freedom of Action. This relationship is significant in the case of actual satisfaction and almost significant in the case of perceived opportunity for satisfaction.

Consideration is related to the largest number of need satisfaction dimensions. It is negatively related to perceived satisfaction of security and social needs, and it is positively related to the

#### PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN LEADERSHIP BEHAVIOR AND WORKER PERCEIVED OPPORTUNITY FOR NEED SATISFACTION

		Perceived Op	cortunity fo	or Need Satis	faction	
Leadership Behavior	Security	Social	Esteen	Autonomy	Self- Actualization	
Initiating Structure	•20 <del>*</del>	14	.04	13	.04	
Freedom of Action	~.21 <del>*</del>	16	.05	•39 <del>**</del>	02	
Consideration	<b>-</b> ₀22 <del>×</del>	20*	<b>.</b> 17*	.04	.21*	
Production Emphasis	•09	.10	.01	15	.06	

\* Significant at p = .05.

\*\* Significant at p = .01.

#### CORRELATIONS BETWEEN LEADERSHIP BEHAVIOR AND WORKER NEED SATISFACTION

	-	faction			
Leadership Behavior	Security	Social	Esteem	Autonomy	Self- Actualization
Initiating Structure	.06	08	.08	02	05
Freedom of Action	08	19*	.02	•27☆	04
Consideration	07	21 <del>*</del>	.09	.12	.12
Production Emphasis	•01	.04	05	07	07

\* Significant at p = .05.

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satisfaction of esteem and self-actualization needs. Production Emphasis was unrelated to perceived need satisfaction.

These relationships are in line with the hypotheses of this study and with the organizational theories discussed earlier. These state that employee-centered and non-restrictive leadership result in higher order need satisfaction. To this writer's knowledge, such relationships have not been demonstrated previously.

However, although significant, these relationships are fairly low. This could be due to the reliabilities of the scales which are only moderately high. Furthermore, it should be noted that some needs are satisfied under certain dimensions of leadership while others are not. Neither Freedom of Action or Consideration are positively related to the satisfaction of all three higher order needs. The satisfaction of all three needs must come from supervision that combines Consideration and Freedom of Action. If security is to be satisfied too, Initiating Structure must also be employed. What amounts of different leadership behaviors must be combined in order to arrive at optimum satisfaction of all needs must be the subject of further study. It is not known, of course, whether the pattern of need satisfaction will hold when all these leadership styles are combined.

Finally, it should be remembered that when actual need satisfaction is used as the criterion the relationship between leadership styles and satisfaction of needs is not very large. Leadership climate alone does not provide actual need satisfaction. In order

to provide such satisfaction workers would have to be placed in appropriate leadership climates according to their need levels.

#### Satisfaction and motivation

Maslow Need Satisfaction and Motivation

One of the main reasons for interest in the relationship between lgadership and need satisfaction is the supposed positive relationship between higher order need satisfaction and motivation. Table 20 shows the correlations between perceived opportunity for need satisfaction and the three dimensions of motivation. Table 21 presents correlations between actual need satisfaction and motivation.

With the exception of a correlation of .21 (which could be significant by chance alone) between perceived satisfaction of autonomy needs and perceived occupational level, no statistically significant relationships appear in Table 20. This is contrary to theory and predictions. Theory would have it that perceived opportunity for satisfaction of higher order needs is positively related to motivation. This hypothesized relationship has been an important reason for advocating non-restrictive and participative leadership. Such leadership, as shown above, does result in satisfaction of higher order needs. But, the link between higher order need satisfaction and motivation does not hold up in this study. It would seem, therefore, that McGregor and others are not correct in theorizing a relationship between participative leadership and motivation for reasons of higher order need satisfaction. At

#### CORRELATIONS BETWEEN PERCEIVED OPPORTUNITY FOR NEED SATISFACTION AND MOTIVATION

Perceived Opportunity for Need Satisfaction	Initiative	Self- Assurance	Perceived Occupational Level
Security	07	.00	03
Social	06	02	09
Esteen	.04	07	04
Autonomy	.13	.11	<b>.</b> 21≭
Self-Actualization	.00	.02	.00

\* Significant at p = .05.

#### TABLE 21

#### PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN NEED SATISFACTION AND MOTIVATION

	Motivation					
Need Satisfaction	Initiative	Self- Assurance	Perceived Occupational Level			
Security	06	12	11			
Social	<b>。</b> 03	.10	.01			
Esteen	12	12	.00			
Autonomy	•06	03	05			
Self-Actualization	04	03	07			

least, that would seem to be the case for this sample of workers. The fact that higher order need satisfaction is not, on the whole, related to motivation also casts some doubt on Maslow's need hierarchy as a useful concept in a theory of industrial motivation.

The relationships between actual need satisfaction and motivation (Table 21) are not significant. This is as previously hypothesized. Satisfaction, as defined in this study, is a function of the individual's need level as well as the environmental factors that may provide satisfaction of the need. Therefore, an individual could be satisfied with self-actualization, for instance, and still not have a sufficient amount of that need to display motivated performance.

Motivation and Satisfaction with Leadership

No hypotheses concerning the relationship between motivation and satisfaction with leadership were stated at the outset of the study. However, the data were available and it seemed of interest to see whether a relationship existed. Table 22 presents correlations between leadership satisfaction dimensions and three measures of motivation. It will be recalled that satisfaction with leadership was measured by means of a difference score between actual and ideal leader behavior description scores.

No significant relationships appear in Table 22. Therefore, it must be concluded that satisfaction with the supervisor's behavior does not motivate workers.

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#### THE RELATIONSHIP BETWEEN MOTIVATION AND SATISFACTION WITH LEADERSHIP BEHAVIOR

Leadership Satisfaction Dimensions*	Motivation				
	Initiative	Self- Assurance	Perceived Occupational Level		
Initiating Structure	.10	.12	02		
Freedom of Action	08	•00	08		
Consideration	.07	.02	06		
Production Emphasis	.06	.07	.06		

\* Satisfaction with leadership was measured by means of a difference score between scores on the LBDQ and ILBQ.

# Interaction of leadership with employee needs and expectations

One of the hypotheses of this study was that motivation and need satisfaction would be affected by the interaction of leadership styles with individual needs and expectations. It was felt that the need satisfaction and motivation of individuals with higher levels of esteem. autonomy, and self-actualization needs would be more positively affected by Consideration and Freedom of Action than individuals low on these needs. On the other hand, the need satisfaction, but not the motivation, of individuals high in need for security would be affected positively by Initiating Structure and Production Emphasis. Individuals low in security would not be so affected. The specific interactive effects of social needs were not predicted. However, it was thought that the interaction between leadership and social need would affect motivation differently than it would affect satisfaction of social need. This prediction was based on the assumption that satisfaction of social needs could not occur within the framework of task-oriented work (in clerical jobs).

No specific hypotheses were stated concerning the interaction of leadership expectations and leadership behavior. There are no theoretical treatments of these variables which could have served as guides for such hypotheses.

A moderator variable approach (Ghiselli, 1963) was taken in determining the interactions discussed above. Ghiselli has presented evidence that individual differences in traits (moderator variables) may be very important in predicting performance and other criteria. For instance, a near zero validity was increased by splitting the total sample into a high and a low group on a moderator variable. The validities for the high and low moderator groups were significant and opposite in sign.

The moderator variable approach has been taken in this study. Maslow needs and leadership expectations served as moderator variables. It was hypothesized that the relationships between the independent variables and dependent variables would increase for some of the moderator groups. A difference in correlations between moderator groups would be an indication of an interaction. In view of the fact that the correlations between leadership styles and the measures of motivation were near zero this approach seemed particularly appropriate.

Interaction of Leadership with Maslow Needs

The sample of 129 clerical workers was split into high, moderate, and low need groups (43 in each group) for each of the Maslow needs. The correlations between the leadership styles and the dependent variables of motivation and perceived need satisfaction were obtained for each of the sub-samples. The results have been grouped into four tables. Each table presents the correlations between one leadership style and the dependent variables for high, moderate, and low need groups.

