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Motivation and Job Satisfaction for Middle Level Career Army Officers

Colin O. Halvorson, CPT, USA
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas 66027

Final report 6 June 1975

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A thesis presented to the faculty of the U.S. Army Command and General Staff College, Fort Leavenworth, Kansas 66027

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It was found with a level of significance = .10 that the variables influencing job satisfaction for these two groups were associated in the population they formed. Additionally, three significant differences existed in the perceptions held by the two groups. The army officer placed more value on being able to do work in his own way, receiving praise for work done, and being promoted than did his civilian counterpart.

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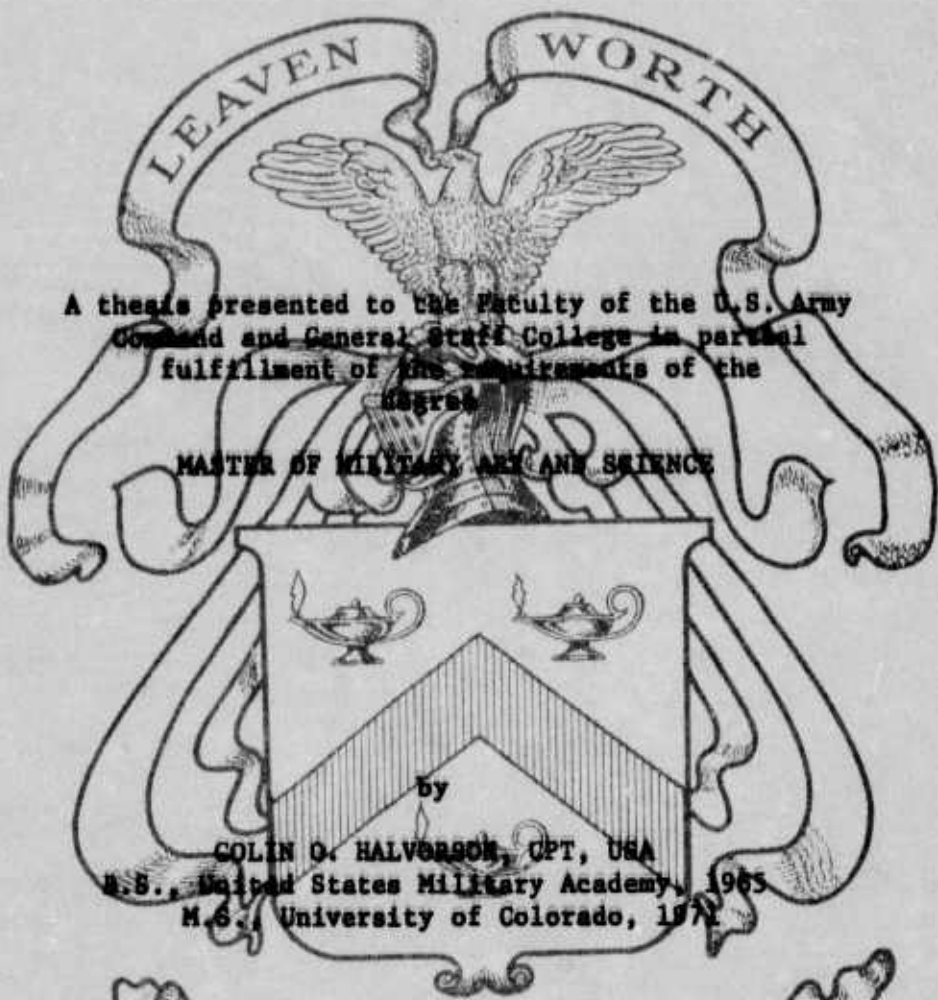
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MOTIVATION AND JOB SATISFACTION FOR
MIDDLE LEVEL CAREER ARMY OFFICERS

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements of the

degree



by
COLIN G. HALVORSON, CPT, USA
M.S., United States Military Academy, 1965
M.S., University of Colorado, 1971

AD BELLUM PACE PARATI

Fort Leavenworth, Kansas
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ABSTRACT

This study examines motivation and job satisfaction for middle level career army officers. A question is raised as to the efficacy of utilizing civilian motivational techniques in a military environment. It is hypothesized that the variables influencing job satisfaction for middle level civilian managers and middle level career army officers are associated in the population composed of these two groups. If this assertion is true the motivational techniques used in civilian industry would have applicability for motivating the military officer.

A review of the literature dealing with motivation points to several factors which mold motivational behavior patterns. For example, environment substantially impacts on the level of motivation that exists. Assumptions the leader makes about his subordinates greatly affects the approach taken to establish the desired level of motivation. Furthermore, the philosophy of the leader dictates the management system of a unit which in turn forms motivational behavior patterns for the individuals associated with it.

Testing the hypotheses of the study required descriptive research to gather data on the perceptions of student officers attending Command and General Staff College concerning the variables affecting job satisfaction. The Hackman Job Satisfaction Schedule was the instrument used to survey two groups of student officers. The data collected was statistically compared to data collected on middle level civilian managers. The two statistical tests used to analyze the data were the Kolmogorov-Smirnov Test and Spearman's Rank Correlation Coefficient. These tests provided the basis to test hypotheses and point out similarities and differences among the variables impacting on job satisfaction for the military officer and civilian manager.

It was found with a level of significance = .10 that the variables influencing job satisfaction for these two groups were associated in the population they formed. Additionally, three significant differences existed in the perceptions held by the two groups. The army officer placed more value on being able to do work in his own way, receiving praise for work done, and being promoted than did his civilian counterpart.

Several conclusions were reached as a result of the statistical analysis of data and supplemental library research. Real motivation for middle level career army officers appears to come from being given a responsible job to do and being permitted to accomplish it in a manner desired by the individual. Motivation is further developed and reinforced by recognition, praise and promotion. The key individual in this process is the immediate supervisor because he controls the environment which may or may not be conducive to the motivation described above. For this reason, the supervisor must be trained in the techniques and concepts which impact on motivation.

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CHAPTER I

THE MILITARY ENVIRONMENT AND MOTIVATION

Introduction

Motivation within an organization has been a subject of increasing concern for managers since the findings of Elton Mayo (1928) in his study of worker efficiency at the Western Electric Company, Hawthorne, Illinois. Research has shown that a worker is capable of producing enough to satisfy job requirements by using only 30 percent of his potential ability.¹ However, when properly motivated the efficiency of a person can be raised to 80 percent of his ability. Improving motivation of individuals to increase their efficiency could result in a quantum jump in productivity. This phenomenon continues to escape full explanation in the field of scientific research; therefore, the quest for understanding continues because of the practical value increased productivity has for any organization. Theories attempting to explain the variables associated with motivation have been developed, yet the search for more information continues because the knowledge required for practical application is still limited.

This raises the question of why today's leaders and managers have not attempted to utilize these motivation theories. The answer is simply that there has not been the development of an integrated scheme for the practical application of motivational variables to actual situations with which managers and leaders are confronted. The need exists for a complete, consistent, and serviceable method of

adapting what has been developed in the field of research to existing situational environments. To satisfy this need one must fully understand the situational environment and have the ability to apply appropriate research concepts to it. This is not an easy assignment.

This work will examine several motivational theories and attempt to develop guidelines for using relevant motivational concepts in a military environment. Specifically these theories will be analyzed with a view toward improving motivation in career officers with nine to fifteen years of service.

Background

Before launching into an investigation of motivational theories, two tasks must be accomplished. First it is necessary to review some of the social and technical events influencing the development of today's officer corps. Second, it is essential to outline the nature of the environment that impacts on officer motivation.

The United States Army is facing a historical turning point in societal legitimacy. The isolationism of the army during the period prior to World War II has been converted to one of total societal involvement.² One reason for the conversion has been an increase in complex mechanical and technological developments which were born in the civilian community, but had direct application to the army's needs. The interdependence of industry for military business and of the army for technological advancements in many areas has drawn both together in an ever tightening alliance of mutual support.

The army has gone through a tremendous growth process since pre-World War II days and this has had the effect of eroding the closely knit organization that existed then. The expansion of the officer's corps brought in a large number of civilians who were not familiar with traditions and customs of the service. Gradually the public image of the army changed as accounts of incompetence and irresponsibility filtered out of the organization. Vietnam and the public attempts of army officers to defend political decisions cast doubts on the nature of this new body of officers in the army. An erosion of prestige and status of officers was the result. Rapid promotions forced some less competent people into positions of authority and as mistakes were made more credibility was added to the spreading belief that the military officer was an incompetent manager who seemed to be overly sensitive about his status position in the organization.

Internally the army became extremely mission oriented. The operational requirements took priority at the expense of individual needs. The job had to be accomplished at any cost and every army officer knew that it was his duty to accomplish the mission.

Next there was an increase in the number of hardship tours, frequent moves between duty stations, frequent changes in the criteria for hardship tours, and the unpredictability of assignments all in the guise of personnel managers doing what was best for the needs of the service. Officers found themselves in situations where they were overworked, oversupervised, overcentralized for control, with an extreme turnover in personnel because of overcommitment of forces to Vietnam, Europe, Korea, and stateside missions. Many officers began to question

the viability of continuing in such an environment with the resultant loss of many good people. Nevins in his study of retention of officers pointed out that what had once been an elite officer corps had become "a conglomeration of ill trained, poorly educated, and generally inexperienced officers."³ Morale and motivation in such a situation can only be described as marginal.

Another important factor influencing motivation of the Army officer is the organizational structure through which he must function. It is therefore necessary to understand the nature of the bureaucratic organization associated with the Army and its impact on the individual who must deal with it.

What is a bureaucracy? A bureaucracy is supposed to aid functional processes through rational utilization of technical knowledge. It is designed to achieve a high degree of efficiency. There are two basic elements characteristic of bureaucracies, rules that govern functional relationships and rules that prescribe behavior patterns for members of the organization. Weber in his analysis of the ideal bureaucracy outlined the following characteristics.⁴

(a) There is a division of labor where tasks are assigned in a fixed pattern and legitimized by recognition as official duties.

(b) Functions are arranged in a hierarchical order resulting in a chain of command.

(c) There are abstract rules which are applied uniformly to particular situations.

(d) Rules are applied impersonally to the affairs of the organization.

(e) Selection criteria for employment are based on qualifications of applicants and these qualifications are compared to objective job standards established by the officials of the bureaucracy.

It is in a similar environment that today's officer must perform his assigned tasks and there are some difficulties which influence his motivation.

For example, one of the most frustrating aspects of such an organization is that often the following of established rules becomes THE organizational goal and the original goals are lost in the red tape shuffle.⁵ How many times have logical solutions to a problem been set aside because there is a general rule which can be applied to a specific situation? The rule takes precedence regardless of the cost in terms of individual sacrifice. The trouble is the bureaucracy is often not in tune with reality. Old rules die hard and new ones spring up to cover situations not addressed in the original set. The expansion rate for new rules can be phenomenal if not controlled. In many cases internal conflict arises because new rules contradict old ones which either have not or cannot be removed from the system. Apathy in the individual begins to develop because there is a genuine lack of confidence in the organization's ability to effectively deal with his problems.

The organizational rules decree that individuals must be dealt with in an impersonal manner, thereby increasing this apathy. Anyone who dares to take risks is overwhelmed by rules, policies, and red tape. There is a general lack of creativity and innovation which

limits the ability of an individual to grow intellectually and psychologically. The result is low job satisfaction and a lack of individual commitment to the organization. Overconformity and inflexible behavior become the norm in this environment. Communications are limited by the hierarchical structure and the fear of making a mistake. Mistakes are not allowed and everyone realizes that you cannot be wrong if you are able to cite a rule which guided your behavior. Overall individual motivation is ignored and alienation sets in with a subsequent erosion of morale and loyalty. Personal identification with the goals of the organization is difficult to develop. Meaningless busy work saps organizational strength and adds to dissatisfaction of the individual. The path for advancement is not clearly defined and many individuals have unfulfilled expectations which destroy motivation to do anything but just get by. The final product of what was once designed for maximum efficiency is extremely inefficient in the execution of tasks and stifling for the individuals it holds as a captive audience in a monopolistic grip. The choice for the individual often becomes conform to the norm or leave the organization.⁶

The above analysis of bureaucracy may cause one to wonder why such an organization continues to survive. The answer is found in the confusion surrounding the behavioral science data collected on the dysfunctional aspects of the organization's methods for handling people. It is not nearly as difficult to find out what the failures in an existing organization are, as it is to propose an

alternative which "rivals the classical model for completeness, consistency, and serviceability in the world of practical application."⁷ Bureaucratic organization concepts are going to continue to play a role in the Army structure in the future. It is essential that the dysfunctional aspects be identified and minimized if individual motivational levels are to be increased.

