Job Attitude, Motivation, Personality Traits and Perceived Deficiencies in Need Fulfillment as a Function of Job Level

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JOB ATTITUDE, MOTIVATION, PERSONALITY
TRAITS AND PERCEIVED DEFICIENCIES IN
NEED FULFILMENT AS A FUNCTION OF JOB
LEVEL

A Thesis
Presented to
The Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Master of Arts

by
Jeff C. Trullinger
August
1972
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(Date)

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Director of Thesis

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Dean of the Graduate School

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Abstract

A study of 958 managers is reported which investigates, by questionnaire, differences in perceived deficiencies in need fulfillment at all levels of management in both large and small organizations. It further gives attention to the relative importance of 13 personality traits for success in their management position, and examines whether motivational commonality exists among various job conditions at all levels of management. Results indicate: (a) all levels of management tend to be similar in the relative ranks they give to the importance of needs regardless of size of organization, (b) self-actualization and autonomy needs seem to be most important by all management levels and least fulfilled, (c) high degree of motivational commonality regarding conditions of work to be important, and (d) high correlation between the personality traits ranking within all levels of management.
Acknowledgments

I would like to express my sincere appreciation to Dr. A. W. Laird, my Thesis Committee Chairman, to whom I am deeply indebted for his generous guidance and encouragement in the designing and execution of the manuscript of this study. I express gratitude and appreciation to Dr. Harry Robe and Dr. James Craig, my Committee Members, for the editing and constructive criticism of the manuscript. I am appreciative and grateful to Dr. Samuel Winters for his encouragement in the many hours spent evaluating the analysis of the data. I wish to thank Lyman W. Porter for permission to replicate and use portions of his study and questionnaire. My appreciation is extended to the American Management Association who made possible the subjects for this study, and to the members of AMA who so generously contributed their time to serve as subjects.
I. Introduction

This is a descriptive study of managerial motivation and those differences in perceived deficiencies in need fulfillment at all levels of management from the first level of supervision to the presidential level. Permission was received to use the questionnaire developed earlier (Porter 1962, letter, Appendix E). Statements in the questionnaire were based upon Maslow's (1954) theory of motivation as they applied to need satisfaction in management personnel.

Along with previous studies in the area of motivation and need satisfaction it is hoped that this current study will add to the minimal studies of which Mason Haire (1959, p. 187) spoke as he commented on studies of worker need satisfaction: "One area of motivational studies is surprisingly lacking--the study of motivation of management. . .The manager is seen generally as activated by money and power as motives, almost as if there were a difference between supervisors and subordinates. A broad program of inquiry in this area would seem worthwhile; it would also tie in well with the assessment approaches to identification of high level talent."

An examination of the literature tends to support Haire's 1959 statement. On the other hand, comprehensive and extensive studies were found to have been conducted, thereby providing additional information.
Managers may not be primarily motivated by remuneration, complex as this may be as a motive. Also, as Haire suggests, executives may not be motivated mainly by desires for power and authority, exhilarating as they may be. The current study will investigate the possibility that managers are motivated by a desire to satisfy needs as identified by A. H. Maslow in his Hierarchy of Prepotency of Needs (Maslow, 1954, Chapter 5).

It is generally recognized that pay, money or remuneration, is a form of complex motivation. At the worker level, however, there is considerable research data which identify other sources of individual satisfaction. The main conclusion is that workers often do not consider pay as the most important incentive. If this is true for the workers, then it might be speculated that it would also be true for executives. Rather than speculate, however, it was felt that a study might indicate particular motivators which could be isolated and which could be demonstrated as affecting managers.