The interactions between Initiating Structure and five Maslow needs are presented in Table 23. A correlation of .38 (significant at the .02 level) emerged between Initiating Structure and initiative for the high self-actualization group. The difference between this

#### CORRELATIONS BETWEEN INITIATING STRUCTURE AND THE DEPENDENT VARIABLES OF MOTIVATION AND PERCEIVED OPPORTUNITY FOR NEED SATISFACTION FOR HIGH, MODERATE, AND LOW NEED GROUPS

	Motivation			
Needs	Initiative	Self- Assurance	Perceived Occupational Level	Perceived Satis- faction
Security				
High	07	12	12	•09
Moderate	.21	.10	.10	.05
Low	.24	.18	.07	07
Social				
High	.13	11	<b>.</b> 05	08
Moderate	•00	.04	06	.07
Low	.14	<b>.</b> 21	•06	15
Esteen				
High	.23	.17	.08	08
Moderate	03	.11	13	.06
Low	.10	13	.15	.02
Autonomy				
High	.19	.12	.19	.14
Moderate	.18	.11	.09	.13
Low	•00	06	18	-,24
Self-Actualization				
High	•38 <del>**</del> 1	<b>.</b> 23	.26	06
Moderate	.05		09	.24
Low	02	08	10	05

\*\* Correlation significant at p = .02.

\* Significant difference between correlations at p = .05.

correlation and the correlation between the same variables for the low self-actualization group was significant at the .05 level. The correlations between Structure and the remaining two measures of motivation were also moderated by self-actualization. Thus, selfactualization appears to be an effective moderator variable for the relationship between Structure and motivation.

Esteem and autonomy needs seem to have the same moderating effects as self-actualization. The correlations between Structure and the motivation measures are generally more positive for the high need groups than for the low need groups. The moderating effects of security and social needs are in the opposite direction. That is, correlations between Structure and motivation are highest for the low need groups. Correlations between these variables are negative or zero for individuals high in security and social needs.

None of these correlations or differences between correlations are statistically significant. However, a definite pattern emerges from Table 23. In general, individuals high in esteem, autonomy, and self-actualization are more positively motivated by Structure than individuals low in these needs. In contrast, individuals low in security and social needs are more positively motivated under Structure than workers high in these needs. This pattern was predicted for the relationship between Consideration and motivation not for the relationship between Initiating Structure and motivation.

The Maslow needs also moderate the relationship between Initiating Structure and perceived need satisfaction. However, the moderating

effects are generally not in the expected direction or significant. Contrary to hypothesis, the moderating effects of esteem, autonomy, and self-actualization are not the same for motivation and perceived opportunity for need satisfaction. In the case of self-actualization, for example, the moderate group showed the greatest relationship between Structure and perceived opportunity for need satisfaction. However, it was the high need group that showed the largest correlation between Structure and initiative. According to current leadership and organization theory, higher order need satisfaction and motivation should occur under the same conditions, since motivation is hypothesized to be a function of higher order need satisfaction.

Table 24 presents the correlations between Freedom of Action and the dependent variables for high, moderate, and low need groups. As hypothesized, individuals high in need for autonomy perceived a greater opportunity for the satisfaction of this need under Freedom of Action than those low in need for autonomy. The correlation between Freedom of Action and perceived satisfaction of autonomy needs was .51 (significant beyond the .01 level) in the high autonomy group and .23 in the low autonomy group.

No significant pattern of correlations emerges from Table 24. The needs do moderate the relationship between Freedom of Action and the dependent variables, but the moderating effects are not consistent across the several dependent variables, are not statistically significant, and certainly not in the predicted direction. It had been hypothesized that the highest correlations between

#### CORRELATIONS BETWEEN FREEDOM OF ACTION AND THE DEPENDENT VARIABLES OF MOTIVATION AND PERCEIVED OPPORTUNITY FOR NEED SATISFACTION FOR HIGH, MODERATE, AND LOW NEED GROUPS

		Motivation		
Needs	Initiative	Self- Assurance	Perceived Occupational Level	Perceived Satis- faction
Security				
High	.22	15	.00	.01
Moderate	02	.06	.10	02
Low	01	.02	17	.09
Social				
High	.14	04	.11	12
Moderate	.11	04	12	04
Low	02	.03	04	33*
Esteem				
High	02	.18	.00	.04
Moderate	02	13	17	.03
Low	.24	04	.13	.15
Autonomy				
High	11	06	15	•51***
Moderate	.25	.01	.08	.27
Low	.07	07	05	.23
Self-Actualization	n			
High	.02	16	11	04
Moderate	03	03	09	.11
Low	.16	.06	.17	15

\* Significant at p = .05.

\*\*\* Significant at p = .01.

Freedom of Action and the dependent variable would occur in the high autonomy, esteem, and self-actualization need groups. In addition it had been hypothesized that the moderating effects of the needs would be the same for the relationship between Freedom of Action and motivation as well as Freedom of Action and perceived satisfaction. None of these hypotheses are confirmed with the exception of the moderating effects of autonomy on the relationship between Freedom of Action and perceived satisfaction with autonomy. Thus, these results cast further doubt on theories that utilize the Maslow need hierarchy as the basis for a theory of industrial leadership and motivation.

There are several significant interactions between Consideration and worker needs (Table 25). However, no clear pattern emerges. Certainly, none of the hypothesized interactions appear. It had been hypothesized that the correlations between Consideration and the dependent variables of motivation and perceived satisfaction would be positive and highest for groups high in esteem, autonomy, and self-actualization needs as compared with groups low in these needs.

The moderating effects of self-actualization, for instance, are contrary to hypothesis. The highest correlation (.35) between Consideration and perceived occupational level appears in the low self-actualization group rather than the high self-actualization group. This correlation is statistically significant beyond the .02 level. The difference between this correlation and the one

#### CORRELATIONS BETWEEN CONSIDERATION AND THE DEPENDENT VARIABLES OF MOTIVATION AND PERCEIVED OPPORTUNITY FOR NEED SATISFACTION FOR HIGH, MODERATE, AND LOW NEED GROUPS

	Motivation			
Needs	Initiative	Self- Assurance	Perceived Occupational Level	Perceived Satis- faction
Security				
High	11	•07	.07	.14
Moderate		.26	.16	21
Low	•15 -•28	23	17	.24
Social				
High	•00	•03	<b>.</b> 12	15
Moderate	•05	04	.12	12
Low	24	10	15	27
Ssteem				
High	18	01	.11	.17
Moderate	15	14	18	.04
Low	.07	.04	.18	•34 <del>*</del>
lutonomy				
High	06	.10	.02	.22
Moderate	05	13	09	- 06
Low	09	06	.17	09
Self-Actualization				
High	-,20	23	19	.16
Moderate	09	07	11 .35***  *	* .47***
Low	.05	.14	.35*** <b>*</b>	.04

\* Significant of p = .05.

\*\* Significant at p = .02.

\*\*\* Significant at p = .01.

\* Significant difference between correlations at p = .05.

appearing for the high self-actualization group is also statistically significant (beyond the .05 level). For some reason the motivation of individuals low in self-actualization is affected more positively by Consideration than the motivation of individuals high in selfactualization.

If the highest correlation between Consideration and perceived satisfaction of self-actualization appeared in the low self-actualization group, perceived satisfaction of self-actualization could be advanced as the cause for higher motivation. But, the highest correlation between Consideration and need satisfaction appears in the moderate self-actualization group. Once more the results refute the hypothesis that higher order need satisfaction leads to higher motivation.

Table 26 contains the correlations between Production Emphasis and the dependent variables for high, moderate, and low need groups. There are several statistically significant differences between correlations in different moderator groups. However, few consistent patterns emerge.

The exception is to be found in the moderating effects of esteem. The self-assurance and initiative of individuals who are high in esteem are positively affected by Production Emphasis, but the selfassurance and initiative of workers who have low or moderate esteem needs are negatively affected by Production Emphasis. The correlations in the high esteem group are significantly different from those in the moderate and low esteem group.