The challenge of handling change effectively is also important when striving for an increase in motivation. Dynamic change is underway in almost every facet of today's society. Discovery of new information is the catalyst which generates questions about existing methods of problem solving. The generation of new information is proceeding at such a rapid rate that it is impossible to keep track of what is known. Comfortable settings for decision making are being disturbed by radically new ways of studying and solving problems. Old values are being challenged and their relevance is being questioned. The turmoil for organizations and the people associated with them is severe. The question of how can one begin to comprehend and react logically to the increasing pressure to keep up with and adapt to the new ideas being promulgated. It appears inevitable that pressure for change will occur in almost every part of the army. Uncontrolled change can be dysfunctional to an organization's goals and extremely damaging to the morale of the personnel within the organization. The problem is even more complex when one realizes that no single part of the Army can change without some impact on the other parts. For example, when the Army's promotion policy is modified there is a direct

impact on the recruitment program. The challenge is to effectively evaluate the need for change and to implement appropriate changes without destroying the stability necessary for operational requirements.

In summary there are some difficult personnel and organizational problems confronting the army today. Its officer corps has seen some trying times. External and internal forces continue to exert increasing pressure for change. Determining what methods and suggested changes should be adopted to maintain and improve the motivational level of its officer corps is an important issue for the army today.

Purpose of Study.

It is possible that Herzberg's Two-Factor Theory of motivation can be applied to a military environment to increase motivation of army officers. Herzberg's theory attempts to explain the nature of satisfaction and dissatisfaction on the job. In the process of developing his theory Herzberg used structured indepth interviews to find out how workers felt about their jobs.⁸ He asked the workers to recall a time when they had "good feelings" and "bad feelings" about their jobs. Based on their response, Herzberg found that job satisfaction and job dissatisfaction are two distinct dimensions rather than opposites of a single dimension. Dissatisfaction was found to be caused by "hygiene factors" which were part of the work context while satisfaction was generated by "motivating factors" and were part of the job content. These factors are shown below:

<u>Hygiene Factors</u>	<u>Motivating Factors</u>
Company policy and administration	Recognition
Supervision	Achievement

<u>Hygiene Factors</u>	<u>Motivating Factors</u>
Salary	Advancement
Interpersonal Relations (Peers, Subordinates, Supervisor)	Responsibility
Working Conditions	Work itself
	Possibility for growth

The hygiene factors result in dissatisfaction when they fall below the level which the worker finds acceptable, but if these factors are above the level of acceptability they do not provide for satisfaction. Motivators on the other hand provide for satisfaction which is the basis for increasing productivity. According to Herzberg, improvements in hygiene factors only make the work more tolerable, but will not cause the motivation level to improve. The thrust of Herzberg's research is that attention must be given to the motivating factors found in the job while insuring that the hygiene factors are maintained at least at a minimal level.

The specific purpose of this study is to examine motivation as applied to army officers with nine to fifteen years of service. The validity of Herzberg's two-factor theory of motivation will be tested in its application to a military population. The implications of the results of this test will be analyzed with a view toward incorporating Herzberg's ideas and other civilian techniques for developing motivation into an action program for changing the level of motivation which exists in these officers. The task is to find out what motivates these officers through descriptive research and then to suggest changes which will maximize those specific motivators identified in the research process.

Some specific questions will need to be answered in the course of this investigation. For example, it is necessary to find out what the roadblocks are, if any, for officer motivation in the army. What are the organizational goals that must be kept in mind while considering programs for change? How do these goals conflict with individual needs and goals? What is the impact of the social and political aspects of the military environment on changing the existing organization? What steps have already been taken that affect the need for further change? How fast can one change and maintain necessary stability? There are other questions which will emerge during the course of this investigation and they will be included as they are formulated. The final product will attempt to take a systems view of the motivational variables discovered through research. By putting together the factors which impact on the organization's ability to increase the motivation of individuals one can get an understanding of what is feasible in selecting actions for change.

When this study is complete there will be suggested answers to the above questions and recommended actions for improving officer motivation. However, the ultimate decision on what should be done will rest with influential army officials. This work can only place new information before them. They must take the initiative to implement change and they must realize there is a need for change if anything productive is to occur.

Hypothesis

1. Herzberg's theory of motivation is supported by investigation of what motivates middle career level army officers.

2. Motivation for civilian managers is essentially the same as motivation for middle career level army officers.

3. Techniques used in civilian industry are appropriate for implementing an army officer motivational development program.

The plan is to test Herzberg's theory by utilizing The Hackman Job Satisfaction Schedule (HJSS) to measure motivational aspects of the army officer's job. Students at the Command and General Staff College will be surveyed to gather data on variables which motivate them in job performance. The results of this data will be compared with previous research in civilian industry to see what similarities exist. An attempt will be made through library research to integrate the data gathered in this study with other motivational studies in order to formulate practical methods for implementing changes which will increase officer motivation in the performance of their assigned tasks.

Summary.

This chapter has examined the military environment and pointed out potential problem areas dealing with increasing the motivational level of army officers. It also outlined the nature of the research effort to be conducted and stated the hypotheses. The issue of what motivates today's army officer has been raised, but left unanswered.

The following chapters will review the literature concerning motivation, outline the methodology of this research, and report on the conclusions and recommendations as they are supported by the data gathered.

ENDNOTES FOR CHAPTER I

1. Paul Hersey and Kenneth H. Blanchard, Management of Organizational Behavior, (Englewood Cliffs: Prentice-Hall, Inc., 1972), p.5.
2. Charles C. Moskos, Jr. (ed.), Public Opinion and the Military Establishment, (Beverly Hills: Sage Publications, 1971), pp. 273-276.
3. R. H. Nevins, "The Retention of Quality Junior Officers - A Challenge for the Seventies", (Army War College, 1970).
4. William G. Scott, Organizational Theory - Behavioral Analysis for Management, (Homewood: Richard D. Irwin, Inc., 1967), pp. 249-250.
5. James G. March and Herbert A. Simon, Organizations, (New York: John Wiley and Sons, Inc., 1958), pp. 36-52.
6. Chris Argyris, Personality and Organizations, (New York: Harper and Row, 1957), pp. 60-70.
7. Scott, op.cit., p. 9.
8. Fredrick Herzberg, Bernard Mausner, and Barbara B. Snyderman, The Motivation to Work, (New York: John Wiley & Sons, Inc., 1959), pp. 59-67.

CHAPTER II
REVIEW OF THE LITERATURE

Motivation - General

One of the major difficulties in discussing the concepts of motivation is the semantics involved. Before one can use the term in a meaningful way it must be defined in a context which fits its intended use. For the purpose of this work motivation will be viewed as the force which directs behavior. The variables in this concept of motivation are initiation, direction and intensity of the behavior.¹ These variables are influenced by an individual's attitudes, values, and perceptions concerning his environment. Motivation causes man to act in a manner which attempts to make sense out of his surroundings.

A pattern of behavior is established when an individual perceives a need he wants to satisfy. The direction or type of behavior is a direct result of the characteristics of the need the individual perceives. The intensity of the behavior is influenced by the recognized value of satisfaction which the individual associates with successful need fulfillment. The behavior, therefore, begins with need perception and is modified by the specific need and its potential value to the individual.

Essentially everyone is motivated all of the time. Any resulting behavior is a product of one's need perceptions and the associated values assigned to the need. The motivation which establishes behavior patterns in an organization is of prime concern. These

behavior patterns have the potential to be either supportive or non-supportive of organizational goals. Identifying motivators which influence favorable behavior patterns is a difficult, but necessary task.

Furthermore, one needs to understand that although unfavorable behavior may be detrimental to an organization, such action does not mean an individual is not motivated. The cause of his behavior and the factors which influence favorable behavior must be understood to increase the kind of motivation desired for middle-level managers in the army. This means that an organization which desires motivation in its members must identify the environmental factors which promote favorable behavior. Emphasis should be placed on increasing intensity levels of those motivators assisting the organization in achieving its goals, as well as, the individual goals of its members. Motivation of this type will result in individual behavior patterns which support organizational productivity and efficiency.

Need Satisfaction Theory

The methods for increasing motivation have their roots in the early studies at the Western Electric Company, Hawthorne, Illinois (1928). In the research effort at Western Electric the human response to attention emerged.² Motivation to perform was increased by accident as researchers "paid attention to individuals" involved in the research project. These workers felt important because of the attention they

were given during the research effort. As a result their productivity increased even when researchers implemented controlled experiments designed to decrease productivity by imposing poor working conditions.

Few studies prior to 1959 did more than provide a descriptive analysis of the managerial role in an organization. The focus was merely on identifying the needs of the individual. However, since 1959 two streams of thought have emerged as predominate in the literature. These are the need-hierarchy concept of motivation and the motivation-hygiene concept. With these two views as a bases of thought several modified theories have been developed, but the foundation of motivational theory is found in their concepts.

Need Hierarchy Theory and Studies

Abraham Maslow postulated his hierarchy of needs theory in 1943. Maslow arranged human needs or motives into five sequential categories: (a) physiological needs (b) safety needs (c) social needs (d) esteem needs, and (e) self-actualizing needs.³ Maslow indicated that these needs were arranged in an ascending order of priority for the purpose of satisfaction. This rank structure is summarized in order of priority as follows:

(a) Physiological needs: Man is survival oriented and needs air to breathe, food to eat, water to drink and shelter to protect him from the elements. These needs are the strongest and have man's attention before other needs.

(b) Safety needs: When the physiological needs have been satisfied, man then seeks security, stability, law and order, and freedom from exposure to danger.

(c) Social or affiliation needs: At this level man turns his attention to the satisfaction of his need for belonging, for association with a group or family, acceptance by his peers, and for exchange of friendship and love with his fellow man.

(d) Esteem or ego needs: These needs relate to one's self-esteem, self-respect, self-confidence, achievement and competence. Man seeks to gain esteem of others through his position, reputation, prestige and status.

(e) Self-actualization needs: These needs represent the height of man's needs and are manifested by total realization of one's potential through self-development.

Maslow indicated that these needs motivated man's behavior, but once a need was satisfied it lost its potential for motivating further behavior. The need hierarchy is viewed as overlapping, with higher level needs surfacing before the lower needs have been fully satisfied. The lower level needs can be more fully satisfied than can the higher level needs.

Maslow's concept of a hierarchy of needs underlies many studies on managerial motivation. Roseu and Weaver (1960) investigated the question of how managers at different levels view the motivational aspects of job conditions. They found that managers regardless of their level in the organizational structure have common motivations with regard to

what they want from their work.⁴ These managers were oriented toward work conditions that enhance the effective discharge of their responsibilities. The following conditions of work in order of priority were found to be significant:

- (a) Having the opportunity to talk over problems with superiors.
- (b) Knowing whose orders to follow.
- (c) Having knowledge of organizational plans that affect them and their job.
- (d) Having sufficient authority to do the job expected of them.
- (e) Being consulted before decisions are made concerning them and their job.

This study also pointed out that the higher one goes in the management structure the greater are the rewards of the job conditions which satisfy needs.