In introducing his theory, The Hierarchy of Prepotency of Needs, Maslow (1959, p. 80) says: "It derives most directly, however, from clinical experiences." According to Maslow, man's needs arrange themselves in a hierarchy of prepotency; and the arrangement is a basic part of the theory. However, in the current study, the title will usually be shortened to the Hierarchy or the Hierarchy of Needs. Maslow (1954, p. 102) also makes the point that "These needs must be understood not to be exclusive or single determinants of certain kinds of behavior. . . Within the sphere of motivational determinants
any behavior tends to be determined by several or all of the basic needs simultaneously rather than by only one of them. . ." Maslow (1943, p. 370) states, "The integrated wholeness of the organism must be one of the foundation stones of motivation theory. Practically all organismic states are to be understood as motivated and as motivating. . .Human needs arrange themselves in hierarchies of prepotency. That is to say, the appearance of one need usually rests on the prior satisfaction of another, more pre-potent need. Man is a perpetually wanting animal. Also no need or drive can be treated as if it were isolated or discrete; every drive is related to the state of satisfaction or dissatisfaction of other drives." Figure 1 shows Maslow's Hierarchy.

![Diagram of Maslow's Hierarchy]

**Figure 1. The Hierarchy of The Prepotency of Needs**
The highest in the level of prepotency is Self-Actualization Need, sometimes called the Self-Fulfillment Need. Even if all the needs of the individual are satisfied, one may still expect that a new discontent and restlessness will develop unless the individual is doing what he is fitted for. As Maslow (1943, p. 382) states: "...a musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy. What a man can be, he must be." This need is Self-Actualization. These needs are satisfied by a feeling of accomplishment that must be of a high enough level to match what the individual considers himself fitted for. It is not to be confused with the mere desire to do something for which the individual knows he lacks the particular skill or ability. Rather, it is accomplishment according to one's potential. The specific form that these needs take will vary greatly from person to person. People whose needs are satisfied are basically satisfied people.

The purpose of the present descriptive research is twofold: (a) to compare and describe differences in perceived deficiencies in need fulfillment at all levels of management from the first level of supervision to the presidential level; (b) to compare the perceived need fulfillment deficiencies of managers in large organizations versus those of managers in small organizations. An additional facet of this study will be an investigation of the five level areas of management in the perception of the relative importance of 13 personality traits for success in their respective management jobs to determine
whether motivational commonality exists among various levels of management regarding what managers want from their jobs, and the importance they attach to various job conditions.

It was expected the data would show that:

1. The vertical level of position within management is an important effect on the degree of perceived need satisfaction.

2. Higher-level management does place more emphasis on Self-Actualization need than the lower-level managers.

3. Higher-level managers placed more emphasis on autonomy need than lower-level managers.

4. There is a difference in the other types of needs between higher-level managers and lower-level managers.

5. Perceived need satisfaction of managers is greater in smaller organizations than in large.

6. Social need fulfillment is greater in higher-level management positions than in lower-level positions.

7. There should be a motivational commonality existing among various levels of management.

8. There should exist difference between the levels of management in their perception of various personality traits for success in their management jobs.

The current study covers a survey of a sample that is drawn from numerous types and sizes of companies and institutions located throughout the country, representing management from the lowest to the highest level.
II. Review of Literature

Studies of management jobs in industry and business in the past tended to concentrate on the technical aspects of these jobs, such as lists of duties, responsibilities, functions, activities performed, or on the personality traits of individuals filling particular jobs.

As Mason Haire (1959) has pointed out, there is really very little known about the motivation of management. Aside from research reports that indicate that the higher the occupational level, the higher the job satisfaction, Centers (1948), Fortune Magazine (1947), reported a comparative study of different occupational levels from executive-professional to factory workers with regard to the relative significance of income versus security that indicated the executive was more interested in monetary reward and less in security than the factory worker. Mullen (1954) reported that supervisors have a great need for information regarding their status and progress in the jobs, for a role in policy formation, and for a chance to present their ideas for consideration. Houser (1938) reported characteristics and traits necessary and important to business executives.

The present study finds the literature is replete with information at the worker level. Studies of worker motivation have practically run the gamut--textile workers (Coch and
French, 1949); retail firms (Giese and Ruter, 1949); clerical workers (Katz, Maccoby, and Moise, 1950); railroad work teams (Katz and Kahn, 1951); bus conductors (Heron, 1956); aircraft factory workers (Bernberg, 1953) and even airplane commanders (Halpin, 1955).