### TABLE 26

### CORRELATIONS BETWEEN PRODUCTION EMPHASIS AND THE DEPENDENT VARIABLES OF MOTIVATION AND PERCEIVED OPPORTUNITY FOR NEED SATISFACTION FOR HIGH, MODERATE, AND LOW NEED GROUPS

		Motivation	L	
Needs	Initiative	Self- Assurance	Perceived Occupational Level	Perceived Satis- faction
Security				
High	12	14	06	.06
Moderate		05	05	.04
Low	28 .15 *	.12	09	27
Social				
High	.07	05	06	<b>.</b> 04
Moderate	14	17 🙀	05	10
Low	07	.24	.00	.02
Esteem				
High	.18 1.	.26 03 *	06	11
Moderate	26 *	03 *	04	35**
Low	17	-,22 1	10	.12  *
Autonomy				
High	09	11	.11	<b>.</b> 10
Moderate	10	07	12	05
Low	.06	03	07	15
Self-Actualization	L			
High	.07	.09	<b>.01</b>	.07
Moderate	28	.22	13	17
Low	02	11	09	.05

\*\* Significant at p = .02.

\* Significant difference between correlations at p = .05,

Esteem also moderates the correlation between Production Emphasis and perceived satisfaction of the esteem need. The correlation in the moderate esteem group is -.35 (significant at the .02 level). This correlation is much larger than the same correlation for the overall sample and the same correlation in the high and low esteem groups.

The moderating effects of the five Maslow needs are not generally in the predicted direction. Furthermore, no consistent pattern emerges and the moderating effects are therefore difficult to explain.

It had been predicted that individuals high in esteem, autonomy, and self-actualization would be more motivated under Freedom of Action and Consideration than individuals low in these needs. It had also been hypothesized that individuals high in these needs would perceive more opportunity for the satisfaction of these needs under Freedom of Action and Consideration. These hypotheses were not confirmed. Instead, it is the relationship between Initiating Structure and motivation which seems to be moderated in the manner just described. Furthermore, the correlations between Structure and perceived satisfaction of the five needs were not moderated by degree of need in the same manner as the relationship between Structure and motivation. In fact, nowhere did the moderating effects of needs coincide for the relationship between leadership and motivation and the relationship between leadership and perceived need satisfaction. Thus, the theories that utilized higher order need satisfaction as an

intervening variable in the cause and effect relationship between leadership and motivation must be doubted.

Interaction of Leadership with Expectations of Leadership

The interactive effects (on motivation) of leadership behavior and employee expectations of leadership are presented in Tables 27, 28, 29, and 30. The effects of this interaction on need satisfaction are not presented. The satisfaction scores used in this study are difference scores between leadership behavior described and ideal leadership desired. As such, the scores are not independent of leadership behavior or leadership expectations. It can be safely assumed, however, that more of a given leadership style would prove satisfying to individuals desiring that style of leadership.

Table 27 presents the moderating effects of leadership expectations on the relationship between Initiating Structure and motivation. It is evident that high expectations of Production Emphasis and Consideration tend to result in higher relationships between Structure and motivation. The moderating effects are consistent across all three measures of motivation.

It is surprising to find that people who have high needs for close supervision and production pressure can be induced to develop internal motivation under Structured supervision. One might expect these individuals to be willing to produce more under Structured supervision, but it is not clear why individuals who seek close supervision and pressure for production would develop internal drive and standards of performance under supervision that does

## TABLE 27

# PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN INITIATING STRUCTURE AND MOTIVATION FOR HIGH, MODERATE, AND LOW LEADERSHIP EXPECTATION GROUPS

		Motivation	
Leadership Expectations	Initiative	Self- Assurance	Perceived Occupational Level
Initiating Structure			
High	.22	.01	.16
Moderate	06	.07	.19
Low	.17	.00	•04
Freedom of Action			
High	.12	.01	03
Moderate	.30*	.29	.14
Low	.01	08	•00
Consideration			
High	.28	.19	.22
Moderate	.14	08	-,02
Low	07	.01	17
Production Emphasis			
High	.37#*	•32*	.15
Moderate	10 *	06	01
Low	.26	.07	.05

\* Significant at p = .05.

\*\* Significant at p = .02.

\* Significant difference between correlations at p = .05.

not encourage such development. The interaction of need for Consideration with Initiating Structure is equally difficult to explain.

Expectations of Freedom of Action also interact with Initiating Structure. The highest correlations between Initiating Structure and the three measures of motivation appear in the moderate expectation (Freedom of Action) group. The correlation between Structure and initiative for this moderate expectation group is significant at the .05 level. The corresponding correlations in the high and low expectation groups are considerably lower. The explanation for this interaction is also not clear.

Table 28 contains the correlations between the leadership style of Freedom of Action and the three measures of motivation. As in the other tables, the correlations are presented for high, moderate, and low leadership expectation groups. It was thought that the highest correlations between Freedom of Action and motivation would appear in the groups high in need for Freedom of Action and high in need for Consideration, and that these correlations would be higher than the corresponding correlations for the moderate and low expectation groups. Such a pattern would have meant that employees high in these expectations respond to Freedom of Action with increasing amounts of motivation while those with lower expectations of Freedom of Action and Consideration do not respond to Freedom of Action with the same increase in motivation. The expected pattern of interactions did not occur. In fact, no clear and statistically

### TABLE 28

# PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN FREEDOM OF ACTION AND MOTIVATION, FOR HIGH, MODERATE, AND LOW LEADERSHIP EXPECTATION GROUPS

		Motivation	
Leadership Expectations	Initiative	Self- Assurance	Perceived Occupational Level
Initiating Structure			
High	.14	~.05	.131
Moderate	.01	23	.13 27 *
Low	.02	.08	.02
Freedom of Action			
High	.06	.00	15
Moderate	.27	.03	.02
Low	-08	13	01
Consideration			
High	.11	.00	•09
Moderate	10	14	15
Low	.11	.12	09
Production Emphasis			
High	•04	.03	.13
Moderate	.06	01	04
Low	.17	02	11

\* Significant difference between correlations at p = .05.

significant pattern emerges from Table 28, and, therefore, it is concluded that Freedom of Action and leadership expectations do not interact.

Table 29 shows the moderating effects of leadership expectations on the correlations between Consideration and the dimensions of motivation. No significant correlations or differences between correlations appear. Furthermore, no consistent pattern of correlations is evident. Therefore, it must be concluded that there is no interaction between leadership expectations and the leadership behavior of Consideration.

The moderating effects of leadership expectations on the correlations between Production Emphasis and the three measures of motivation are presented in Table 30. Although there is only one significant correlation, an interpretable pattern of interactions is to be seen in the moderating effects of two expectation dimensions, Production Emphasis and Consideration.

The correlation between the leadership behavior of Production Emphasis and the dimensions of motivation are larger in the high Production Emphasis expectation group than in the low expectation group. This pattern of correlations would seem to indicate that individuals with high expectations of Production Emphasis become positively motivated by Production Emphasis as compared to employees with low expectations of Production Emphasis who do not become motivated by Production Emphasis. Naturally, these conclusions

# TABLE 29

# PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN CONSIDERATION AND MOTIVATION, FOR HIGH, MODERATE, AND LOW LEADERSHIP EXPECTATION GROUPS

		Motivation	
Leadership Expectations	Initiative	Self- Assurance	Perceived Occupational Level
Initiating Structure			
High	04	25	.04
Moderate	13	.03	11
Low	04	•07	.17
Freedom of Action			
High	06	.01	17
Moderate	.01	.09	.21
Low	14	16	.02
Consideration			
High	09	.00	.11
Moderate	11	19	17
Low	00	.15	•04
Production Emphasis			
High	01	11	.22
Moderate	18	10	18
Low	.05	.19	.13

# TABLE 30

# PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN PRODUCTION EMPHASIS AND MOTIVATION, FOR HIGH, MODERATE, AND LOW LEADERSHIP EXPECTATION GROUPS

		Motivation	
Leadership Expectations	Initiative	Self- Assurance	Perceived Occupational Level
Initiating Structure			
High	04	.07	.04
Moderate	21	02	29
Low	.01	08	02
Freedom of Action			
High	.01	.15	.03
Moderate	13	10	15
Low	07	09	10
Consideration			
High	•09	.12	<b>.</b> 06
Moderate	,08	.03	01
Low	30*	22	28
Production Emphasis			
High	.21	.23	.15
Moderate	12	.07	04
Low	07	09	09

\* Significant at p = .05.

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are only tentative because the correlations and the differences between correlations are not statistically significant.