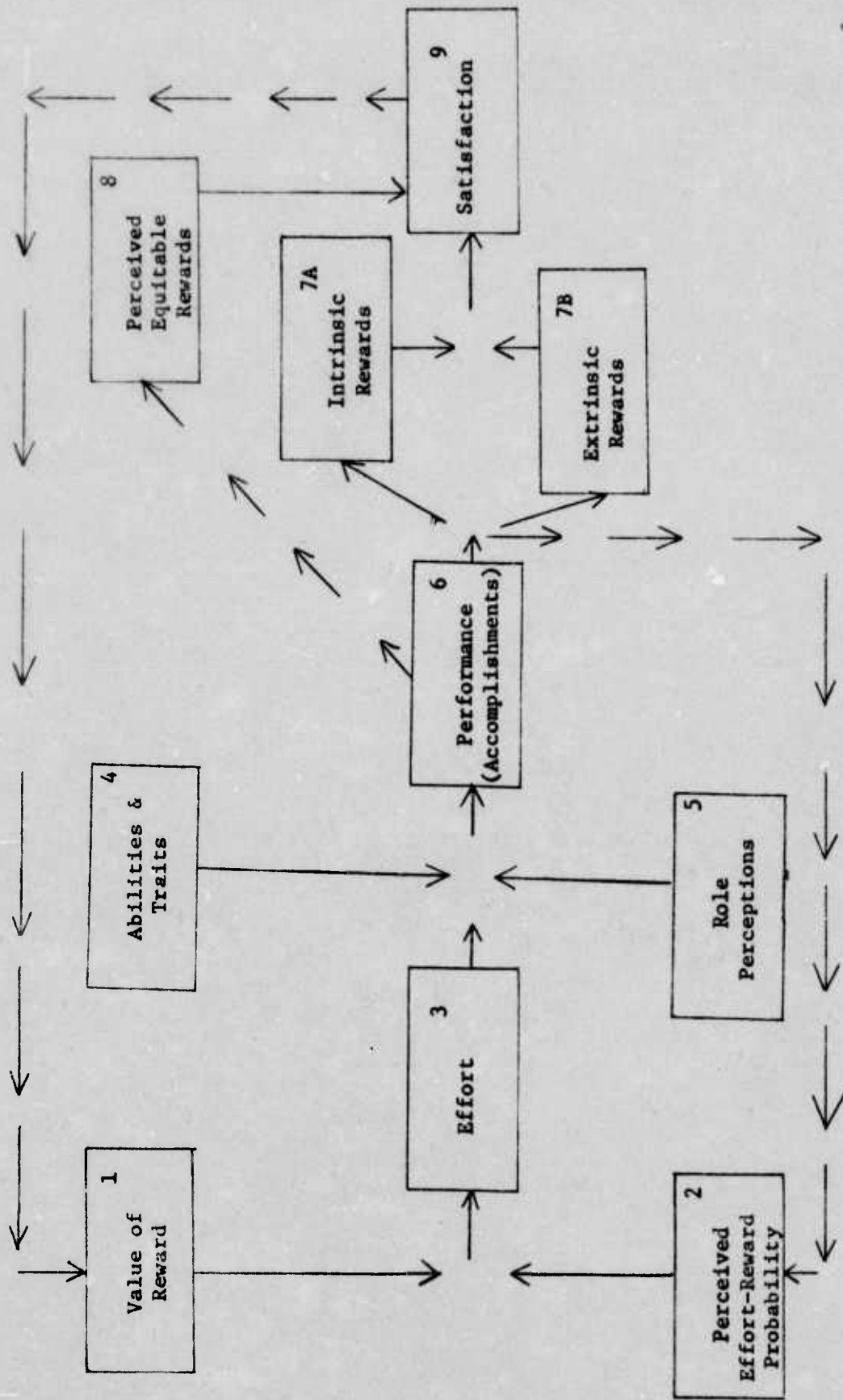
In terms of Maslow's hierarchy these managers were expressing concern for the higher order needs found at the social and esteem level.

Porter and Lawler (1967) did a comparative study of need satisfactions in military and business hierarchies. Their analysis pointed out that military officers tend to be much more dissatisfied at each rank than their civilian managerial counterparts.⁵ They also found that the perception of need-fulfillment and satisfaction increased with an increase in position in the hierarchy. "That is, brigadier generals and colonels consistently perceived more need-fulfillment in their positions than did lieutenant colonels and majors, who in turn perceived

more than captains and lieutenants."⁶ This is an example of esteem and self-actualization needs being fulfilled.

Mitchell (1970) found that commanders in military hierarchies had more need fulfillment and less dissatisfaction than their staff counterparts.⁷ This supported Porter's finding that the needs of line managers are better fulfilled than those of staff at all levels. Esteem or ego need fulfillment seems to be operative in this case. He also found that military grade does not correlate highly with the level of managerial responsibility. This means that direct comparison of need fulfillment and satisfaction between military and civilian managers may be difficult.

Porter and Lawler (1968) using Maslow's theory developed a model of motivation based on perceived need satisfaction and perceived reward probability. Their model was an attempt to add an important consideration to what had been developed in managerial motivation studies. They believed that, in addition to knowing how important a need is and how much individuals expected their jobs to satisfy needs, it was essential to find out what was the perceived probability in the job environment of getting the amount of need satisfaction desired by the individual. In other words, they were looking at the total job environment and asking the question what are the chances of getting needs satisfied in this setting. See figure one a for schematic of their model.⁸



Model of Motivation

Figure 1

(1) Value of reward. This refers to the attractiveness of the different outcomes as perceived by the individual. The emphasis here is on positive outcomes.

(2) Perceived effort - Reward probability. The assumption here is that increase effort improves performance and performance ultimately leads to reward in the form of need satisfaction. The individual's perception of this assumption and the probability of achieving reward through effort influences the degree of effort he is willing to expend.

(3) Effort is the mental and physical effort expended to perform tasks. The value of the reward and perceived effort-reward probability variables have a multiplicative effect on effort.

(4) Abilities and traits are long-term characteristics of an individual which place an upper limit on ability to perform.

(5) Role perceptions are the beliefs and perceptions through which an individual defines his job in terms of what is required for success.

(6) Performance is the actual accomplishment of tasks required on the job. Performance is measured by subjective analysis in the form of ratings by others and rating by self.

(7) Rewards. Intrinsic rewards are those which fulfill self-satisfaction. Extrinsic rewards are those in the physical environment such as promotion and money.

(8) Perceived equitable rewards is a variable based on what the individual believes to be a fair reward. The main difficulty is the identification of the individual's reference group.

There are several assumptions made in this motivation model. First, someone must have the ability to discriminate individual differences for the purpose of giving rewards. Second, there must be a real capability to give rewards identified as need satisfiers by individuals in the organization. Finally, there must be a willingness on the part of those in power positions to give these identified rewards.

The problem with this model is the complexity of the variables which influence behavior. It is necessary to be able to control certain variables in order to evaluate the effect one variable has on performance. This task cannot be accomplished with the present knowledge of how these variables impact on each other. For this reason, the model has limited value for practical research at the present time.

Motivation-Hygiene Theory

Herzberg, Mausner, and Synderman (1959) developed the motivation-hygiene theory which was outlined in Chapter I.⁹ The theory states that:

(a) Job satisfaction and dissatisfaction are not the opposite of each other. They are in fact on two separate continua.

(b) The opposite of job satisfaction is not dissatisfaction; it is simply an absence of satisfaction. In the same manner, the opposite of job dissatisfaction is not job satisfaction; rather it is no job dissatisfaction.

(c) Job satisfaction is determined by the feelings that the individual has regarding the content of his job. These feelings reflect the individual's active search for psychological growth; therefore, they have been termed "motivators." Job content includes task achievement, recognition for achievement, intrinsic interest in the job itself, increased task responsibility, advancement or occupational growth, and the possibility of occupational growth.

(c) Job dissatisfaction is determined by the feelings the individual has regarding the context of his job. The job-context factors, when present, serve to help the individual meet his need to avoid unpleasant situations, but they do not lead to satisfaction. They are called "hygiene" because they only serve to prevent dissatisfaction. These factors are environmental in nature and include company policies and administration, supervision, working conditions, salary, personal life, status, interpersonal relationships with subordinates, peers and superiors, and job security.

What Herzberg is saying is that there are some factors that affect job attitudes only in a positive direction, thus leading to job satisfaction. The absence of these factors does not lead to job dissatisfaction. There are other factors which have the potential to cause job dissatisfaction if they are not properly handled. These factors do not contribute to job satisfaction.

There have been a number of studies designed to test the validity of the two-factor theory. As a result, a controversy has developed, primarily concerning Herzberg's method of collecting data. The complaint is

that the interview method brings out defensive responses on the part of the individual being interviewed. The controversy remains unresolved at the present time.

Lindsay, Machs, and Garlow (1967) conducted research on Herzberg's theory and found that motivators are more important to job satisfaction than are hygiene factors by a factor of three to one.¹⁰ They also reported motivator and hygiene factors to appear to be related to job satisfaction in a non-additive fashion. This means that a given job satisfaction level cannot be predicted from a simple weighted sum of the levels of motivator and hygiene factors present. In addition, the motivator factors in Herzberg's theory described most of the variance in their job satisfaction study. It appears then that Herzberg's theory is a useful tool in finding out what provides the motivation to perform in the job environment.

Saliman (1970) confirmed Herzberg's theory and drew the following conclusions:¹¹

- (a) Replication of the motivation-hygiene theory's method revealed the same motivation and hygiene need categories.
- (b) The theory was found to be a function of its own methodology.
- (c) Even though the theory is correct in identifying two sets of need categories, the multi-dimensionality of the concept job satisfaction was not substantiated. Satisfaction and dissatisfaction were

found to be obverse to each other, that is, on opposite ends of the same continuum. Motivator and hygiene factors were found to be related to both job satisfaction and dissatisfaction.

(d) The organizational environment was found to be an important variable in explaining the relationship between motivators and overall job satisfaction.

Friedlander (1964) and Halpain (1966) used a questionnaire in their research and supported Herzberg's theory.^{12, 13} They moved away from the interview method which had received strong criticism as being subject to the defensive responses of the individual. Even though they supported Herzberg's concepts no conclusion could be drawn to resolve the methodology controversy.

Graen (1968) challenged the two-factor because it had serious limitations in its ability to predict results.¹⁴ The theory can summarize past events, but can not provide a method for predicting future results. Graen pointed out again how personality entered into the story telling method and had an impact on the data collected.

Hulin and Smith (1967) found that Herzberg's results seemed to be method bound. "The conclusions drawn by Herzberg pivot on method variance rather than on true content or scale variance."¹⁵ The data were too dependent on individual responses in the interview. This means that a change in interview technique can cause a variance in the responses given to the interviewer. Hulin and Smith used a sample of 670 office employees, supervisors, and executives in their study. They

supported Maslow's need theory of motivation rather than Herzberg's two-factor theory. Data indicated that if the presence of a variable resulted in a job being described as good, the absence of the same variable resulted in the job being described as bad.

House and Wigdor (1967) reviewed the Herzberg theory of motivation, its criticisms and the empirical investigations relating to the theory. They indicated that the two-factor theory had been criticized on at least three dimensions: (a) it is methodologically bound, (b) it is based on faulty research, and (c) it is not consistent with past evidence concerning satisfaction and motivation.¹⁶ On the basis of their review of previous work, House and Wigdor found that a given factor can cause job satisfaction as well as job dissatisfaction, and intrinsic factors appear to be more important than extrinsic factors in generating both satisfaction and dissatisfaction. They concluded that the two-factor theory is, at best, an oversimplification of managerial motivation.

Wolf (1967) found that content factors are the most important in determining job satisfaction while context factors are not significantly related to job dissatisfaction.¹⁷ On the other hand, he found that context factors were related to both satisfaction and dissatisfaction with the company. Thus, the roles of content and context factors were found to vary as a function of the object of the satisfaction - dissatisfaction measurement, that is, the job versus the company.

Whitsett and Wilson (1967) have criticized the criticism of the two-factor theory on the following grounds: (a) misinterpretation of

the motivation-hygiene theory, (b) methodological weaknesses, and (c) misinterpretation of results.¹⁸ They concluded that the research to date offers little reason to doubt the validity of Herzberg's theory. The argument centered on interpretation of data. There can be little doubt that the two-factor theory has generated an abundance of data. The use of this data for improving one's understanding of motivation is still open to question.

Hackman (1969) did considerable work in testing Herzberg's theory. He developed a job satisfaction schedule and used it to measure satisfaction on eight different occupational groups.¹⁹ His research confirmed Herzberg's theory. Hackman reported that a great deal of information about motivation is lost if attention is restricted to the observable behavior of an individual in response to direct stimulation. Verbal reports yield direct information on the channeling of motivation. They also clarify the motivational significance of events and conditions that would otherwise remain ambiguous, such as a promotion. Hackman went one step further in an attempt to link personality and temperament traits with Herzberg's motivator factors. He found that it was possible to describe the personal characteristics of individuals attuned to a particular kind of reinforcement on the job. However, the reliability and value of this linkage remains largely hypothetical. Hackman did develop several dimensions which describe motivated people at work:²⁰

- (a) The amount of directed energy or sheer drive they have.
- (b) The extent to which they are identified with work in a social context that yields closure experiences.

(c) The extent to which they view work solely as a means to some end or goal extrinsic to the work itself.

(d) The extent to which ordinary pressures of work are threatening and generate anxiety reactions.

(e) The extent to which the ordinary pressures of work generate aggressive and pugnacious reactions.

Individuals that are highly motivated maintain high levels of directed energy at work. They work for the satisfaction inherent in the work itself or work to achieve goals extrinsic to the work. They are not threatened or irritated by the routine pressures of a job. People do not fit any one dimension, rather they have combinations and various amounts of each dimension. There appear to be similarities between Hackman's findings and Porter and Lawler's model of motivation (See Figure one, page 19).