Some of the role problems of the foreman in complex structures have been pointed out by Ghiselli and Lodahn (1958) and Porter (1959), though there is little research. Porter's study (1961, p. 1) provides some information, although controversial, which could stimulate thinking about executive motivation in the industrial climate.

Benge (1959) reported that supervisors in a cross-country survey thought the following were important: (1) Opportunity to get information from a face-to-face contact, (2) Receiving sufficient advanced information, and (3) Having enough authority to carry out their duties and responsibilities.

Ghiselli and Brown (1956) have offered a conceptual framework for describing an individual's position in an organization and his relationship with others. The position and the relationships of an individual are described in terms of prescribed and perceived roles. Role perceptions refer to the roles the individual sees himself as actually fulfilling or the roles that others see him as actually fulfilling. The generalizations drawn from the Ghiselli and Brown study are based on at least two assumptions: (1) Self-perceptions shown by the supervisors are approximately in accord with the perceptions of higher management of these same supervisors. That is,
higher management sees the good supervisors as having the same qualities that the good supervisors see themselves as having. The same is true with poor supervisors. (2) The differences in self-descriptions reflect the qualities that distinguish the good supervisors from the poor supervisors.

Flieshman (1953) has termed "leadership climate" as supervisory styles that tend to be similar between adjoining hierarchial levels within an organization. Bowers (1963) studied variables by questionnaire submitted to 17 foreman and their 330 male subordinates in a packaging materials plant. The study provided strong evidence to support the "leadership climate" concept which frequently does not appear because certain processes intervene between behavior at one level and behavior at the next level down in the hierarchy. Particularly one such conative mediator is the foreman's self-esteem which aids in translating for him the behavior of his superior into mandates for his own actions. Leadership is not, as many theorists might prefer, a level up in this hierarchy, nor is it simply a reflection of the subject's values and motives. Instead, it is a matter of perceived selective reward, mediated by the cognitive and conative structures of the lower-level individual.

All managers in industrial concerns, with the exception of the highest echelon, must integrate their roles as subordinates and superiors. A study was conducted (Rosen, 1961) with three levels of management in a moderately sized industrial plant which implied that the integration process is heavily weighted
in terms of satisfying the demands of the immediate superior rather than the immediate subordinates. It was suggested that in the absence of adequate role demand communications, differential demands due to position in the management hierarchy may have accounted for relatively lower commonalities in supervisory values between plant managers and those in subordinate positions.

Ghiselli (1956, p. 123) found in one of his studies on maturity of self-perception in relation to managerial success: ". . . contrary to expectations a positive relationship between maturity and success in managerial positions was not found. Rather, those individuals whose self-perceptions were like those of their own age groups were most likely to be successful managers and to achieve higher management positions."

Henry's study (1949) indicated a great drive toward upward mobility among executives, and Katona (1951) postulated an identification with organizational goals of the executives becoming indistinguishable. Rosen and Weaver (1960) found that men from four managerial levels, regardless of status within the hierarchy, are oriented specifically toward conditions of work that will permit them to function effectively in carrying out responsibilities. A study of Kuhn, Slocum, and Chase (1971) indicates satisfaction of lower-order needs, such as security and social, as more closely associated with job performance than satisfaction of higher needs such as job autonomy and self-actualization. Their study suggests that the relationship between "extrinsic" rewards and job
performance is strengthened by incentive pay. Katz and Kahn (1952), Haire (1957), and Brayfield and Crockett (1955) state in their studies of Human Relations, Attitudes, and Productivity that organizations tend to seek out situations which are rewarding and avoid those which are punishing. A book by John Coison (1962, p. 143) made observations relevant to this current study: "A man's decision to accept or reject a position of his position and rank is not easily analyzed, even by himself. It results from a conscious or unconscious balancing of factors—compensation, home, family, prospects for the future, status, prestige, personal interests, and satisfaction with associates."