The moderating effects of expectation of Consideration are opposite to those of expectation of Production Emphasis discussed in the previous paragraph. The highest correlations between Production Emphasis and motivation are negative and are to be found in the low Consideration groups. Thus, individuals with a low need for Consideration tend to exhibit less motivation with increasing amounts of Production Emphasis. The reasons for this are not clear. However, only one of the correlations is significant, and none of the differences between correlations are significant. Therefore, these results are only tentative.

Several conclusions can be drawn from the data just discussed. In general, expectations of given leadership behaviors tend to interact with perceived leadership behavior. A high need for Production Emphasis tends to result in higher motivation (on all three motivation dimensions) under Initiating Structure and Production Emphasis. On the other hand, individuals with low need for Production Emphasis do not show higher motivation with increases in Production Emphasis and Initiating Structure.

Of the four leadership styles, Initiating Structure seems to interact with the most leadership expectation dimensions. However, conceptually different expectations like Production Emphasis and Consideration interact with Structured supervision in the same manner. This makes interpretation difficult. It must be pointed out, however, that these expectation dimensions are empirically independent. Thus,

it is possible for an individual to have a high need for both Consideration and Production Emphasis. In any case, Initiating Structure interacts with the largest number of leadership expectations as it did with the largest number of Maslow needs. For this reason, it seems as if Structured supervision holds the greatest promise for increasing employee motivation. The types of individuals that are most likely to be motivated by Structure and the reasons for their being motivated need further study.

One of the most interesting conclusions comes from the moderating effects that were not found. Neither a high expectation of Freedom of Action nor a high expectation of Consideration resulted in higher motivation under considerate and non-restrictive supervision. Again, this is contrary to what one might expect on the basis of theory. Although the null-hypothesis cannot be proven, these results cast some doubt on the applications of current theories of leadership and motivation to industrial problems. At least for this sample, these theories do not hold.

### Statistical Interpretation

Whenever a large number of correlations are used in the analysis of data, the usual statistical confidence levels used in interpreting the results are open to question. This is the case with the large number of correlations just presented in the analysis of interactions. When there are such a large number of correlations it is always possible that a certain number of significant correlations will

appear by chance alone. Of course, it is impossible to identify which correlations are chance correlations and which ones represent a real relationship in the population. But, if the number of significant correlations is much larger than the number of correlations one might expect by chance alone, some confidence can be placed in the overall pattern of correlations and the conclusions reached from this pattern.

Since the probability level used in testing for the significance of the above correlations was .05, it can be expected that five percent of the correlations will be significant by chance alone. Table 31 presents the actual proportion of correlations that were significant and the theoretical proportion of correlations that can be expected to be significant on the basis of chance alone (when p = .05). It is clear that the proportion of correlations that were actually significant is smaller than the theoretical proportion. This means that the number of significant correlations obtained in the above analysis could have been obtained by chance alone.

Table 31 also presents the actual proportion of significant differences between correlations. Since the total number of differences between correlations (relevant to the hypotheses of this study) is the same as the total number of correlations, the theoretical proportion of significant differences is the same as the theoretical proportion of significant correlations. As can be seen, the proportion of significant differences obtained was not larger than chance.

# TABLE 31

### COMPARISON OF THEORETICAL AND EXACT PROBABILITIES OF OBTAINING SIGNIFICANT CORRELATIONS AND DIFFERENCES BETWEEN CORRELATIONS

Proportions	Number of Significant Statistics	Total Number of Statistics	Percent of Significant Statistics
Theoretical			
Proportion	19	384	•05
Actual Proportion of Significant Correlations	11	384	.03
Actual Proportion of Significant Differences Between Correlations	14	384	•04

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The fact that the proportion of significant correlations and differences between correlations did not exceed chance makes the findings discussed above tentative. However, there were some definite patterns in certain groups of correlations. In these instances the data may be interpreted with some assurance that the findings are not restricted to this sample. This is particularly true in view of the fact that the sub-samples consisted of only 43 subjects, and the reliabilities of the motivation measures were low and probably attenuated the correlations. However, the findings discussed above should be used only as a guide for further research and not for the purpose of prediction.

#### Interaction between leadership styles

The review of literature showed that Consideration and Initiating Structure interact in their effect on grievances and turnover (Fleishman and Harris, 1962). An a posteriori analysis was performed to determine if a similar interaction occurs with respect to the three motivation measures. An analysis was also performed to determine if Freedom of Action and Initiating Structure interact. Once again a correlational approach was taken in determining these interactions. The sample was divided into high, moderate, and low groups on one of the leadership dimensions in each pair. The correlation between the other leadership dimension and the three motivation measures was then determined for each of these groups.

Table 32 shows the interaction between Initiating Structure and Consideration. Consideration was the dimension on which high,

### TABLE 32

# CORRELATIONS BETWEEN INITIATING STRUCTURE AND THREE DIMENSIONS OF MOTIVATION FOR HIGH, MODERATE, AND LOW CONSIDERATION

			Motiva	ation		· · · · · · · · · · · · · · · · · · ·
Consideration	Initiative	Means	Self- Assurance	Means	Perceived Occupational Level	Means
High	•35*	25.8	.15	25.7	.13	28.6
Moderate	06	27.2	06	25.5	<b>-</b> •04	27.8
Low	.16	27.0	.07	25.6	.01	29.1

\* Significant at p = .05.

\* Significant difference between correlations at p = .05.

moderate, and low groups were formed. The correlations in the cells are those between Initiating Structure and the three motivation measures.

It is evident that an interaction does exist, particularly with respect to initiative. Evidently a supervisor that is perceived to be a very Considerate supervisor can effectively increase initiative by increasing the amount of Initiating Structure that he displays. The correlation between Initiating Structure and initiative is .35 (significant at p = .05) for the group of workers who perceive highly Considerate leadership. This correlation is considerably higher than the correlation between Initiating Structure and initiative for the overall sample.

Table 33 presents the interaction between Freedom of Action and Initiating Structure. In this case the overall sample was divided into high, moderate, and low groups on the dimension of Initiating Structure. Thus, the correlations in the cells represent the relationship between Freedom of Action and the three dimensions of motivation.

There is a definite interaction between these two styles of supervision. Individuals that perceive high or low amounts of Initiating Structure are positively motivated by increasing amounts of Freedom of Action. The correlations in these two categories are generally above those for the overall sample. But, only the correlation between Freedom of Action and perceived occupational level (.37) for the low Structure group is significant statistically. In sharp contrast, the correlations between Freedom of Action and all three

### TABLE 33

### CORRELATIONS BETWEEN FREEDOM OF ACTION AND THREE DIMENSIONS OF MOTIVATION FOR HIGH, MODERATE, AND LOW INITIATING STRUCTURE

	Motivation					
Initiating Structure	Initiative	Means	Self- Assurance	Means	Perceived Occupational Level	Means
High	。24	28,1	· <sup>20</sup>	25.9	.04	28.7
Moderate	29	26.1	~.30*	25.5	32*	28,3
Low	.23	25.9	•13 <b> </b> *	25.4	.37**	28.5

\* Significant at p = .05.

\*\* Significant at p = .02.

\* Significant difference between correlations at p = .05.

\*\* Significant difference between correlations at p = .02.

\*\*\* Significant difference between correlations at p = .01.

measures of motivation are negative in the moderate Initiating Structure group. Two of these correlations are significant at the .05 level and the third is very close to significance. Furthermore, the differences between two of these correlations and the corresponding correlations for the high and low Structure groups are statistically significant.

For some reason workers who perceive a moderate amount of Initiating Structure become less motivated with increasing amounts of Freedom of Action. However, workers who perceive a high amount or a low amount of Structure become more motivated with increasing amounts of Freedom of Action. The only exception to this occurs in the relationship between Freedom of Action and perceived occupational level for the high Structure group. This correlation is near zero.

In summary, it can be said that leadership styles do interact in their effects on motivation. It must be remembered, however, that leadership behavior descriptions were not averaged by department. Hence, the interactions observed are between perceived leadership styles.

#### SUMMARY AND CONCLUSIONS

The purpose of this study has been to determine the relationship between leadership, employee needs and expectations, need satisfaction, and motivation. These constituted the broad variables in this investigation, although a large number of specific measures were used.