Lawler (1970) found that rewards given to good performers were the basis for continued motivation of these individuals.²¹ Statements from individuals about how they plan to perform were good indicators of how they actually performed. He also reported that the measurement of attitudes provides a potential base for monitoring the motivational levels that exist in an organization. In addition, supervisors and subordinates need to develop shared perceptions of how the subordinate's job should be done. It appears that the Army is heeding this recommendation through the new officer efficiency report which requires subordinates to write out a job description for themselves and for the superior to do the same for the subordinate's job.

Herzberg recommended job enrichment as a technique for emphasizing the motivators in his theory. Job enrichment refers to redesigning the job itself in order to give the individual more responsibility. Ford (1969) reported on an extensive research effort concerning job enrichment in conjunction with the American Telephone and Telegraph Company. In nineteen studies using the concept of job enrichment he had eighteen with successful results and one that failed.²² He was able to reduce the turnover rate in specific areas by 13 percent while the company at large was experiencing a nine percent increase in turnover. Productivity, quality of performance, and customer reaction either improved slightly or remained stable. His plan for job enrichment is outlined below.

(1) Give the employee a good module of work.

(a) Pull responsibilities back down to this job level if they have been assigned higher up only for safety's sake.

(b) Gather together the responsibilities that are now handled by people whose work precedes or follows, including verifying and checking.

(c) Push certain routine matters down to lower-rated jobs.

(d) Automate the routine matter completely if possible.

(e) Rearrange the parts and divide the total volume of work, so that an employee has the feeling of "my customers", "my responsibility."

(2) Once an employee has earned the right, let him really run his job.

(3) Develop ways for giving employees direct, individual feedback on their performance.

(4) Invent ways of letting the job expand so that an employee can grow psychologically. "There is always something new coming up on this job!"²³

Job enrichment should not be confused with job enlargement. Job enlargement refers to giving an individual more varied things to do and lacks the addition of more responsibility inherent in job enrichment.

Other Views of Motivation

A review of literature dealing with motivation would not be complete without a discussion of McGregor's Theory X and Y. McGregor's Theory X and Y deals with assumptions about man in the work environment. These assumptions become the basis for management techniques designed to achieve certain behavior patterns or motivation in the worker. His Theory X assumptions were:

(a) The average human being has an inherent dislike of work and will avoid it if he can.

(b) Because of this human characteristic of dislike of work, most people must be coerced, controlled, directed, threatened with punishment to get them to put forth adequate effort toward the achievement of organizational objectives.

(c) The average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all.²⁴

The implicit actions for managing motivation in this environment are self-evident. It was McGregor's view that how people were treated resulted in a self-fulfilling prophecy. If the manager assumed that people were lazy and treated them as if they were, then they would be lazy.

The Theory Y part of McGregor's analysis included the following assumptions:

(a) The expenditure of physical and mental effort in work is as natural as play or rest. The average human being does not inherently dislike work.

(b) External control and threat of punishment are not the only means for bringing about effort toward organizational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed.

(c) Commitment to objectives is a function of the rewards associated with their achievement. The most significant of such rewards, e.g., the satisfaction of ego and self-actualization needs, can be direct products of effort directed toward organizational objectives.

(d) The average human being learns, under proper conditions, not only to accept but to seek responsibility. Avoidance of responsibility, lack of ambition, and emphasis on security are generally consequences of experience, not inherent human characteristics.

(e) The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population.

(f) Under conditions of modern industrial life, the intellectual potentialities of the average human being are only partially utilized.²⁵ McGregor proposed that if the manager assumed that people desired challenging work and made use of the individual's discretion, the worker would behave in a responsibility seeking manner. McGregor based his concept on Maslow's need-hierarchy to a great extent.

Chris Argyris examined the effort of management practices on individual behavior and personal growth in the work environment. Argyris viewed personality development as the cornerstone for managing motivational development in an organization. His immaturity-maturity theory outlined seven developmental dimensions of personality. As man's personality develops his state changes from passive to active; his dependence becomes independence; instead of behaving in a few ways he is capable of behaving in many ways; erratic shallow interests become deeper stronger interests; short time perspectives increase to long time perspectives; subordinate position becomes equal or superordinate; and his lack of self-awareness shifts to awareness and control over self.²⁶ Managers operating under Theory X assumptions of man tend to arrest mature development by creating childlike roles where immaturity is emphasized. Argyris challenges managers to provide a climate in which individuals have a chance to grow. His argument is based on the theory Y assumptions formulated by McGregor.

Rensis Likert has focused attention on managerial behavior and its influence on motivation and productivity within organizations. His research has been directed toward assisting organizations in their move

from Theory X behavior toward Theory Y behavior. As a result of his studies he developed four "systems" of management. These systems can be outlined as follows:

System One - Management does not trust subordinates and does not allow them to participate in the decisionmaking process. All decisions are formulated at top management level and sent down through the chain of command. Subordinates work because of threats, punishment, fear and rewards designed to satisfy needs at the physiological and safety level of Maslow's need-hierarchy.

System Two - Management places little trust and confidence in subordinates. The bulk of decisions are still made by top level managers, however some decisions, with rules to guide subordinates, are placed at lower echelons. Superior-subordinate interaction takes place in an atmosphere of fear and caution by subordinates. Rewards and punishment are used to motivate workers.

System Three - Management has substantial trust and confidence in subordinates. The broad policy decisions are made by top management while subordinates are given authority to make some specific decisions affecting their work. Rewards, punishment and subordinate participation are used to motivate workers. Superior-subordinate exchange is based on a great deal of trust and confidence.

System Four - Management has complete trust and confidence in subordinates. Decisionmaking is decentralized and dispersed throughout

the organization. Workers are motivated by participation and involvement in developing organizational goals. Communication flows freely up, down and laterally within the organization. The control process is widely dispersed with lower levels deeply involved.²⁷

Likert's research involved asking organizations to rate their management style in terms of his four systems. He found that the most productive organizations tended toward a system four style of management, while the least productive ones followed a system one style.

Military Studies in Motivation

The military community has conducted limited research in the area of motivation. There have been many projects designed to gather data but the data have not yet been translated into specific programs. Surveys have been conducted to find out what factors affect retention, career attitudes, and job satisfaction levels. The information collected to date appears to have limited value because a great deal of the focus has been on what Herzberg called hygiene variables. For example, surveys on satisfaction have looked at areas such as housing, pay, medical care, post exchange, commissary, social life and retirement benefits.²⁸ It is not surprising to find retirement benefits as the most satisfying of this list, but this information does not provide the means for developing greater motivational levels. Other surveys point out that job dissatisfaction is the reason that 25.1 percent of the officer corps plans to leave the Army.²⁹ The question of what causes this degree of dissatisfaction has not been clearly answered.

The Air Force (1966) conducted a study of officer motivation called New View and based it on Herzberg's methodology and analysis. This study found corresponding evidence to support more than 30 civilian studies which used the Herzberg method. The conclusion was that the motivational problem is the same for the Air Force as it is for industry.³⁰ This study added one more motivator to Herzberg's list - Patriotism. This motivator is perhaps unique to the military environment.

The Army has recently established a school at Fort Ord, California to train officers in organizational development (O.D.) so that they can serve as consultants. It is planned that officers will work in conjunction with commanders at all levels in the chain of command to improve the overall performance of their units.

How effective these O.D. Consultants will be is a question yet to be answered. This program has the potential to accomplish a great deal toward increasing individual motivational levels if properly administered.

Summary

This review of the motivational literature points to certain areas concerning what is known with varying degrees of certainty about the variables of motivation. In summary the following points seem to be warranted as useful:

(a) There has not yet been designed a theory of managerial motivation that is unified, definitive, and universal.

(b) The environment is postulated as an important aspect of motivation phenomenon.

(c) Replications of the two-factor theory using the same methodology have supported its precepts. However, studies using different methods have provided conflicting data which limits the generality and universality of the theory.

(d) Both the two-factor theory and the need-satisfaction theory have provided the basic tools for continued investigation of motivational variables.

(e) The complexity of the variables in determining motivational levels in an organization make research in the area very difficult.

(f) The heavy use of sample surveys in research places constraints on the ability to draw adequate conclusions about cause effect relationships.

(g) On the other hand, the use of verbal reports as a means for assessing motivation tends to produce data that are dependent upon the responder's emotional state. This reduces the objectivity of these responses.

(h) The assumptions one makes about man greatly influences the approach taken to achieve desired levels of motivation.

(i) The philosophy of the top man in the organization greatly influences the management system within the organization which in turn influences motivational behavior patterns of individuals.

(j) The military community has considerable data on what its members like and dislike about their environment, but there has not been a significant effort to integrate what is known into a plan for action.

(k) Some new ideas on effectiveness and motivation are being tried by the military community, but the impact of these ideas has not been evaluated.

ENDNOTES FOR CHAPTER II

1. Walter R. Nord (ed.), Concepts and Controversy in Organizational Behavior, (Pacific Palisades: Good Year Publishing Company, Inc., 1972), p. 44.
2. Hersey and Blanchard, *op.cit.*, p. 43.
3. Abraham H. Maslow, Motivation and Personality, (New York: Harper and Row, 1954), pp. 35-46.
4. Hjalman Rosen and Charles G. Weaver, "Motivation in Management: A Study of Four Managerial Levels," Journal of Applied Psychology, Vol 44, No. 6, (December, 1960), pp. 390-392.
5. Lyman W. Porter and Edward E. Lawler, "Comparative Study of Need Satisfaction in Military and Business Hierarchies," Journal of Applied Psychology, Vol 51, No. 2, (April, 1967), p. 143.
6. *Ibid.*, p. 142.
7. V. F. Mitchell, "Need Satisfaction of Military Commanders and Staff," Journal of Applied Psychology, Vol 54, No. 3, (June, 1970), pp. 286-287.
8. Lyman W. Porter and Edward E. Lawler, Managerial Attitudes and Performance, (Homeland: Richard D. Irwin, Inc., 1968), p. 168.
9. Herzberg, *op. cit.*, pp. 107-120.
10. Carl A. Lindsay, Edmond Marks, and Sean Gorlow, "The Herzberg Theory: A Critique and Reformation," Journal of Applied Psychology, Vol 51, No. 4, (August, 1967), pp. 330-340.
11. Hanafi Soliman, "Motivation-Hygiene Theory of Job Attitudes," Journal of Applied Psychology, Vol 54, No. 5, (October, 1970), pp. 452-461.
12. Frank Friedlander, "Job Characteristics as Satisfiers and Dissatisfiers," Journal of Applied Psychology, Vol 48, No. 6, (December, 1964), pp. 388-392.
13. Gerald Halpern, "Relative Contributions of Motivator and Hygiene Factors to Overall Job Satisfaction," Journal of Applied Psychology, Vol 50, No. 3, (June, 1966), pp. 190-200.

14. George B. Braen, "Testing Traditional and Two-Factor Hypothesis Concerning Job Satisfaction," Journal of Applied Psychology, Vol 52, No.5, (October, 1968), pp. 366-271.
15. Charles S. Hulin and Patricia A. Smith, "An Empirical Investigation of Two Implications of the Two-Factor Theory of Job Satisfaction," Journal of Applied Psychology, Vol 51, No. 5, (October, 1967), pp. 396-401.
16. Cummings, L. L. and A. M. Salmi, "Research on the Bases and Correlates of Managerial Motivation," Psychological Bulletin, Vol 10, No. 2, (August, 1968), pp. 127-144.
17. Martin G. Wolf, "The Relationship of Content and Context Factors to Attitudes Toward Company and Job," Personnel Psychology, Vol 20, No. 4, (Winter, 1967), pp. 391-417.
18. David A. Whitsett and Erik K. Winslow, "An Analysis of Studies Critical of the Motivator-Hygiene Theory," Personnel Psychology, Vol 20, No. 4, (Winter, 1967), pp. 391-417.
19. Ray C. Hackman, The Motivated Working Adult, (New York: American Management Association, Inc., 1966), p. 31.
20. Ibid., p. 135.
21. Edward E. Lawler, "Job Attitudes and Employees Motivation: Theory, Research and Practice," Personnel Psychology, Vol 23, No. 2, (Summer, 1970), pp. 223-237.
22. Robert N. Ford, Motivation Through the Work Itself, (New York: American Management Association, Inc., 1969), p. 188.
23. Ibid.
24. Douglas McGregor, The Human Side of Enterprise, (New York: McGraw-Hill Book Company, Inc., 1960), pp. 33-34.
25. Ibid., pp. 47-48.
26. Hersey and Blanchard, op. cit., p. 51.
27. Rensis Likert, The Human Organization: Its Management and Value, (New York: McGraw-Hill Book Company, Inc., 1967), pp. 4-10.
28. Department of the Army, Personnel Management Development Office, Survey Estimate of Satisfying and Dissatisfying Aspects of Military Life as Indicated by Army Officers and Enlisted Men, (Washington: Government Printing Press, 1969), p. 4.