Patton's (1961, p. 101) comments have a relevance to executive motivation as reviewed in this current descriptive research: "Compensation has been looked upon largely as a collection of financial devices by which executives may be paid, rather than as an instrument of leadership." This comment by Patton recalls similar ones by Mason Haire. One of Haire's (1964, p. 184) comments was "...we have never really tried money as an incentive in the firm."

Ewing and Fenn (1961, p. 113), in their book, included readings by eleven contributing authors who had taken part in the 31st Annual Business Conference at Harvard, June 9, 1961. One author of the book is cited: "There is, of course, another and very different kind of incentive: the internal incentive. This is the kind which is created by the executive himself, which wells up within—not the carrot on the stick incentive,
but something very different. A personal ethic or philosophy, over-weaning ambition for power or material gain, greed or fear. . .as for disincentives, the external ones include such factors as poor pay, a bad boss, unhappiness at home, the mores of the society in which one lives, and statutory prohibitions with threat of punishment; while internal disincentives include such things as lack of education, laziness, being naturally an introvert in an extrovert's job, and neurosis of some sort." This comment of Austin and his term of incentive and disincen-
tive are reminiscent of Herzberg's terms, satisfier and dissatisfier. There doesn't appear to be much difference.

Herzberg, Mausner, and Snyderman (1959) reported on a study of accountants and engineers employed by a company. There were two major hypothesis: (1) that the factors leading to positive job attitudes and those leading to negative atti-
tudes would differ, and (2) that the factors and effects involved in long-range sequences of events would differ from those in short-range sequences. Herzberg, Mausner, and Snyderman's report proposed that two factors were important to the accountants and engineers: (a) motivators and (b) hygienic factors. Thus, motivators have a positive, improving effect on attitudes and job performance. Hygienic factors produce no improvements but prevent declines in attitude and losses of efficiency in job performance. Two other terms were job satisfiers and dissatisfiers and were these: factors that are rarely instrumental in bringing about high job attitudes focus not on the job itself but rather on the characteristics of
the content in which the job is done: working conditions, interpersonal relationships, supervision, company policies, administration of their policies, effects on the worker's personal life, job security, and salary. This is a basic distinction. The satisfiers relate to the actual job. Those factors that do not act as satisfiers describe the job situation... the satisfier factors are likely to increase job satisfaction, whereas the factors that relate to job dissatisfaction infrequently act to increase job satisfaction.

There is a hierarchy or prepotence (Maslow's terms) or similar term of reference in many instances. Argyris (1957) classified needs as "inner needs and outer needs," and further separates them as "conscious and unconscious needs," "social needs," and "psychological needs." Mason Haire (1964) speaks of a "classification of needs," as well as of an ascendence of "physical needs," "social needs," and "egoistic needs."

Probably the best known product of the Harvard behavioral scientists was the report of the Hawthorne studies. These, after they passed from the industrial engineering stage, were under the inspiration of Elton Mayo (1933). Investigation has been continued by Harvard people since the 1930's when Zaleznik (1956) wrote of workers satisfaction and development; his 1963 article discussed the human dilemmas of leadership, followed by co-authorship of a book relating the executive role constellation. Reviewing the research studies of Cornell University (1964), Chris Argyris (1953) at Yale, Douglas McGregor (1966) at Massachusetts Institute of Technology, and Hubert A. Simon
(1961) at Carnegie Institute of Technology, one finds active extensions of concepts like Maslow's but little direct research on executive motivation.

For a conceptual framework, Porter (1961, p. 3) used the Hierarchy and inserted another category (Autonomy) between the Self-Actualization and Esteem needs. The autonomy level was described as: "The items included under this category of autonomy are ones that in Maslow's system would be included in 'esteem' category; here, however, these items have been put into a separate category since it seemed that they are logically distinct from other items that are more commonly associated with the term 'esteem'."