The relationship between type of supervision and employee motivation is the subject of numerous theories which are often employed in recommending optimum supervisory methods to management. A number of these theories employ Maslow's theory of motivation in explaining why participative, non-restrictive, and employee-centered supervision will lead to higher employee motivation and performance. These theories state that such supervision provides workers an opportunity to satisfy higher order needs which in turn results in motivated performance. This study has been a test of these theories within the limited scope of one company.

The Ohio State Leadership scales were utilized to measure four dimensions of leadership. Motivation was measured by means of scales that measure initiative, self-assurance, and perceived occupational level. Special scales were developed that measure employee needs and need satisfaction along the Maslow need hierarchy. Finally, worker expectations of specific leadership styles were measured by

means of a questionnaire that asked workers to describe their ideal leader.

A Factor analysis of the variables indicated that all the major variables emerged as independent factors. Of particular interest was the fact that the Maslow needs emerged as separate factors.

The anticipated relationships between leadership behavior and motivation were not found. For the overall sample, correlations between leadership styles and motivation dimensions were all close to zero. A secondary analysis of these relationships was performed for a sub-sample of workers who had more complex jobs which were assumed to allow a greater amount of motivated performance. For this sub-sample, the largest relationships between leadership and the three motivation measures were found for Initiating Structure. Considerate leadership resulted in positive effects on self-assurance and perceived occupational level but not on initiative. Only the relationship between Structure and initiative was statistically significant. However, the implication for future studies is clear. Type of work and probably level of organization are important variables to consider in studies on leadership and motivation in industry.

The relationships between leadership climates and the satisfaction of Maslow needs were as expected. Higher order needs (esteem, autonomy, and self-actualization) are more readily satisfied under Consideration and Freedom of Action, while the social and security needs are better satisfied under Initiating Structure and Production Emphasis. However, the pattern of higher order need satisfaction is not the same for Freedom of Action and Consideration. Satisfaction of all higher order needs would require a supervisor who displays both types of leadership behavior. Likewise, the satisfaction of security and social needs would require Initiating Structure and Production Emphasis as leadership behaviors. At this point, it is important to note that the leadership climates which provide an opportunity for higher order need satisfaction are not the ones that lead to higher motivation. Initiating Structure had the highest correlations with the dimensions of motivation, but it was negatively correlated with perceived opportunity to satisfy higher order needs.

To test the Maslow approach to motivation even further, perceived opportunity for the satisfaction of Maslow needs was correlated with the three measures of motivation. The correlations were, with one exception, near zero. The exception was the correlation between perceived opportunity to satisfy the autonomy need and perceived occupational level (level of aspiration). This correlation was significant but low. Furthermore, satisfaction of autonomy was shown, in the previous analysis, to be related to Freedom of Action which was not related to any of the motivation measures.

Leadership, it was felt, might interact with individual needs and expectations in a way that would effect both motivation and need satisfaction. By determining the nature of such interactions, the optimum conditions for high employee motivation were ascertained.

At the same time such an analysis served as a further test of current theoretical formulations on leadership and motivation in industry.

The results of the analysis showed that individual needs do indeed interact with leadership behavior with effects on motivation and perceived need satisfaction. With few exceptions, the pattern of these interactions was not the predicted pattern. Once again Initiating Structure emerged as the leadership behavior that is most related to motivation. Individuals high in needs for selfactualization, esteem, autonomy, Production Emphasis, and Consideration were positively motivated by such supervision. Individuals low in self-actualization tended to have a higher perceived occupational level with increasing amounts of Consideration. This was completely contrary to predictions.

Only in the case of need for independence did higher need result in greater satisfaction under the predicted supervisory climate, Freedom of Action. Finally, positive relationships between leadership and motivation did not occur under the same conditions as did positive relationships between leadership and satisfaction. This casts further doubt on the hypothesized relationship between higher order need satisfaction and motivation.

The interactive effects of perceived leadership styles were also studied. Workers who perceive high Consideration seemed to be more positively motivated by Initiating Structure than individuals who perceive a low level of Consideration. That is, a combination of Consideration and Initiating Structure resulted in a higher

positive relationship between Structure and initiative than the relationship between Structure and initiative without regard to Consideration. Freedom of Action and Initiating Structure also interacted but in a more complicated manner. Individuals who perceive a moderate amount of Initiating Structure seem to be negatively motivated by increasing amounts of Freedom of Action, while those perceiving high or low amounts of Structure seem to be positively motivated by increasing amounts of Freedom of Action. It seems that leadership styles interact in a manner that effects motivation. Just what the reasons are for the effects observed must await further research into the dynamics of leadership.

The present study has raised more questions than it has answered. The accepted notions about leadership and motivation have not been confirmed. The results cast serious doubts on McGregor's theory and other theories that employ the Maslow need hierarchy as means of explaining the dynamics of leadership and human motivation at work. In fact, the usefulness of the Maslow theory as a framework for an industrial theory of motivation is open to question. However, fairly reliable measurement of the a priori need dimensions is possible.

Individual needs and expectations do seem to interact with leadership behavior. But these interactions effect motivation and need satisfaction in extremely complicated ways. They must be studied carefully, and the underlying causes must be determined. The same thing is true of the interaction between leadership styles. The dynamics behind these interactions and their effect on motivation

cannot be explained by a study such as this. Furthermore, job type and probably organizational level is much more important than anyone has realized. Leadership styles that may be effective in one situation may not be effective in others. Just what combination of leadership, employee needs and expectations, and job type will result in optimum motivation must be the subject of exhaustive research. Finally, it must be remembered that motivation is not a unitary concept and hasn't been treated as such in this study. The interactive effects discussed above may be different for the several dimensions of motivation.

In short, the problem of supervision and worker motivation is extremely complex and cannot be explained by global theories and oversimplified models. These approaches must be discarded in favor of a greater respect for the complicated interaction of the many individual and environmental factors which are responsible for human motivation at work.

# APPENDIX A

# LEADERSHIP BEHAVIOR DESCRIPTION QUESTIONNAIRE

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#### LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Originated by the staff members of The Ohio State Leadership Studies and revised by the Bureau of Business Research

#### Purpose of the Questionnaire

. . .

On the following pages is a list of items that may be used to describe the actual behavior of your supervisor. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. Although some items may appear similar, they express differences that are important in the description of leadership. Each item should be considered as a separate description. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to describe, as accurately as you can, the behavior of your supervisor.

Note: All the items refer to the supervisor as He. If your supervisor is a woman just assume that the item reads <u>She</u>.

The term, "group," as employed in the following items, refers to a section that is supervised by the person being described.

The term, "member," refers to all the people in the unit of organization that is supervised by the person being described.

### DIRECTIONS:

a. READ each item carefully.

- b. THINK about how frequently the leader actually engages in the behavior described by the item.
- c. DECIDE whether he (A) <u>always</u> (B) <u>often</u> (C) <u>occasionally</u> (D) <u>seldom</u> or (E) never acts as described by the item.
- d. DRAW A CIRCLE around one of the five letters (A B C D E) following the item to show the answer you have selected.
  - A = Always B = Often C = Occasionally D = Seldom E = Never

e. MARK your answers as shown in the example below.

Example: He comes in to work	A)	B	C	D	E
Example: He goes out to lunch	A	B	<b>()</b>	D	E
Example: He sleeps at his desk	A	B	С	D	Ē

1.	He	lets group members know what is expected of them	A	B	C	D	E
2.	He	allows the members complete freedom in their work	A	B	С	D	E
3.	He	is friendly and approachable	A	B	С	D	E
4.	He	encourages overtime work	A	B	С	D	E
5.	He	encourages the use of uniform procedures	A	B	C	D	E
6.		permits the members to use their own judgment in solving probl-	A	В	с	D	E
7.		does little things to make it pleasant to be a member of the oup	A	B	С	D	E
8.	He	stresses being ahead of competing groups	A	B	С	D	E
9.	He	tries out his ideas in the group	A	B	С	D	E
10.	He	encourages initiative in the group members	A	B	С	D	E
11.	He	puts suggestions made by the group into operation	A	B	C	D	E
12.	He	urges members for greater effort	A	B	С	D	E
13.	He	makes his attitude clear to the group	A	B	С	D	E
14.	He	lets the members do their work the way they think best	A	B	С	D	E