29. Department of the Army, Personnel Management Development Office, Survey Estimate of Career Plans of Male Officers and Factors Affecting Retention, (Washington: Government Printing Press, 1963).

30. Department of Air Force, Office of the Chief of Staff, A Study in Officer Motivation: New View, (Washington: Government Printing Office, 1966), p. 118.

CHAPTER III

METHODOLOGY

Overview

In this study descriptive research will be used to identify the variables influencing middle level career army officer job satisfaction. Data will be collected by means of a survey designed to point out items influencing job satisfaction and the feelings derived from the perceived satisfaction. The survey will also provide data on the causes of job dissatisfaction and the feelings associated with such a state.

The data obtained from the survey will be compared with similar data reported by Hackman in his study of civilian middle level managers. Two statistical tests will be conducted to identify similarities and significant differences between the perceptions of the army officer and the civilian manager concerning their view of variables influencing job satisfaction. The proof of my second hypothesis will rest on the results of these statistical tests.

To prove the other hypothesis, an analysis of data from a library search and interpretation of data gathered by the above survey will be required. No statistical analysis will be made to support the remaining hypotheses.

Survey Instrument

The Hackman Job Satisfaction Schedule (HJSS), Annex A, is the specific measurement instrument to be used. It was developed by

Ray C. Hackman, former Director of the Psychological Service of Pittsburg. The HJSS was designed to gather data on job satisfaction and dissatisfaction and has been used to study many different civilian work groups to include salesman, middle level managers, industrial engineers, production workers, and research technicians. In each case it has provided some meaningful data on what causes job satisfaction and dissatisfaction.¹

The HJSS does have some limitations for measuring individual motivation. It is open ended in its directions to the individual thus allowing one person to describe one episode while another may describe many. Furthermore, the type of response one gives depends on the amount and kind of work he has experienced. The instrument can provide data about group motivation, but cannot be used to describe any given individual's motivation.

The HJSS was selected for this research because it attempts to overcome the controversial problems associated with the interview technique used by Herzberg. It is simple and easy to understand and the results can be statistically compared with readily available data from previous research on middle level civilian managers. It also provides information on the relative strengths of factors influencing job satisfaction and dissatisfaction. The data collected can, therefore, be arranged using ordinal scaling.

Limitations of Study

This research is directed toward analysis of middle level career army officers with nine to fifteen years of service who are

attending the Command and General Staff College. One student section will be administered the HJSS to collect data for subsequent comparison with middle level civilian managers and with the accountants and engineers in Herzberg's original study. An assumption will be made that one section represents a random sample of the population being studied.

A second survey will be made using officers from a different section to provide additional data to check the results of the first survey. The results of the second survey should provide information on the reliability of the Hackman Job Satisfaction Schedule.

Null and Operational Hypotheses

There are two null hypotheses to be tested in this research. The first will be tested using the Spearman Rank Correlation Coefficient. The null hypothesis to be tested is as follows: The variables affecting job satisfaction of middle level career army officers and middle level civilian managers are not associated in the population composed of these two groups.² See endnote for explanation of the logic involved in establishing a negative premise to reach a positive association of variables. Siegel states that a test of this type of null hypothesis rests on the computation of the Spearman Rank Correlation Coefficient and a subsequent examination of the respective probability associated with the computed value of this coefficient. Furthermore, if the null hypothesis can be rejected given a specific level of significance, one may conclude that in the population composed of middle level career army officers and middle level civilian managers the variables identified by this research as having influence on job satisfaction are associated.³

The computation of the Spearman Rank Correlation Coefficient is accomplished by using the following formula:

$$R_s = 1 - \frac{6 (\text{Sum of } d^2)}{N^3 - N} \quad 3.0a$$

where d = differences in the numerical rank order of the variables and N = number of subjects being correlated.⁴

The level of significance of the calculated value of R_s is determined by computing the value of t in the formula

$$t = R_s \sqrt{\frac{N - 2}{1 - R_s^2}} \quad 3.0b$$

Where the value of t is used to find the appropriate level of significance in a table of critical values for t .⁵

The second null hypothesis to be tested is as follows: There are no differences in the perceptions of the middle level career army officer and the middle level civilian manager concerning the variables influencing their job satisfaction. The purpose of this test is to identify any specific differences which might exist in their perceptions. The Kolmogorov-Smirnov two sample test will be used to test this null hypothesis.

This test was selected because it is suited for use with data which follows an ordinal scaling pattern. The test is also well suited for analyzing a population sample which does not have precisely defined parameters. If these parameters could be defined then a parametric test would be more appropriate, but such is not the case in

this study. Also, the test is simple to administer in that the mathematical calculations are easily made and compared. Finally, the test is excellent for evaluating two sets of data having cumulative frequency distributions which are expected to be fairly close together.⁶

The test looks at the magnitude of the difference between the responses obtained from each population in the following fashion:

$$D = \text{Maximum } [S_{n_1}(X) - S_{n_2}(X)] \quad (3.1)$$

$$\text{Where } S_{n_1}(X) = k/n_1 \quad (3.1a)$$

$$S_{n_2}(X) = k/n_2 \quad (3.1b)$$

and k = the number of responses obtained in each respective sample of size n_1 and n_2

Once the observed D is calculated it is compared to the maximum allowable value of D for the specified level of significance desired by the researcher.

A level of significance = .05 was selected for this test and the appropriate formula for computing the maximum allowable difference is given below.⁷

$$D (\text{max}) = 1.36 \sqrt{\frac{N_1 + N_2}{N_1 N_2}} \quad (3.2)$$

By making the comparison between this theoretical value of the difference and the actual difference one can determine what significant differences in perception exist, if any.

ENDNOTES FOR CHAPTER III

1. Hackman, op. cit., p. 33.
2. Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences, (New York: McGraw-Hill Book Company, 1956).
(NOTE: Siegel uses this negative premise to obtain a positive result in determining the degree of association between variables. Association refers to the idea of measuring the degree of correlation between variables. The statistical test is designed to "determine the probability associated with the occurrence of a correlation as large as the one observed in the sample under the null hypothesis that the variables are unrelated in the population." The Correlation Coefficient itself represents the degree of association. pp. 195-196.
3. Ibid., an example of this concept is given on pp. 211 and 212.
4. Ibid., p. 204.
5. Ibid., p. 212.
6. Ibid., p. 127.
7. Ibid., p. 131.

CHAPTER IV

FINDINGS - ANALYSIS AND EVALUATION

Introduction.

The Hackman Job Satisfaction Schedule was administered to two sections of student officers attending the Command and General Staff College at Fort Leavenworth. The responses of these two samples were analyzed and the variables arranged in rank order for the purpose of testing the null hypotheses stated in Chapter III. The following sections of this chapter show the results of the data gathered and outline the statistical analysis required to test the null hypotheses.

Survey Data on CGSC Officer.

The survey of a student section at the Command and General Staff College resulted in the data outlined in tables A through D. The specific variables in each table are rank ordered according to the percentage of times they were identified as part of the set of variables being examined.

TABLE A
CGSC Student Officer Perception
of Variables Providing Job Satisfaction
N=46

<u>JOB SATISFACTION</u>	<u>PERCENT IDENTIFYING VARIABLE</u>
1. Work itself.	85
2. Permitted to do work in own way.	78
3. Successful completion of Task	74
4. Praise for work.	74
5. Subordinates did a good job	72
6. Promotion	65
7. Given supervisory responsibility	46
8. Increase in status	35
9. Increase in pay	30

TABLE B
CGSC Student Officer Perception
of Feelings Associated with Job Satisfaction
N=46

<u>FEELINGS ACCOMPANYING JOB SATISFACTION</u>	<u>PERCENT IDENTIFYING FEELING</u>
1. Accomplishment	91
2. Belonging	72
3. Confidence	70
4. Pride	67
5. Responsibility	56
6. Recognition	54
7. Personal Growth	50
8. Status	41
9. Security	33
10. Financial Progress	20

TABLE C
CGSC Student Officer Perception
of Variables Causing Job Dissatisfaction
N=46

<u>JOB DISSATISFACTION</u>	<u>PERCENT IDENTIFYING FEELING</u>
1. Dull and uninteresting work	65
2. Lack of praise	65
3. Subordinates performed poorly	65
4. Unable to complete assigned task	63
5. Told how to do work	59
6. Disagree with organizational goals	54
7. Incompetent supervisor	52
8. Poor relationship with peers and subordinates	41
9. Supervisor critical of work no matter what accomplished	39
10. Disagree with personnel policies	39
11. Supervisor unfriendly	37
12. Lost face	33
13. Work poorly organized	30
14. Did not receive expected pay raise	24
15. Did not get expected promotion	20

TABLE D
CGSC Student Officer Perception
of Feelings Associated with Job Dissatisfaction
N=46

<u>FEELINGS ACCOMPANYING JOB DISSATISFACTION</u>	<u>PERCENTAGE IDENTIFYING FEELING</u>
1. Disgusted	74
2. Just plain mad	67
3. Not accomplishing anything	56
4. Not being recognized	50
5. Things were unfair	39
6. Unimportant	35
7. Blocked from developing	30
8. Insecure	30
9. Less confident	30
10. Isolated	30
11. Fearful	30
12. Rejected	26
13. Inadequate	26
14. Not making financial progress	24
15. Ashamed	20

These tables do not provide any hard evidence upon which to base specific conclusions as to the nature of officer satisfaction and dissatisfaction with his job. However, the data does indicate the type of job conditions and associated feelings which are part of the army officer's view of his job. Furthermore, each table has value, limited as it may be, for explaining some of the unknown aspects of motivation on the job.

Data Comparison Using Spearman Rank Order Correlation Coefficient.

The next logical step is to compare the data gathered on the CGSC student officer with data on Herzberg's accountants and engineers, and

Hackman's Civilian Level Managers. Tables E and F show the relative rank ordering of the variables from each of these studies.

TABLE E
Comparison of Rank Order of Variables Providing Job Satisfaction

Military Officer Rank Order	Herzberg's Accounts & Engineers Rank Order	Hackman's Civilian Manager Rank Order
1. Work itself	2	1
2. Permitted to do work in own way	8	6.5
3. Successful completion of task	1	2.5
4. Praise for work	6	5
5. Subordinates did a good job	9	2.5
6. Promotion	4	8
7. Given supervisory responsibility	3	4
8. Increase in status	7	9
9. Increase in pay	5	6.5

NOTE: The decimal figures are the result of tied scores in rank order.

TABLE F
Comparison of Rank Order of Feelings Associated With Variables Providing Job Satisfaction

Army Officer at CGSC	Herzberg's Accountants/Engineers	Hackman's Middle Level Civ Manager
1. Accomplishment	2	1
2. Belonging	7	7
3. Confidence	5	2
4. Pride	9	3.5
5. Responsibility	4	6
6. Recognition	1	5
7. Personal Growth	3	3.5
8. Status	6	10
9. Security	8	8.5
10. Financial progress	10	8.5

NOTE: The decimal figures are the result of tied scores in rank order.

Based on the data in these two tables the Spearman Rank Order Correlation Coefficients, t values, and appropriate levels of significance were determined. The results of this process are summarized in Table G below.

TABLE G
Spearman Rank Order Correlation Coefficients (Rs), t values,
and Levels of Significance as Calculated from Data
in Tables E and F

	Army Officer vs Hackman's Civ Managers			Army Officers vs Herzberg's Accounts/ Engineers		
	Rs	t	Level of Significance	Rs	t	Level of Significance
Job Satisfaction Variables	.65	2.26	.10	.62	2.08	.10
Feelings associ- ated with job satisfaction	.73	3.01	.02	.70	2.77	.05

Table G indicates that with a level of significance = .10 one may make the assertion that the variables compared are in fact associated in two populations. One population is composed of the army officers and the civilian level managers and the other population is composed of the army officers and Herzberg's accountants and engineers. In other words, it may be possible to transfer what is known about techniques for influencing job satisfaction of civilian middle level managers in order to influence job satisfaction of middle level career officers. This is possible because of the close association the variables show in the population made up of these two groups.

Data Comparison Using Kolmogorov-Smirnov Test.