Porter (1963, p. 141) also showed: "...that there was some relationship between vertical level of position within management and degree of perceived importance of needs. Higher-level managers placed relatively more emphasis on self-actualization and autonomy needs than did lower-level managers. For each of the other three types of needs, however, there were not differences between responses from higher-level vs. lower-level managers."

Porter (1962, p. 382) in another study showed: "...that at lower levels of management small company managers were more satisfied than large company managers, but at higher levels of management large company managers were more satisfied than small company managers. Size of company had little relationship to the other attitude variable, perceptions of the importance of various needs."
Porter and Ghiselli (1957, p. 401) investigated the self-perception of top and middle management personnel and found "...members of top management perceive themselves as active, self-reliant, and generally willing to take action on the basis of their own faith in themselves and in their abilities rather than simply on the basis of the weight of the objective evidence. They will take risks when they think they have good, original ideas, and they possess the confidence that their decisions will lead to success... They are not easily discouraged. ...capitalize on opportunities. ...are candid and straightforward. ...picture themselves refined. ...able to get along with others without having to appear to ingratiate themselves."

Another study by Porter (1961) investigated the perception of the relative importance of various personality traits for success in management jobs. The perception of 64 individuals in bottom management was compared with that of 75 individuals in middle management jobs. Two major findings emerged from Porter's (1961, p. 235) study. The first is that there is little difference between bottom-level and middle-level managers in how they rank the 13 common personality traits in terms of perceived importance among these 13 traits. Evidence from this study indicated that general social desirability could not entirely account for the obtained similarity. The second major finding involves the relatively high ranks obtained for the traits showing a concern for adapting to the feelings and behavior of others. Porter's (1961, p. 236)
study revealed: "It appears that many top-level executives may be advocating one type of behavior, but rewarding through a 'law of effect' mechanism quite another type of behavior... the higher the individual is in the organization the greater such behavior as originality and independence is demanded by the job requirements."

Haire (1959, p. 187) has pointed out that: "The emphasis on social and egoistic need satisfaction at work has been primarily on the hourly paid worker..." Argyris (1959, pp. 66, 94), however, referring to these types of need satisfaction, makes an assumption that would apply throughout the whole organization. It is his contention that the higher an individual is in the organization the more he is able to satisfy higher-order needs, especially those pertaining to self-actualization. Maslow (1943, p. 394) states: "...that a healthy man is primarily motivated by his needs to develop and actualize his fullest potentialities and capacities. ...when we ask what man wants of life, we deal with his very essences."
III. Method

Questionnaire. The questionnaire contained four sections. The relevant part of Part I of the questionnaire contained 13 items classified into a Maslow-type need hierarchy system. See Appendix A. Part II of the questionnaire contained 13 personality traits arranged in 78 forced-choice pairs. See Appendix B. Part III of the questionnaire contained 24 items categorized into four major areas: (1) relations with managers and executives; (2) company policies and practices; (3) peer relationships; and (4) opportunity for self-expression. See Appendix C. Part IV of the questionnaire contained a number of personal data questions, enabling the respondents to be classified on several types of variables. See Appendix D.

Sample: The 18 page questionnaires were mailed to 3,000 managers and executives throughout the country. It was sent to a random sample of 1,500 members (approximately 5%) of the American Management Association and to another random sample of 1,500 managers whose names were on mailing lists available to the Association (see letter in Appendix E). Accompanying the questionnaire was a cover letter which stated that the American Management Association was asking each manager to cooperate and that no individual was required to answer the questionnaire, but each was strongly urged to do so. The
letter stated that the questionnaire was to be filled out anonymously and that individual responses would not be made available to the respondent's company. Along with the questionnaires and the cover letter, each respondent received a stamped self-addressed envelope. This method of collection was used not only to facilitate the mechanics of the process, but also to emphasize that this was a research project being carried out by an individual associated with a university and was not a company-sponsored study. Responses were received from 979 managers with the number of useable questionnaires being 958, for approximately a 32% return rate of the total mailed out.