A = Always B = Often C = Occasionally D = Seldom E = Never	12	8		
15. He treats all group members as his equals	B	C	D	E
16. He keeps the work moving at a rapid pace A	B	С	D	E
17. He decides what shall be done and how it shall be done A	B	С	D	E
18. He assigns a task, then lets the members handle it A	B	C	D	E
19. He gives advanced notice of changes A	B	С	D	E
20. He pushes for increased production A	B	С	D	E
21. He assigns group members to particular tasks A	B	С	D	E
22. He turns the members loose on a job, and lets them go to it A	B	С	D	E
23. He keeps to himself A	B	С	D	E
24. He asks the members to work harder A	В	С	D	E
25. He makes sure that his part in the group is understood by the group members A	B	с	D	E
26. He is reluctant to allow the members any freedom of action A	B	С	D	E
27. He looks out for the personal welfare of group members A	B	С	D	E
28. He permits the members to take it easy in their work A	Б	C	D	E
29. He schedules the work to be done A	B	С	D	E
30. He allows the group a high degree of initiative A	B	С	D	E
31. He is willing to make changes A	B	С	D	E
32. He drives hard when there is a job to be done	B	С	D	E
33. He maintains definite standards of performance A	B	С	D	E
34. He trusts the members to exercise good judgment	В	С	D	Ē
35. He refuses to explain his actions A	B	С	D	E
36. He urges the group to beat its previous record A	B	С	D	E
37. He asks that group members follow standard rules and regulations A	B	С	D	E
38. He permits the group to set its own pace	B	С	D	E
39. He acts without consulting the group A	B	C	D	E
40. He keeps the group working to capacity A	B	С	D	E

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# APPENDIX B

# PREFERENCE INVENTORY

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PREFERENCE INVENTORY

(Note: There is another questionnaire that uses similar items but has different directions. Therefore, read these directions carefully.)

### Purpose of Inventory:

Below you will find six sets of statements that describe various aspects of a job. These job factors are of differing importance to different people. The purpose of this inventory is to determine the relative importance to you of each of the five statements in each set. Although some items in the various sets may be similar they express different aspects of the job and are necessary to a complete description of what is important to you in a job. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to rank each set of items in terms of their importance to you.

#### Directions:

a. READ all the statements in each set carefully.

- b. THINK about how important each statement is to you.
- c. RANK the statements in order of their importance to you. Do this by placing a "l" next to the statement that is most important to you, a "2" next to the statement that is second most important to you and so on through number "5" which would be the statement of least importance to you.
- d. RANK ALL STATEMENTS in a set even when this is difficult.

### Example:

2 The opportunity in my job to work together with other people.
4 Having sufficient authority for the job expected of me.
5 Having knowledge of company plans that affect me and my job.
1 Credit given me by my superiors for doing a good job.
3 The opportunity to utilize all of my abilities on the job.

RANK the statements in each set in order of their importance to you.

#### Set 1

The status that my job gives me. Relative freedom from supervision. Being told what I am supposed to do and how I am to do it. The opportunity to develop my full potential on the job. The opportunity to develop close friendships in my job.

### Set 2

The opportunity in my job to give help to other people. NOT having to make decisions on my job. The opportunity to come up with my own solutions to problems connected with my work. The opportunity for personal growth and development in my job. The importance of my job title. The chance to go as high as I want to go at work.

Receiving adequate information about plans and policies that influence my work.

Freedom to express my opinion and suggestions to superiors.

Being liked by others in the department.

The feeling that my job is regarded as important.

# Set 4

Freedom to use my own judgment in my work. Getting as far ahead as my abilities will allow. Having other workers at my level recognize the importance of my work. An opportunity in my job to show my liking and friendship for others. Working under a man who will take over and do the job for me when I get into a jam.

## Set 5

Freedom to make decisions about my work.

The opportunity to participate in after-work activities such as picnics, bowling leagues etc.

A routine job where I always know what is expected of me.

The prestige and regard my job receives from others outside the company. The opportunity to advance in responsibility as far as I am able to.

### Set 6

A sense of belonging to my work group.

A definite set of rules and procedures that I can follow in doing my job. NOT having my work interfered with by my supervisor.

Credit given me by the company for doing good work.

The feeling of self-fulfillment from being able to use my own unique capabilities and realizing my potential in my job.

# APPENDIX C

IDEAL LEADER BEHAVIOR QUESTIONNAIRE

IDEAL LEADER BEHAVIOR (What you expect of your supervisor)

### Developed by staff members of The Ohio State University Leadership Studies

On the following pages is a list of items that may be used to describe the behavior of your supervisor, as he <u>should</u> behave. This is not a test of ability. It simply asks you to describe what an ideal leader <u>should</u> do in supervising the group.

Note: The term "group," as employed in the following items, refers to a department, division or other unit of organization which is supervised by the person being described.

The term "member" refers to all the people in the unit of organization which is supervised by the person being described.

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#### DIRECTIONS:

- a. READ each item carefully.
- b. THINK about how frequently the supervisor <u>SHOULD</u> engage in the behavior described by the item.
- c. DECIDE whether he SHOULD (A) <u>always</u>, (B) <u>often</u>, (C) <u>occasionally</u>, (D) <u>seldom</u>, or (E) <u>hever</u> act as described by the item.
- d. DRAW A CIRCLE around one of the five letters following the item to show the answer you have selected.
  - A = Always B = Often C = Occasionally D = Seldom E = Never

e. MARK your answer as shown in the sample below:

The IDEAL supervisor SHOULD:

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Example: Come to work
Example: Sleep at his desk A B C D 🖲
The <u>IDBAL</u> supervisor <u>SHOULD</u> :
1. Let group members know what is expected of them A B C D E
2. Allow the members complete freedom in their work A B C D E
3. Be friendly and approachable B C D E
4. Encourage the use of uniform procedures A B C D E
5. Encourage overtime work A B C D E
6. Permit the members to use their own judement in solving problems A B C D E
7. Do little things to make it pleasant to be a member of the group A B C D E
8. Stress being ahead of competing groups A B C D E
9. Try out his ideas in the group A B C D E
10. Encourage initiative in the group members A B C D E
11. Put suggestions made by the group into operation A B C D E
12. Urge members to greater effort A B C D E
13. Make his attitude clear to the group A B C D E
14. Let the members do their work the way they think best A B C D E

A = Always B = Often C = Occasionally D = Seldom E = Never		13	15		
15. Treat all group members as his equals	A	B	C	D	E
16. Keep the work moving at a rapid pace	A	B	С	D	Е
17. Decide what shall be done and how it shall be done	A	B	С	D	Е
18. Assign a task and then let the members handle it	A	B	С	D	E
19. Give advance notice of changes	A	B	C	D	E
20. Push. for increased production	A	B	С	D	E
21. Assign group members to particular tasks	A	B	C	D	E
22. Turn the members loose on a job and let them go on it	A	B	C	D	Е
23. Keep to Maself	A	B	С	D	E
24. Ask the members to work harder	A	B	С	D	E
25. Make sure that his part in the group is understood by the group members	A	B	с	D	E
26. Be reluctant to allow the members any freedom of action	A	В	С	D	Е
27. Look out for the personal welfare of group members	A	B	С	D	E
28. Permit the members to take it easy in their work	A	B	С	D	E
29. Schedule the work to be done	A	B	С	D	E
30. Allow the group a high degree of initiative	A	В	C	D	E
31. Be willing to make changes	A	B	С	D	E
32. Drive hard when there is a job to be done	A	B	С	D	Е
33. Maintain definite standards of performance	A	B	С	D	E
34. Trust the members to exercise good judgment	A	B	С	D	E
35. Refuse to explain his actions	A	B	С	D	E
36. Urges the group to beat its previous record	A	В	С	D	E
37. Ask that group members follow standard rules and regulations	A	B	С	D	E
38. Permit the group to set its own pace	A	В	С	D	E
39. Act without consulting the group	A	B	С	Ď	E
40, Keep the group working to capacity	A	B	C	D	E

# APPENDIX D

# JOB INVENTORY

#### JOB INVENTORY

(Note: There is another questionnaire that uses similar items but has different directions. Therefore, read these directions carefully.)

#### Purpose of the Inventory:

This inventory contains six sets of statements. Each describes five things that you can get from your job. All the statements are probably true of your job to some extent but not to the same degree. The purpose of this inventory is to determine the rank-order in which you are getting these things on the job. To do this you will have to rank the statements in the order in which they reflect things that you are truly getting from your job.