In using this test one is looking to identify any significant differences concerning the variables which influence job satisfaction for the army officer and the civilian manager. Direct comparison between the army officer and Herzberg's accountants and engineers is not possible because of the different methodology used to collect the data. However, the following tables include Herzberg's data in order for the reader to get a feel for the kind of comparisons that could have been made if the same methodology had been used.

Tables H and I outline the results of making the Kolomogorove-Smirnov test with a level of significance = .05.

TABLE H
 Comparison of Job Satisfaction Data
 Using KOLMOGOROV-SMIRNOV Test
 Level of Significance = .05

Items Providing Job Satisfaction	Army Officer at CGSC N ₁ = 46	Herzberg's Accountants/ Engineers N ₂ = 176	Hackman's Middle Level Civ. Managers N ₃ = 44	Difference Military/ Herzberg D(max) = .226	Difference Military/ Hackman D(max) = .286
	K ₁ K ₁ /N ₁	K ₂ K ₂ /N ₂	K ₃ K ₃ /N ₃	K ₁ /N ₁ - K ₂ /N ₂	K ₁ - K ₃ /N ₃
1. Work itself	39 .847	45 .255	28 .636	.594	.212
2. Permitted to do work in own way	37 .782	13 .074	16 .364	.708	.418 *
3. Successful com- pletion of task	34 .739	75 .426	25 .545	.313	.194
4. Praise for work	34 .739	16 .358	19 .432	.381	.307 *
5. Subordinates did good job	33 .717	10 .057	25 .568	.660	.149
6. Promotion	30 .652	30 .171	15 .341	.481	.311 *
7. Given Supervisory Responsibility	21 .457	42 .239	20 .455	.218	.002
8. Increase in Status	16 .348	15 .085	9 .205	.263	.143
9. Increase in Pay	14 .304	27 .153	16 .364	.151	.060

*Significant Difference

NOTE: Direct Comparison of Herzberg's Data with Data on the Army Officer is not possible because of different methodology use to collect data.

TABLE I
 Comparison of Feelings Influencing Job Satisfaction
 Using KOLMOGOROV-SMIRNOV Test
 Level of Significance = .05

Items Providing Job Satisfaction	Army Officer at CGSC	Herzberg's Accountants/ Engineers	Hackman's Middle Level Civ. Managers	Difference Military/ Herzberg	Difference Military/ Hackman
	N ₁ = 46 K ₁ K ₁ /N ₁	N ₂ = 176 K ₂ K ₂ /N ₂	N ₃ = 44 K ₃ K ₃ /N ₃	D(max) = .226 K ₁ /N ₁ - K ₂ /N ₂	D(max) = .286 K ₁ - K ₃ /N ₃
1. Accomplishment	42 .913	99 .563	36 .818	.594	.212
2. Belonging	33 .717	20 .114	19 .432	.503	.285
3. Confidence	32 .696	55 .312	32 .727	.384	.031
4. Pride	31 .674	14 .176	31 .705	.498	.031
5. Responsibility	26 .565	57 .324	29 .659	.241	.094
6. Recognition	25 .544	103 .585	30 .682	.041	.139
7. Personal Growth	23 .500	75 .426	31 .705	.074	.205
8. Status	19 .413	38 .108	11 .250	.305	.163
9. Security	15 .326	17 .097	18 .410	.229	.084
10. Financial Progress	9 .200	3 .017	18 .410	.183	.210

*Significant Difference

NOTE: Direct comparison of Herzberg's data with data on the Army officer is not possible because of different methodology use to collect data.

There are three items which show a significant difference when one compares the army officer with Hackman's civilian manager. These three items are being permitted to do work in own way, receiving praise for work and being promoted. These significant differences mean that the null hypothesis should be rejected. The conclusion reached is that there are in fact differences in the perception of these two groups concerning variables influencing their job satisfaction.

A closer look at the three items with significantly different responses reveals that the army officer identified each item as providing job satisfaction more frequently than did the civilian manager. Therefore, one is lead to believe that the army officer values these items more than his civilian counterpart because they are not always present in a military environment. For example, the army officer may place more value on being able to do work in his own way because the opportunity to practice this idea is more limited in the army than in civilian industry. Conversely, the civilian manager identified this item less often because it may be an everyday occurrence in his job environment. The same analogy could be made for the idea of being praised for work efforts. The promotion variable is perhaps different because the military officer wears his rank in a visible fashion and he, therefore, places more value on it.

There is no assurance that any of the above explanations really account for the differences noted. However, one fairly sound assertion

can be made and, that is, both groups identified the same variables associated with job satisfaction and three of the variables appear to have more importance for the army officer than for the civilian manager. Furthermore, the differences noted are based on relative strength of influence and not on the failure to positively influence job satisfaction.

Second Officer Survey

A different section of CGSC officer students was administered the Hackman Job Satisfaction Schedule to be used as a check for the first officer group. The sample size was 26. Tables J through O outline the data gathered and the statistical test results. The data demonstrate the reliability and consistency of what was discovered by the first officer survey.

TABLE J
CGSC Student Officer Perception
of Variables Providing Job Satisfaction
Second Sample N=26

<u>JOB SATISFACTION</u>	<u>PERCENT IDENTIFYING VARIABLE</u>
1. Work itself.	81
2. Praise for work.	77
3. Permitted to do work in own way.	69
4. Successful completion of task.	69
5. Promotion.	65
6. Subordinates did a good job.	58
7. Increase in status.	46
8. Given supervisory responsibility.	38
9. Increase in pay.	35

TABLE K
CGSC Student Officer Perception
of Feelings Associated with Job Satisfaction
Second Sample N=26

<u>FEELINGS ACCOMPANYING JOB SATISFACTION</u>	<u>PERCENT IDENTIFYING FEELING</u>
1. Accomplishment.	96
2. Recognition.	77
3. Belonging.	69
4. Confidence	69
5. Pride.	58
6. Financial progress.	54
7. Status.	50
8. Personal growth.	46
9. Responsibility.	42
10. Security.	38

TABLE L
CGSC Student Officer Perception
of Variables Causing Job Dissatisfaction
Second Sample N=26

<u>JOB DISSATISFACTION</u>	<u>PERCENT IDENTIFYING VARIABLE</u>
1. Dull and uninteresting work.	73
2. Incompetent supervisor.	73
3. Told how to do work.	58
4. Lack of praise.	54
5. Disagree with organizational goals.	50
6. Unable to complete assigned task.	46
7. Supervisor critical of work no matter what accomplished.	42
8. Disagree with personnel policies.	38
9. Subordinates performed poorly.	38
10. Did not get expected raise.	35
11. Supervisor unfriendly.	35
12. Work poorly organized.	27
13. Lost face.	23
14. Did not receive expected promotion.	19
15. Poor relationship with peers and subordinates.	15

TABLE M
CGSC Student Officer Perception
of Feelings Associated with Job Dissatisfaction
Second Sample N=26

<u>FEELINGS ACCOMPANYING JOB DISSATISFACTION</u>	<u>PERCENT IDENTIFYING FEELING</u>
1. Disgusted.	89
2. Not accomplishing anything.	73
3. Just plain mad.	58
4. Not being recognized.	38
5. Unimportant.	35
6. Less confident.	27
7. Blocked from developing.	23
8. Things were unfair.	23
9. Insecure.	23
10. Inadequate.	23
11. Fearful.	23
12. Isolated.	19
13. Rejected.	19
14. Not making financial progress.	8
15. Ashamed.	8

TABLE N
 Second Survey CGSC Students, N=26
 Comparison of Job Satisfaction Data
 Using KOLMOGOROV-SMIRNOV Test
 Level of Significance = .05

Items Providing Job Satisfaction	Army Officer at CGSC	Herzberg's Accountants/ Engineers	Hackman's Middle Level Civ. Managers	Difference Military/ Herzberg	Difference Military/ Hackman
	N ₁ = 46 K ₁ K ₁ /N ₁	N ₂ = 176 K ₂ K ₂ /N ₂	N ₃ = 44 K ₃ K ₃ /N ₃	D(max) = .286 K ₁ /N ₁ - K ₂ /N ₂	D(max) = .336 K ₁ - K ₃ /N ₃
1. Worl. itself	21 .808	45 .255	28 .636	.553	.172
2. Praise for work	20 .769	16 .358	19 .432	.411	.337 *
3. Permitted to do work in own way	18 .692	13 .074	16 .364	.618	.328
4. Successful com- pletion of task	18 .692	75 .426	24 .545	.266	.147
5. Promotion	17 .653	30 .171	15 .341	.482	.312
6. Subordinates did a good job	15 .577	10 .057	25 .568	.520	.009
7. Increase in Status	12 .462	15 .085	9 .205	.377	.257
8. Given Supervisory Responsibility	10 .384	42 .239	20 .455	.246	.071
9. Increase in pay	9 .346	27 .153	16 .364	.193	.193

*Significant difference

NOTE: Direct comparison of Herzberg's Data with Data on the Army officer is
 not possible because of different methodology used to collect data.

TABLE O
 Second Survey CGSC Students, N=26
 Comparison of Feelings Influencing Job Satisfaction
 Using KOLMOGOROV-SMIRNOV Test
 Level of Significance = .05

Feelings Accompanying Job Satisfaction	Army Officer at CGSC	Herzberg's Accountants/ Engineers	Hackman's Middle Level Civ. Managers	Difference Military/ Herzberg	Difference Military/ Hackman
	N ₁ = 46	N ₂ = 176	N ₃ = 44	D(max) = .286	D(max) = .336
	K ₁ K ₁ /N ₁	K ₂ K ₂ /N ₂	K ₃ K ₃ /N ₃	K ₁ /N ₁ - K ₂ /N ₂	K ₁ - K ₃ /N ₃
1. Accomplishment	25 .961	99 .563	36 .818	.398	.143
2. Recognition	20 .769	103 .585	30 .682	.184	.087
3. Confidence	18 .692	55 .312	32 .727	.380	.035
4. Belonging	16 .615	20 .114	19 .432	.501	.183
5. Pride	15 .577	14 .176	31 .705	.128	.031
6. Financial progress	14 .538	3 .017	18 .410	.128	.138
7. Status	13 .500	38 .108	11 .250	.250	.163
8. Personal growth	12 .462	75 .406	31 .705	.243	.243
9. Responsibility	11 .423	57 .324	29 .659	.236	.236
10. Security	10 .384	17 .097	18 .410	.026	.084

*Significant difference

NOTE: Direct comparison of Herzberg's Data with Data on the Army officer is not possible because of different methodology used to collect data.

Analysis of Second Survey

The data collected by the second survey supports the findings of the first survey. The second survey gives data which show a close pattern of responses with the civilian manager. Only the variable praise for work shows a significant difference when the two groups are compared.

If a test of the two officer samples is made there are not any variables where a significant difference exists. This provides information as to the reliability of the survey instrument to consistently measure the items it was designed to measure.

Herzberg's Two Factor Theory

Concrete evidence which proves Herzberg's two factor theory of motivation is not present in the data gathered on army officers. However, the data do indicate that there may be similarities between Herzberg's findings and the results of this study. For example, the general nature of the items which influence job satisfaction are similar to the items Herzberg described as motivators. The items which influence job dissatisfaction fall into the category of items Herzberg described as hygiene factors. The relationship is not clearly defined by the data, but there is a tendency for the data to separate into two such groups. There is overlap in each grouping and the actual impact of each item on satisfaction or dissatisfaction remains unknown.

Several of the items that influence dissatisfaction were not mentioned as having any influence on providing satisfaction. For example, poor personnel policies, poor relationship with superiors

and disagreement with organizational goals all had an effect on job dissatisfaction, but the good aspects of these items were not noted as providing job satisfaction. This fact tends to support Herzberg's theory.

The review of the literature in Chapter II tends to provide support for Herzberg's theory also. The Air Force study on officer motivation and thirty additional civilian studies all supported Herzberg's contentions. No conclusive evidence has been found to prove Herzberg was absolutely correct. However, this study did not find any conclusive evidence to prove Herzberg was wrong. In fact, the data seem to support Herzberg's view of motivation.

Civilian Motivational Techniques for the Army Officer

The logic behind accepting some of the motivational techniques designed for civilian middle level managers rests on the operational hypothesis of this study. It has been shown that the middle level army officer and the middle level civilian manager identify with the same variables influencing job satisfaction and thus motivation. The fact that both groups view job satisfaction variables in a similar pattern leads one to believe motivational levels in both groups could be increased using similar techniques. These techniques were discussed in Chapter II and some specific recommendations how to use them will be made in Chapter V of this study.