One other relevant characteristic of the sample (not shown in Table 1) is that for type of company. About 66% of the sample came from manufacturing companies, 7% from transportation and public utilities, 7% from finance and insurance, 5% from wholesale and retail trade, and the remaining 15% from among other types of companies. It should be noted and stressed that due to the method of distribution of the questionnaire to executives and managers throughout the country, no particular company was represented more than a few times in the total sample, except by chance.

For this part of the research study, level of position was the major independent variable. However, since the variable is to some extent correlated with the age of the respondent, it was felt necessary to classify respondents by age as well as by level of position. In this way, by looking at differences
among management levels within different age groups, the age variable could be more or less held constant and the level variable independently assessed. The data for classification by age were obtained from one of the personal data questions that asked the respondent to indicate his age as falling within one of eight categories. In the data analysis, the five management levels were cross-tabulated against four age groups: 20 - 34, 35 - 44, 45 - 54, and 55+. A further important advantage of tabulating responses by age as well as by management level was that by having four age groups of five management levels it was possible to replicate management level effects in four independent samples.

Table 1 presents the characteristics of the sample by the five management levels.

<table>
<thead>
<tr>
<th>Management Level</th>
<th>20-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55+</th>
<th>Total N for Level</th>
<th>Median Age</th>
<th>College Degree (%)</th>
</tr>
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<tbody>
<tr>
<td>President</td>
<td>4</td>
<td>15</td>
<td>25</td>
<td>13</td>
<td>57</td>
<td>48.2</td>
<td>76.1</td>
</tr>
<tr>
<td>Vice-President</td>
<td>26</td>
<td>120</td>
<td>106</td>
<td>53</td>
<td>305</td>
<td>45.5</td>
<td>72.1</td>
</tr>
<tr>
<td>Upper-Middle</td>
<td>47</td>
<td>144</td>
<td>103</td>
<td>35</td>
<td>329</td>
<td>43.1</td>
<td>75.6</td>
</tr>
<tr>
<td>Lower-Middle</td>
<td>50</td>
<td>104</td>
<td>49</td>
<td>13</td>
<td>216</td>
<td>40.6</td>
<td>75.0</td>
</tr>
<tr>
<td>Lower</td>
<td>16</td>
<td>23</td>
<td>7</td>
<td>5</td>
<td>51</td>
<td>39.2</td>
<td>76.2</td>
</tr>
</tbody>
</table>

This table shows that the higher levels have somewhat older personnel. With regard to amount of formal education, the five levels are approximately equivalent in terms of the
percentage of respondents holding college degrees. This means that the lowest level in this sample is probably composed of office-type supervisory and staff personnel rather than foremen of blue collar workers because of its relatively high percentage of college educated respondents. Therefore, conclusions involving the lowest level of this sample would not necessarily apply to first-line foremen who do not have as high a level of formal education. However, the fact that all five levels in the sample for this research study have almost identical amounts of formal education makes it possible to assess trends for effects of level independently of those for amount of education.

Procedure: From personal data questions asked in the last part of the questionnaire, it was possible to classify respondents on a number of variables. The two relevant variables for this part of the study were level of position within management and, as a control variable, age of the respondent. For level of position, a five-category system was set up. These categories were, from top to bottom:

President - president and chairman of boards
Vice-President - vice-president (or their equivalents in large companies)
Upper-Middle - approximately the level of division managers, plant managers, and major department managers
Lower-Middle - approximately the level of department and sub-department managers
Lower - first level or second level supervisors
Assignments of respondents to the above categories of level of position was made on the following basis: Anyone having the title of president or chairman of a board of directors was assigned to the president category and this was limited to these two chief executive positions. (Presidents accounted for 90% of the individuals in this category.) Individuals were assigned to the vice-president title on the basis of having a vice-president title (including such titles as assistant vice-president) or its equivalent in very large companies. (Example of equivalent types of positions would be certain staff positions, such as controller. Although the title was not of a vice-president, the respondent would be part of that category if he indicated that he reported to the chief executive of the organization.) Respondents who did not qualify for the president or vice-president categories were assigned to one of the other three levels on the basis of their answers to two questions: (a) How many levels of supervision are there in your organization? (b) How many levels of supervision are there above your position? Those respondents who indicated by their answers to these two questions that they were in the lowest level of supervision were assigned to the Lower (bottom) category. The remaining respondents were placed in the Upper-Middle, Lower-Middle, or Lower category, depending upon the ratio of levels of supervision above them to the total levels of supervision in their organizations. The key feature of this system was that respondents were classified in the same category based on their relative
distance up the management hierarchy regardless of size of company.

For the purpose of the current study with regard to motivation in management, the job competition stimulus data were collected on the basis of previous research literature and discussions with several executives and general managers of various plants, industries and organizations in the Northeastern part of the United States. Four response categories were provided having a priori weights assigned from 4 through 1, respectively. They were (4) Essential, (3) Very Important, (2) Quite Important, and (1) of Little Importance. The meaning intended by the response selection was spelled out in terms of behavioral acts. Data were analyzed in terms of descriptive statistics, i.e., means and standard deviation and in terms of intergroup comparisons, i.e., t test and Spearman rho's.
IV. Results

The degree of perceived need fulfillment deficiency (NFD) in fulfillment for each respondent on each questionnaire item was obtained by subtracting the answer to Part a of an item ("How much of the characteristic is now connected with your position?") from Part b of the item ("How much of the characteristic do you think should be connected with your position?") The assumption was made that the greater the difference (- a subtracted from b -) the greater the degree of dissatisfaction. This measure of perceived need satisfaction is an indirect measure computed from two answers by the respondent for each item. This method has two presumed advantages: (a) The subject was not asked directly concerning his satisfaction. Therefore, it is assumed, any tendency for a single "response set" to determine his expression of satisfaction is probably reduced somewhat. It is also assumed that it is more difficult, although by no means impossible, for the respondent to manipulate his satisfaction measure to conform to what he thinks he "ought" to put down versus what he actually feels to be the real situation. (b) Secondly, this method of measuring need fulfillment is a more conservative measure than would be a single question concerning simple obtained satisfaction. It takes into account the fact that higher level positions should be expected to provide more rewards because it utilized
the differences between obtained and expected satisfaction. In effect, this method asks the respondent "how satisfied are you in terms of what you expected from this particular management position?" It is designed to be a realistic and meaningful measure in comparing different management groups.

Table 2 presents the mean NFD for each of the 13 items in the questionnaire and for each subgroup of respondents.