Although some of the items in the various sets are similar they express different aspects of the job and are necessary to the complete description of what you are getting from your job. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to rank each set of items in the order in which they reflect what you are getting from your job.

#### Directions:

a. READ all the statements in each set carefully.

- b. THINK about how truly the statement reflects what you are getting from your job.
- c. RANK the statements in the order in which you are getting the things described by the statements. Do this by placing a "l" next to the thing you are getting most on the job, a "2" next to the thing you are getting second most on the job, and so on through number "5" which would be the thing you are getting least on the job.
- d. RANK ALL THE STATEMENTS in a set even when this is difficult.

#### Example:

5 There is an opportunity to utilize all of my abilities on the job. 3 I have sufficient authority for the job expected of me. 1 Credit is given me by my superior for doing a good job. 4 I have knowledge of company plans that affect me and my job. 2 I have the opportunity in my job to work together with other people.

 $\frac{RANK}{from}$  the statements in the order in which they reflect things you are getting

#### Set 1

There is freedom to express my opinions and suggestions to my supervisor. I am liked by others in the department.

I receive adequate information about plans and policies that influence my work. There is a chance to go as far as I want to go at work.

I have the feeling that my job is regarded as important.

### Set 2

There is an opportunity to advance in responsibility as far as I am able to. There is freedom to make decisions about my work. The job I have is routine and I always know what is expected of me. My job has prestige and receives regard from others outside of the company. There is an opportunity to participate in after-work activities such as picnics, bowling leagues, etc.

### Set 3

There is freedom to use my own judgment in my work. There is an opportunity in my job to show my liking and friendship for others. Others working at my level recognize the importance of my work. There is an opportunity to get as far ahead as my abilities will allow. I work under a man who will take over and do the job for me when I get into a jam.

### Set 4

There is an opportunity to develop my full potential on the job. I am told what I am supposed to do and how I am to do it. There is relative freedom from supervision.

My job gives me status.

There is an opportunity to develop close friendships in my job.

# Set 5

There is a definite set of rules and procedures that I can follow in doing my job.

I don't have my work interfered with by my superior.

I receive credit by the company for doing good work.

I have the feeling of self-fulfillment from being able to use my own unique capabilities and realizing my potential in my job.

\_\_\_\_I have a sense of belonging to my work group.

# Set 6

I do not have to make decisions on my job

There is an opportunity to come up with my own solutions to problems connected with my work.

There is an opportunity for personal growth and development in my job.

My job has an important title.

There is an opportunity in my job to give help to other people.

# APPENDIX E

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# SELF-DESCRIPTION INVENTORY

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### SELF-DESCRIPTION INVENTORY

DIRECTIONS:

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The purpose of this inventory is to obtain a picture of the traits and behavior that you believe you display on your job and to see how you describe yourself. There are no right or wrong answers so try to describe your job behavior as accurately and honestly as you can. You are to check  $(X_{-})$  the space next to one word in each of the following pairs.

In each of the pairs of words below check the one you think most describes you.

1discreet	2understanding thorough
3cooperativeinventive	4persevering independent
5loyal dependable	6industrious practical
7unaffected alert	8sharp-witted deliberate
9	10enterprisingintelligent
llffectionatefrank	12progressive thrifty
13sincere calm	14fair-minded
15poised ingenious	l6sociable steady
17pleasantmodest	18responsible reliable
19dignifiedcivilized	20. imaginative self-controlled
21sympatheticpatient	22stableforesighted

In each of the pairs of words below check the one you think least describes you.

24shy	25noisy
lazy	arrogant
26immature	27unfriendly
quarrelsome	self-seeking
28conceited	29shallow
infantile	stingy
30unstable	31dreamy
frivolous	dependent
32changeable prudish	33foolish
34apathetic	35despondent
egotistical	evasive
36weak	37rattle-brained
selfish	disorderly
38fussy submissive	39opinionatedpessimistic
40shiftless	41hard-hearted
bitter	self-pitying
42cynicalaggressive	43dissatisfied outspoken
44undependable	45sly
resentful	excitable
46irresponsibleimpatient	

#### BIBLIOGRAPHY

- Argyle, M., Gardner, G., and Cioffi, F. "Supervisory Methods Related to Productivity, Absenteeism, and Labor Turnover," <u>Human</u> <u>Relations</u>, 1958, <u>11</u>, 23-40.
- Argyris, Chris. <u>Personality</u> and <u>Organization</u>. New York: Harper and Brothers, 1958.
- Argyris, C. "The Individual and Organization: An Empirical Test," <u>Admin. Sci. Quarterly</u>, 1959, <u>4</u>, 145-167.
- Barrett, Richard, S. "Performance Suitability and Role Agreement, Two Factors Related to Attitudes," <u>Personnel Psychology</u>, 1963, <u>16</u>, 345-357.
- Bass, B. M. "Leadership Opinions as Forecasts of Supervisory Success: A Replication," <u>Personnel Psychology</u>, 1958, <u>11</u>, 515-18.
- Baumgartel, H. "Leadership, Motivations, and Attitudes in Research Laboratories," J. of Social Issues, 1956, <u>12</u>, 24-31.
- Bennis, W. G. "Leadership Theory and Administrative Behavior: The Problem of Authority," <u>Admin. Sci. Quarterly</u>, 1959, <u>4</u>, 239-301.
- Brayfield, A. R., and Crockett, W. R. "Employee Attitudes and Performance," <u>Psychological Bulletin</u>, 1955, 396-424.
- Brown, A. The Organization of Industry. Engelwood, N.J: Prentice-Hall, 1950.
- Coch, L., and French, J. R. P., Jr. "Overcoming Resistance to Change," <u>Human Relations</u>, 1948, <u>1</u>, 512-532.
- Compey, A. L., Pfiffner, J. M., and Beem, H. "Factors Influencing Organizational Effectiveness: I. The U.S. Forest Survey," <u>Personnel Psychology</u>, 1952, <u>5</u>, 307-328.
- Davis, R. C. The Fundamentals of Top Management. New York: Harper and Brothers, 1951.

- Day, R. C., and Hamblin, R. L. "Some Effects of Close and Punnitive Styles of Supervision," <u>Tech. Rep.</u> 8, <u>Contract N onr 816 (11)</u> (Washington University, St. Louis, Mo., 1961).
- DeCharms, R., and Bridgeman, W. "Leadership Compliance and Group Behavior," <u>Tech. Rep. 9</u>, <u>Contract N onr 816 (11)</u> (Washington University, St. Louis, Mo., 1961).
- Dunteman, G., and Bass, B. M. "Supervisory and Engineering Success Associated with Self, Interaction, and Task Orientation Scores," <u>Personnel Psychology</u>, 1963, <u>16</u>, 13-21.
- Fayol, Henri. <u>Industrial and General Administration</u>. International Management Institute, 1930.
- Fleishman, E. A., Harris, E. F., and Burtt, H. E. <u>Leadership and</u> <u>Supervision in Industry</u>. Columbus: Ohio State University, Bureau of Educational Research, 1955.
- Fleishman, E. A., and Harris, E. F. "Patterns of Leadership Behavior Related to Employee Grievances and Turnover," <u>Personnel</u> <u>Psychology</u>, 1962, <u>15</u>, 43-56.
- Foa, U. G. "Relation of Worker Expectations to Satisfaction with Supervisor," <u>Personnel</u> <u>Psychology</u>, 1957, <u>10</u>, 161-168.
- French, J. R. P., Jr., Israel, J., and As, D. "An Experiment on Participation in a Norwegian Factory," <u>Human Relations</u>, 1960, <u>13</u>, 3-19.
- Georgopoulos, B. S., Mahoney, G. M., and Jones, N. W., Jr. "<u>A</u> Path-Goal Approach to Productivity," <u>J. of Applied Psychology</u>, 1957, <u>41</u>, 345-353.
- Gibb, C. A. "Leadership," in <u>Handbook of Social Psychology</u>, ed. Lindzey, G. Cambridge: Addison-Wesley, 1954, pp. 877-920.
- Ghiselli, Edwin. "The Forced Choice Technique in Self Description," <u>Personnel Psychology</u>, 1954, 7, 201-208.
- Ghiselli, Edwin. "A Scale for the Measurement of Initiative," <u>Personnel Psychology</u>, 1955, <u>8</u>, 157-164.
- Ghiselli, Edwin. "Occupational Level Measured Through Self-Perception," <u>Personnel Psychology</u>, 1956 a, <u>9</u>, 169-179.
- Ghiselli, Edwin. "Correlates of Initiative," <u>Personnel Psychology</u>, 1956 b, <u>9</u>, 311-320.