Summary

The data from two officer surveys have been analyzed and compared to data gathered on middle level civilian managers and data on Herzberg's

accountants and engineers. As a result of this analysis and subsequent hypotheses testing insight has been gained concerning the nature of the army officer's view of job satisfaction and dissatisfaction. The variables influencing both satisfaction and dissatisfaction have been identified and arranged in sets with some overlap in each set being apparent. The final step of this project is to draw conclusions from what has been found and to make recommendations for change in the future. This task will be accomplished in the next chapter.

CHAPTER V
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Chapter I introduced the problem to be studied by examining the military environment and its impact on job satisfaction for the army officer. The problem was to examine officer motivation on the job and determine what actions should be taken to increase job dissatisfaction.

Hypotheses were formulated to express the belief that motivation on the job for middle level civilian managers is essentially the same as for middle level career army officers and that the techniques used to increase motivation in civilian managers would be useful in doing the same for the army officer.

Chapter II reviewed the literature on motivation to present the concepts being studied and used at the present time. As a result, several assertions concerning various aspects of motivation were made. A summary of these assertions appears on page 34.

Chapter III outlined the approach to be taken in collecting data on the variables influencing job satisfaction. The Hackman Job Satisfaction Schedule was selected as the measurement instrument. It was decided to conduct two surveys of student officers at Command and General Staff College to provide the data on officer perceptions of

variables affecting their job satisfaction. The data collected was to be compared with Herzberg's data on accountants and engineers, and with Hackman's data on middle level civilian managers using the Spearman Rank Order Correlation Coefficient. A test of significant differences in the data was to be made using the Kolmogorov-Smirnov test at a level of significance = .05.

Chapter IV provided an analysis of the data collected. It was found that the variables influencing job satisfaction in the population composed of middle level career army officers and middle level civilian managers were associated at a level of significance = .10. A further analysis of the data pointed out three areas of significant difference in the variables influencing job satisfaction. These three areas are being permitted to do work in own way, being praised for work, and receiving a promotion.

The variables identified with job satisfaction and job dissatisfaction supported Herzberg's two factor theory, but there was considerable overlap between variables expected to be motivators and those expected to be hygiene in nature. The data were inconclusive and no specific evidence was uncovered which could be used to prove Herzberg was wrong.

Conclusions

There are identifiable variables that influence job satisfaction for the army officer. These variables are listed in Tables E and F.

They are significant because they provide a basis for designing programs through which one could conceivably increase an officer's motivation to do his job.

For example, by giving an officer a task which has meaning and praising his efforts one could expect to increase his individual desire and drive to accomplish the task. By emphasizing the variables which support job satisfaction you would expect to get an increase in an individual's motivation. In addition, you could possibly overcome some of the dysfunctional aspects of the bureaucratic structure by applying these variables to the everyday operation of the organization.

The variables influencing job satisfaction for middle level career army officers and middle level civilian managers are associated in the population composed of these two groups. Because of this association the techniques for increasing job satisfaction and motivation in civilian industry do have relevance for use in the military setting. This assertion appears to be appropriate even though there are differences between the two groups because the differences are few and they were found to be differences of degree of influence only. These few differences indicate that perhaps the army should place more emphasis on providing praise for work, promotion for performance, and atmosphere for doing work as the individual desires.

Herzberg's theory of motivation was supported by the data gathered on army officer job satisfaction. The data identified some variables as being purely satisfiers and some as purely dissatisfiers. Considerable

overlap of most variables casts some doubt on Herzberg's view, but there was no conclusive evidence to disprove his contentions.

The environment is an important factor in establishing and maintaining job satisfaction. The work itself is the most often cited environmental aspect influencing satisfaction or dissatisfaction with the job. The army officer should be given a meaningful, responsible job if one expects him to find satisfaction in doing it. In addition, he needs praise for his efforts if you expect an increase in his level of motivation. All of the aspects of the environment which impact on his ability to complete assigned tasks in a manner of his choosing are important in increasing motivation to do the job. An atmosphere supporting an officer's perceptions of the above conditions is essential to increasing motivation, while any other atmosphere will probably lead to reduced motivation.

It is apparent that the army's bureaucratic structure will remain intact for some time to come. The fact that the army operates under the rules of bureaucracy is not damning in itself providing the dysfunctional aspects of bureaucracy can be minimized. This can be accomplished if one understands the nature and potential dangers of the dysfunctional aspects and applies what is known about the items influencing satisfaction on the job.

The final conclusion is really an assertion which cannot be proved by facts. The concepts developed in this research on middle level career army officers at CGSC have relevance for application

in dealing with the rest of the officer corps. This assertion is based on the findings of many studies done on several groups of people. There are similarities in the identified variables influencing job satisfaction that indicate a tendency of the many groups studied to want similar things from their job. The proof of this assertion is left as a matter for further research.

Recommendations

The army needs to examine the situation surrounding the middle level career army officer. Those individuals who supervise this group of officers need to understand the nature of the variables which influence the job satisfaction levels of the middle level career officer. This need for understanding can best be met through training of officers while attending Command and General Staff College.

What is suggested here is a core course at the Command and General Staff College which develops in the student a philosophy which supports a job environment that emphasizes the job satisfaction variables identified by this research. The course should foster an understanding of potential problem areas associated with bureaucracies. It should also examine the assumptions made about man and his reaction to the different work philosophies a supervisor could adopt. This is important because a supervisor's philosophy influences the way his subordinates view their environment.

One subset of the core course should examine motivational techniques being used by civilian managers today. For example, participative

management, management by objectives, and job enrichment should be looked at for possible discussion topic areas.

In the final analysis each supervisor must select the techniques which are most appropriate for his situation. The core course at Command and General Staff College would simply provide him with a solid foundation of ideas for implementation when needed.

The impact of such a course would be to move the supervisors of middle level career army officers toward a system of management resembling Argyris' system four concept.

The next logical step for the army would be to provide assistance in the field for the process of implementing ideas in day to day activities to improve the overall effectiveness of specific organizations. This concept has already begun in the form of organizational development training at Fort Ord for unit consultant specialist. These consultants will soon be available in divisional units. Their ability to provide assistance to personnel in the division will rest for the most part on how well they are understood and accepted by those who require organizational development assistance. The training of officers at Command and General Staff College in the concepts discussed above could provide the catalyst for getting the organizational development program started.

Another recommendation for the army is that if real motivation is desired then programs should orient on developing the factors which have the greatest impact on motivation. Money spent to provide hygiene level satisfaction is still necessary, but increased motivation can

best be gained by providing challenging jobs with responsibility and then recognizing those who perform well.

Further research is essential to gain additional information on how each of the variables identified in this work influences job satisfaction. As one understands more about the specific influence of each variable he is better prepared to design actions which emphasize the crucial variables needed to maximize job satisfaction.

APPENDIX

APPENDIX A

THE HACKMAN JOB SATISFACTION SCHEDULE

All of us have had and will continue to have the experience of being made either very happy or very unhappy about things that happen at work. Some of these experiences are of short duration; some last for longer periods of time. Some occur suddenly in response to a particular thing that happens, and some build up over a period of time. Most of them are violent enough so that we remember later on what happened and how we felt at the time.

I would like you to think of times during the past few years when you got a *real kick* out of your job or were *very happy* on the job. Look at the list below of things that would have happened. Check in the left-hand column the thing or things that you remembered as being the primary cause of your being made happy. In the right-hand column check those things that you remember as being of somewhat less significance. Leave blank anything you remember as being of little or no significance to you.

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. You were promoted? |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. You were allowed to do a piece of work your way? |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Your work was interesting and challenging to you? |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. You were asked to supervise or oversee the work of others? |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. You got a raise in pay? |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. You completed a piece of work to your own satisfaction? |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. You were praised for the way you handled a piece of work? |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Your relative position or standing was made apparent to others? |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. Your subordinates turned out a particularly fine piece of work? |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. Other (please specify) _____ |

The next set of items describes feelings that you might have had at the time. Those that were the strongest and the most vivid should be checked in the left-hand column. The weaker or less characteristic ones should be checked in the right-hand column. Do not check either box before an item if you didn't experience the particular feeling at all. Did what happen make you feel:

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. That you had really accomplished something? |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Confident? |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. That you and your work were being recognized? |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Proud? |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Secure? |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. That you were making material and financial progress? |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. That you were growing and developing as a person? |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Responsible for others? |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. Important? |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. That you belonged or were accepted by the people you worked with? |
| <input type="checkbox"/> | <input type="checkbox"/> | 11. Other (please specify) _____ |

Now, think about the times during the past few years when you were very *unhappy* on your job. Look at the list below of things that might have produced this unhappiness. Check in the left-hand column the thing or things you remember as being the primary cause of your unhappiness. In the right-hand column check those things that you remember as being of somewhat less significance. Leave blank any item that was of little or no significance to you.

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. You didn't get an expected promotion? |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. You had to do your work exactly the way you were told to? |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Your work was dull and uninteresting? |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. You didn't get an expected raise? |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. You were unable to complete an assigned task? |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Your work wasn't noticed or praised when you thought it should have been? |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. You couldn't agree with the organization's goals? |

8. Your supervisor criticized your work no matter what you did or how you did it?
9. Your supervisor was unfriendly?
10. Your supervisor was incompetent?
11. You weren't getting along with your subordinates or the people you were working with?
12. You couldn't do your job because of the way in which your work was organized?
13. Something happened that made you lose face?
14. You didn't like the Army's personnel policies or procedures?
15. Your subordinates turned out a poor piece of work?
16. Other (please specify) _____

The next set of items describes feelings that you might have had at the time. Those that were the strongest and the most vivid should be checked in the left-hand column. The weaker or less characteristic ones should be checked in the right-hand column. Do not check either box before an item if you didn't experience the particular feeling at all. Did what happen make you feel:

1. Blocked from growing or developing?
2. That you were not accomplishing anything?
3. That you were not being recognized?
4. That you were not making financial progress?
5. That things were unfair?
6. Just plain mad?
7. Disgusted?
8. Unimportant?
9. Insecure?
10. Inadequate?
11. Less confident?

- 12. Isolated?
- 13. Ashamed of yourself?
- 14. Rejected?
- 15. Anxious or fearful?
- 16. Other (please specify) _____

BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

A. BOOKS

- Andreski, Stanislav. Military Organization and Society. Berkeley: University of California Press, 1968.
- Argyris, Chris. Integrating the Individual and the Organization. New York: John Wiley & Sons, Inc., 1964.
- _____. Intervention Theory and Method A Behavioral Science View. Reading: Addison-Wesley Publishing Company, 1970.
- _____. Management and Organizational Development. New York: McGraw-Nill Book Company, 1971.
- _____. Personality and Organization. New York: Harper and Brothers, 1957.
- Beekhard, Richard. Organizational Development: Strategies and Models. Reading: Addison-Wesley Publishing Company, 1969.
- Bennis, Warren G. Organizational Development: Its Nature, Origins, and Prospects. Reading: Addison-Wesley Publishing Company, 1969.
- Birch, David and Joseph Veroff. Motivation: A Study of Action. Belmont: Brooks/Cole Publishing Company, 1966.
- Blake, Robert R. and Jane S. Mouton. The Managerial Grid. Houston: Gulf Publishing Company, 1964.
- Brown, James D. The Human Nature of Organization. New York: John Wiley and Sons, Inc., 1973.
- Buckley, Walter. Sociology and Modern Systems Theory. Englewood Cliffs: Prentice Hall, Inc., 1967.
- Cribbin, James J. Effective Managerial Leadership. New York: American Management Association, Inc., 1972.
- Dalton, Gene W. and Paul R. Lawrence (eds.). Motivation and Control in Organizations. Homewood: Richard D. Irwin, Inc., 1971.
- Ford, Robert N. Motivation Through the Work Itself. New York: American Management Association, Inc., 1969.
- Gellerman, Saul W. Motivation and Productivity. New York: American Management Association, 1963.

- Hackman, Ray C. The Motivated Working Adult. New York: American Management Association, Inc., 1969.
- Hersey, Paul and Kenneth H. Blanchard. Management of Organizational Behavior, 2d ed. Englewood Cliffs: Prentice-Hall, Inc., 1972.
- Herzberg, Frederick. Work and the Nature of Man. Cleveland: World Publishing Company, 1966.
- _____, B. Mausner, and B. Snyderman. The Motivation to Work. New York: John Wiley & Sons, Inc., 1959.
- Jones, M. R. (ed.). Nebraska Symposium on Motivation. Lincoln, Nebraska: University of Nebraska Press, 1959.
- Just, Ward. Military Men. New York: Alfred A. Knopf, 1970.
- Lawrence, Paul R. and Jay W. Lorsch. Developing Organizations: Diagnosis and Action. Reading: Addison-Wesley Publishing Company, 1969.
- Leavitt, Harold J. Managerial Psychology. Chicago: University of Chicago Press, 1964.
- Likert, Rensis. The Human Organization: Its Management and Value. New York: McGraw-Hill Book Company, Inc., 1967.
- Lindzey, G., (ed.). Assessment of Human Motives. New York: Holt, Rinehart and Winston, 1958.
- Litwin, George H. and Robert A. Stringer, Jr. Motivation and Organizational Climate. Boston: Research Division, Harvard University, 1968.
- Maslow, Abraham H. Motivation and Personality. New York: Harper and Row, 1954.
- McClelland, David C. The Achieving Society. New York: The Free Press, 1961.
- _____, and David G. Winter. Motivating Economic Achievement. New York: The Free Press, 1969.
- McGregor, Douglas. The Human Side of Enterprise. New York: McGraw-Hill Book Company, Inc., 1960.
- _____. Leadership and Motivation. Massachusetts: M.I.T. Press, 1966.
- Miller, Delbert C. Handbook of Research Design and Social Measurement. New York: David McKay Company, Inc., 1964.

- Moskos, Charles C., Jr., (ed.). Public Opinion and the Military Establishment. Beverly Hills: Sage Publications, 1971.
- Murray, Edward J. Motivation and Emotion. Englewood Cliffs: Prentice-Hall, 1965.
- Nord, Walter R. (ed.). Concepts and Controversy in Organizational Behavior. Pacific Palisades: Goodyear Publishing Company, Inc., 1972.
- Perrow, Charles. Organizational Analysis: A Sociological View. Belmont: Wadsworth Publishing Company, Inc., 1970.
- Peters, R. S. The Concept of Motivation. New York: Humanities Press, 1958.
- Porter, Lyman W. and Edward E. Lawler. Managerial Attitudes and Performance. Homeland: Richard D. Irwin, Inc., 1968.
- Schein, Edgar H. Organizational Psychology. Englewood Cliffs: Prentice-Hall, Inc., 1965.
- Scott, William G. Organization Theory: A Behavioral Analysis for Management. Homewood: Richard D. Irwin, Inc., 1967.
- Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, 1956.
- Stouffer, Samuel A., and others. Measurement and Prediction. Princeton: Princeton University Press, 1950.
- Vroom, Victor H. Work and Motivation. New York: John Wiley & Sons, Inc., 1964.
- Whyte, William F. Man and Organization. Homeland: Richard D. Irwin, Inc., 1959.
- _____. Organizational Behavior Theory and Practice. Homewood: Richard D. Irwin, Inc., 1969.
- Zalesnik, A., C. R. Christensen, and F. J. Roethlisberger. The Motivation, Productivity, and Satisfaction of Workers: A Predictive Study. Boston: Division of Research, Harvard University, 1958.

B. PERIODICALS AND DOCUMENTS

- Adair, Robert E. "Satisfaction of Basic Human Needs: The Key to Junior Officer Motivation?" Unpublished Research Report, Air War College, 1971.

- Baddett, Francis J. "Motivation in Stressful Occupations." Unpublished Research Report. Air War College, 1971.
- Behling, Orlando, George LaBovitz, and Richard Kosmo. "The Herzberg Controversy: A Critical Reappraisal," Academy of Management Journal, Vol II, No. 1, (March, 1968), 99-109.
- Blake, Robert R., Janes S. Moulton, and Dale E. Bryson. "The Military Leadership Grid." Military Review, Vol XLVII, No. 6, (June, 1968), 3-18.
- Bobbitt, Randolph H., Jr. and Orlando Behling. "Defense Mechanisms as An Alternate Explanation of Herzberg's Motivator-Hygiene Results," Journal of Applied Psychology, Vol 56, No. 1, (February, 1972), 24-27.
- Cummings, L. L. and A. M. Salmi. "Research on the Bases and Correlates of Managerial Motivation." Psychological Bulletin, Vol 70, No. 2, (August, 1968), 127-144.
- Davis, Keith and George R. Allen. "Length of Time that Feelings Persist for Herzberg's Motivational Factors," Personnel Psychology, Vol 23, No. 1, (Spring, 1970), 67-75.
- Department of Air Force, Office of the Chief of Staff. A Study in Officer Motivation (New View). Vol I, Washington: Government Printing Office, 1966.
- Department of the Army, Personnel Management Development Directorate. Survey Estimate of Career Plans of Male Officers and Factors Affecting Retention. Washington: Government Printing Office, 1973.
- _____. Survey Estimate of Opinions on Job Satisfaction. Washington: Government Printing Office, 1973.
- _____. Survey of Factors Relating to the Retention of Junior Officers. Washington: Government Printing Office, 1973.
- Department of the Army, Personnel Management Development Office. Survey Estimate of Attitudes and Opinions of Army Male Officers on Making the Army a Career. Washington: Government Printing Office, 1968.
- _____. Survey Estimate of Opinions on Essentially of Staff Functions and Credit for Performance of Military Duties. Washington: Government Printing Office, 1971.
- _____. Survey Estimate of Satisfying and Dissatisfying Aspects of Military Life as Indicated by Army Officers and Enlisted Men. Washington: Government Printing Office, 1969.

- Fitzgerald, Robert F. and Lawrence A. Wigdor. "Herzberg's Dual-Factor Theory of Job Satisfaction and Motivation: A Review of the Evidence and a Criticism." Personnel Psychology. Vol 7, No. 2 (February, 1967) 369-387.
- Fitzgerald, Thomas H. "Why Motivation Theory Doesn't Work," Harvard Business Review, Vol 49, No 4, (July-August, 1971), 37-44.
- Fleek, Thomas A. "An Examination of the Military Mind," Air University Review, Vol 21, No. 1. (November-December, 1969), 92-105.
- Ford, Robert N. "Job Enrichment Lessons from AT&T," Harvard Business Review, Vol 51, No. 1, (January-February, 1973), 97-106.
- Friedlander, Frank. "Job Characteristics As Satisfiers and Dissatisfiers," Journal of Applied Psychology, Vol 48, No. 6, (December, 1964), 388-392.
- Graen, George B. "Testing Traditional and Two Factor Hypotheses Concerning Job Satisfaction," Journal of Applied Psychology, Vol 52, No. 5, (October, 1968), 366-371.
- Halpern, Gerald. "Relative Contributions of Motivator and Hygiene Factors to Overall Job Satisfaction," Journal of Applied Psychology, Vol 50, No. 3, (June, 1966), 190-200.
- Herzberg, Frederick. "An Analysis of Morale Survey Comments," Personnel Psychology, Vol 7, No. 2, (Spring, 1954), 267-275.
- House, Robert F. and Lawrence A. Wigdor. "Herzberg's Dual-Factor Theory of Job Satisfaction and Motivation: A Review of the Evidence and a Criticism", Personnel Psychology, Vol 7, No. 2 (February, 1967), 369-387.
- House, William C., Jr. "Attitudes Toward People," Military Review, Vol XLVI, No 12, (December, 1966), 53-56.
- Hulin, Charles L. and Patricia A. Smith. "An Empirical Investigation of Two Implications of the Two Factor Theory of Job Satisfaction," Journal of Applied Psychology, Vol 51, No. 5, (October, 1967), 396-401.
- Hughes, Harriette. Job Satisfaction in Industry and In the Military. Department of Defense, Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs). Washington: Government Printing Office, 1973.
- Hunt, J. G. and J. W. Hill. "The New Look in Motivational Theory for Organizational Research," Human Organization, Vol 28, No. 2, (Summer, 1969), 100-109.

- Jacobs, T. O. Leadership and Exchange in Formal Organizations. Research Report for Office of Naval Research. Alexandria: Human Resources Research Organization, 1971.
- Jones, John P. "Leadership, Motivation and Communication," Personnel Administration, Vol 33, No. 4, (September-October, 1970), 4-14.
- Lawler, Edward E. "Job Attitudes and Employee Motivation: Theory, Research, and Practice," Personnel Psychology, Vol 23, No. 2, (Summer, 1970), 223-237.
- Levinson, Harry. "Asinine Attitudes Toward Motivation," Harvard Business Review, Vol 51, No. 1, (January-February, 1973), 70-76.
- Levy, S. and L. Freedman. "Psychoneurosis and Economic Life," Social Problems, Vol 4, No. 1, (July, 1956), 55-67.
- Lindsay, Carl A., Edmond Marks, and Leon Gorlow. "The Herzbert Theory: A Critique and Reformation," Journal of Applied Psychology, Vol 51, No. 4, (August, 1967), 330-340.
- Malone, Dandridge M. "The Prize," Army, (March, 1973), 11-21.
- Mitchell, V. F. "Need Satisfactions of Military Commanders and Staff," Journal of Applied Psychology, Vol 54, No. 3, (June, 1970), 283-287.
- Morse, John J. and Jay W. Lorsch. "Beyond Theory Y," Harvard Business Review, Vol 48, No. 3, (May-June, 1970), 61-68.
- Newell, William E. "Effecting Improvements in Job Satisfaction in the Military," Unpublished Research Report, Air War College, 1970.
- Paul, William J., Keith B. Robertson, and Frederick Herzbert. "Job Enrichment Pays Off," Harvard Business Review. Vol 47, No. 2, (March-April, 1969), 61-78.
- Porter, Lyman W. and Edward E. Lawler. "Comparative Study of Need Satisfactions in Military and Business Hierarchies," Journal of Applied Psychology, Vol 51, No. 2, (April, 1967), 139-144.
- Reif, William E. and Peter P. Schoderbek. "Job Enlargement: Antidote to Apathy," Management of Personnel Quarterly, Vol 5, No. 1, (Spring, 1966), 16-23.
- Roche, William J. and Neil L. MacKinnon. "Motivating People with Meaningful Work," Harvard Business Review, Vol 48, No. 3, (May-June, 1970), 97-110.
- Ronan, W. W. "Individual Situational Variables Relating to Job Satisfaction," Journal of Applied Psychology, Vol 54, No. 1, (February, 1970), 1-31.

- Rosen, Hjalman and Charles G. Weaver. "Motivation in Management: A Study of Four Managerial Levels," Journal of Applied Psychology, Vol 44, No. 6, (December, 1960), 386-392.
- Sandler, Donald T. "Discipline and Officer Training: Conflicting Interests," Air University Review, Vol 20, No. 3, (March/April 1969), 89-92.
- Schneider, Benjamin and Loren K. Olson. "Effort as a Correlate of Organizational Reward System and Individual Values," Personnel Psychology, Vol 23, No. 4, (Autumn, 1970), 313-326.
- Smith, Dr. Clifford E. "The Implications of New View for Motivating Officer Behavior," Air University Review, Vol 20, No. 3, (March-April, 1969), 57-62.
- Soliman, Hanafi. "Motivation-Hygiene Theory of Job Attitudes," Journal of Applied Psychology, Vol 54, No. 5, (October, 1970), 452-461.
- Starcewich, Matt M. "Job Factor Importance for Job Satisfaction and Dissatisfaction Across Different Occupational Levels," Journal of Applied Psychology, Vol 56, No. 6, (December, 1972), 467-471.
- Wernimont, Paul F. "A Systems View of Job Satisfaction," Journal of Applied Psychology, Vol 56, No. 2, (April, 1972), 173-176.
- _____, Paul Thoren, and Henry Kapell. "Comparison of Sources of Personal Satisfaction and of Work Motivation," Journal of Applied Psychology, Vol 54, No. 1, (February, 1970), 95-104.
- Williams, L. C. S. "Effects of Competition Between Groups in a Training Situation," Occupational Psychology, Vol 30, No. 2, (April, 1956), 85-93.
- Whitsett, David A. and Erik K. Winslow. "An Analysis of Studies Critical of the Motivator-Hygiene Theory," Personnel Psychology, Vol 20, No. 4, (Winter, 1967), 391-417.
- Wigdor, Lawrence A. and Robert J. House. "Herzberg's Dual Factor Theory of Job Satisfaction and Motivation: A Review of the Evidence and a Criticism," Personnel Psychology, Vol 20, No. 4, (Winter, 1967), 369-390.
- Wolf, Martin G. "Need Gratification Theory: A Theoretical Reformulation of Job Satisfaction/Dissatisfaction and Job Motivation," Journal of Applied Psychology, Vol 54, No. 1, (February, 1970), 87-94.
- _____. "The Relationship of Content and Context Factors to Attitudes Toward Company and Job," Personnel Psychology, Vol 20, No. 4, (Winter, 1967), 121-132.