- Ghiselli, Edwin E. "The Validity of Management Traits in Relation to Occupational Level," <u>Personnel Psychology</u>, 1963 a, <u>16</u>, 109-114.
- Ghiselli, E. "Moderating Effects and Differential Reliability and Validity," J. of <u>Applied Psychology</u>, 1963 b, <u>47</u>, 81-86.
- Ghiselli, E. <u>Self-Description Inventory Manual</u>. Unpublished Document, University of California, Berkeley, California.
- Herzberg, F., Mousner, B., Peterson, R. O., and Copwell, D. F. Job <u>Attitudes</u>: <u>Review of Research and Opinion</u>. Pittsburgh: Psychological Service of Pittsburgh, 1957.
- Herzberg, F., Mousner, B., and Snyderman, R. B. <u>The Motivation to</u> <u>Work</u>. New York: John Wiley and Sons, 1959.
- Hutchins, E. B., and Fiedler, F. E. "Task Oriented and Quasi-Therapeutic Role Functions of the Leader in Small Military Groups," Sociometry, 1960, 23, 393-406.
- Indik, B. P., Georgopoulos, B. S., and Seashore, S. E. "Superior-Subordinate Relationships and Performance," <u>Personnel</u> <u>Psychology</u>, 1961, <u>14</u>, 357-74.
- Katz, D., Maccoby, N., Gurin, G., and Floor, L. G. <u>Productivity</u>, <u>Supervision and Morale Among Railroad Workers</u>. Ann Arbor: University of Michigan, Institute for Social Research, 1951.
- Katz, D., Maccoby, N., and Morse, N. <u>Productivity</u>, <u>Supervision</u>, <u>and</u> <u>Morale in an Office Situation</u>. Ann Arbor: University of Michigan, Institute for Social Research, 1950.
- Lawrence, L. C., and Smith, P. C. "Group Decision and Employee Participation," J. of <u>Applied</u> <u>Psychology</u>, 1955, <u>39</u>, 334-337.
- Levine, J., and Butler, J. "Lecture versus Group Discussion in Changing Behavior," J. of Applied Psychology, 1955, 39, 334-337.
- Lewin, K., Lippitt, R., and White, R. "Patterns of Aggressive Behavior in Experimentally Created Social Climates," J. of Social Psychology, 1939, 10, 271-299.
- Likert, R. "Effective Supervision: An Adaptive and Relative Process," <u>Personnel Psychology</u>, 1958, <u>11</u>, 317-332.
- Likert, R. New Patterns of Management. New York: McGraw-Hill, 1960.

- Likert, R. "Developing Patterns of Management, I.," <u>American</u> <u>Management Association General Management Series No. 178,</u> 1955, 1-20, in ed. Petrullo, L., and Bass, B. <u>Leadership</u> <u>and Interpersonal Behavior</u>. New York: Holt, Reinhart, and Winston, Inc., 1961.
- Maier, N. R. F. "The Quality of Group Decisions as Influenced by the Discussion Leader," <u>Human Relations</u>, 1950, <u>3</u>, 155-174.
- Mann, F. C., and Baumgartel, H. <u>Absences</u> and <u>Employee</u> <u>Attitudes</u> in <u>an Electric Power Company</u>. Ann Arbor: Survey Research Center, 1952.
- Mann, F. C., and Baumgartel, H. "The Supervisor's Views on Costs," New York: <u>American Management Association</u>; <u>Office Management</u> <u>Series</u> No. 138, 1954, 3-21.
- Maslow, H. <u>Motivation and Personality</u>. New York: Harper and Brothers, 1954.
- Mayo, E. <u>The Human Problems of an Industrial Civilization</u>. New York: The Macmillan Co., 1933.
- McGregor, D. <u>The Human Side of the Enterprise</u>. New York: McGraw-Hill, 1960.
- Mead, G. H. <u>Mind</u>, <u>Self</u>, <u>and</u> <u>Society</u>. Chicago, University of Chicago Press, 1934.
- Morse, Nancy, C. <u>Satisfactions in the White Collar Job</u>. Ann Arbor: University of Michigan, Institute for Social Research, 1953.
- Morse, N. C., and Reimer, E. "The Experimental Change of a Major Organizational Variable," J. of <u>Abnormal</u> and <u>Soc</u>. <u>Psychology</u>, 1956, <u>52</u>, 120-129.
- Oaklander, H., and Fleishman, E. A. "Patterns of Leadership Related to Organizational Stress in Hospital Settings," <u>Admin. Sci.</u> <u>Quarterly</u>, 1964, <u>8</u>, 520-532.
- Parker, Treadway C. "Relationship Among Measures of Supervisory Behavior, Group Behavior, and Situational Characteristics," <u>Personnel Psychology</u>, 1963, <u>16</u>, 319-333.
- Patchen, M. "Supervisory Methods and Group Performance Norms," <u>Admin. Sci. Quarterly</u>, 1962, <u>1</u>, 275-294.
- Porter, Lyman, and Ghiselli, Edwin. "The Self-Perception of Top and Middle Management Personnel," <u>Personnel Psychology</u>, 1957, <u>10</u>, 397-406.

-----

- Porter, Lyman. "Differential Self-Perception of Management Personnel and Line Workers," J. of Applied Psychology, 1958, 42, 105-108.
- Porter, Lyman, W. "Self-Perception of First-Level Supervisors, Compared with Upper Management Personnel and with Operative Line Workers," J. of Applied Psychology, 1959, 43, 183-186.
- Porter, Lyman, W. "Job Attitudes in Management: I. Perceived Deficiencies in Need Fulfillment as a Function of Job Level," J. of Applied Psychology, 1962, 46, pp. 375-384.
- Porter, L. W. "Job Attitudes in Management: II. Perceived Importance of Needs as a Function of Job Level," J. of <u>Applied Psychology</u>, 1963, <u>47</u>, 141-148.
- Rambo, W. W. "The Construction and Analysis of a Leadership Behavior Rating Form," J. of Applied Psychology, 1958, 42, 409-415.
- Rethlingshafer, D. <u>Motivation as Related to Personality</u>. New York, McGraw-Hill, 1963.
- Schachter, S., Festinger, L., Willerman, B., and Hyman, R. "Emotional Disruption and Industrial Froductivity," J. of <u>Applied</u> <u>Psychology</u>, 1961, 45, 201-213.
- Stagner, Ross. "Industrial Morale (A symposium) 2. Motivational Aspects of Industrial Morale," <u>Personnel</u> <u>Psychology</u>, 1958, <u>2</u>, 64-70.
- Stogdill, R. M. <u>Individual Behavior and Group Achievement</u>. New York: Oxford University Press, 1959.
- Stogdill, Ralph M. <u>Manual for the Leader Behavior Description</u> <u>Questionnaire - Form XII</u>, Bureau of Business Research, College of Commerce and Administration, Ohio State University, 1963.
- Tannenbaum, A. S. "The Relationship Between Personality and Group Structure," Unpublished doctoral dissertation, Syracuse University, 1954, in Likert, R. "Effective Supervision: An Adaptive and Relative Process," <u>Personnel Psychology</u>, 1958, <u>11</u>, 317-332.
- Taylor, F. W. <u>Principles of Scientific Management</u>. New York: Harper and Brothers, 1911.
- Thurstone, L. L. <u>Multiple Factor Analysis</u>. Chicago: The University of Chicago Press, 1947.

- Vroom, Victor H. <u>Some Personality Determinants of the Effects of</u> <u>Participation</u>. Engelwood Cliffs, N. J: Prentice-Hall, Inc., 1960.
- Wickert, R. "Turnover and Employee's Feelings of Ego-Involvement in the Day-To-Day Operation of a Company," <u>Personnel</u> <u>Psychology</u>, 1951, <u>4</u>, 185-197.