### Table 2
Mean Need Fulfillment Deficiencies for Each Need Category and Item Five Management Levels by Four Age Groups

<table>
<thead>
<tr>
<th>Need Category</th>
<th>Item</th>
<th>Age Group</th>
<th>Security</th>
<th>Social</th>
<th>Esteem</th>
<th>Vice-President</th>
<th>President</th>
<th>Upper-Middle</th>
<th>Middle</th>
<th>Lower-Middle</th>
<th>Lower</th>
<th>Grand Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>I-1</td>
<td>20-34</td>
<td>--</td>
<td>0.15</td>
<td>0.05</td>
<td>0.32</td>
<td>0.19</td>
<td>0.117</td>
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<td></td>
<td></td>
<td>0.490</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35-44</td>
<td>0.36</td>
<td>0.53</td>
<td>0.46</td>
<td>0.29</td>
<td>1.24</td>
<td>0.576</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45-54</td>
<td>0.35</td>
<td>0.45</td>
<td>0.48</td>
<td>0.70</td>
<td>--</td>
<td>0.495</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>55+</td>
<td>-0.26</td>
<td>0.51</td>
<td>0.59</td>
<td>0.38</td>
<td>--</td>
<td>0.435</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>II-1</td>
<td>20-34</td>
<td>--</td>
<td>0.50</td>
<td>0.41</td>
<td>0.53</td>
<td>0.52</td>
<td>0.490</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>35-44</td>
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<td></td>
<td></td>
<td>45-54</td>
<td>0.27</td>
<td>0.51</td>
<td>0.45</td>
<td>0.41</td>
<td>--</td>
<td>0.410</td>
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<td></td>
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<td>0.46</td>
<td>0.47</td>
<td>0.43</td>
<td>--</td>
<td>0.427</td>
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</tr>
<tr>
<td>Social</td>
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<td>20-34</td>
<td>--</td>
<td>0.22</td>
<td>0.21</td>
<td>0.14</td>
<td>0.08</td>
<td>0.162</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>35-44</td>
<td>0.39</td>
<td>0.10</td>
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<td>0.22</td>
<td>0.36</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>55+</td>
<td></td>
<td></td>
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<tr>
<td>Esteem</td>
<td>III-1</td>
<td>20-34</td>
<td>--</td>
<td>0.45</td>
<td>0.82</td>
<td>1.14</td>
<td>1.47</td>
<td>0.970</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>35-44</td>
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<td>0.66</td>
<td>0.95</td>
<td>0.91</td>
<td>1.43</td>
<td>0.890</td>
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<td>45-54</td>
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<td>0.87</td>
<td>0.83</td>
<td>--</td>
<td>0.680</td>
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<td></td>
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<td>0.72</td>
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<td>0.79</td>
<td>--</td>
<td>0.617</td>
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<tr>
<td>Esteem</td>
<td>III-2</td>
<td>20-34</td>
<td>--</td>
<td>0.41</td>
<td>0.65</td>
<td>0.94</td>
<td>1.34</td>
<td>0.835</td>
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<td></td>
<td>45-54</td>
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<td>0.62</td>
<td>0.75</td>
<td>1.01</td>
<td>--</td>
<td>0.672</td>
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<tr>
<td></td>
<td></td>
<td>55+</td>
<td>0.22</td>
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<td>0.61</td>
<td>0.82</td>
<td>--</td>
<td>0.526</td>
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</tr>
<tr>
<td>Esteem</td>
<td>III-3</td>
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<td>--</td>
<td>0.36</td>
<td>0.49</td>
<td>0.28</td>
<td>0.84</td>
<td>0.492</td>
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<td></td>
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<td>0.45</td>
<td>0.50</td>
<td>0.47</td>
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<td>0.41</td>
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<td>0.352</td>
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<td>0.18</td>
<td>--</td>
<td>0.207</td>
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</tbody>
</table>
Examination of Table 2 shows several trends that will be shown more clearly in succeeding tables. First, Table 2 shows that need fulfillment deficiencies for most items tended to increase in the majority of the four age groups of the management hierarchy. With only a few decreases noted, the second
trend observable in this table is that the largest deficiencies were found in the items in the two highest order need categories: Autonomy and Self-Actualization. (The values for each entry in Table 2 were obtained by subtracting each respondent's answer to Part a of each item from his answer to Part b of each item, and then calculating the mean of these values for each subgroup of respondents.) No entries are given where the N for an age group is less than 20 because of the lack of stability in values based on such small numbers of respondents.

Table 3 brings into sharper focus the first trend apparent in Table 2, the trend for larger need fulfillment deficiencies to be associated with the lower levels of management.
### TABLE 3
Number of Changes in Sizes of Mean Need Fulfillment Deficiencies From Higher to Lower Levels of Management Within Four Age Groups

<table>
<thead>
<tr>
<th>Need Security</th>
<th>Item</th>
<th>Age Groups</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20-34</td>
<td>35-44</td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td></td>
<td>I-1</td>
<td>1 0 2</td>
<td>2 0 2</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td></td>
<td>II-1</td>
<td>1 1 1</td>
<td>2 0 2</td>
</tr>
<tr>
<td></td>
<td>II-2</td>
<td>0 1 2</td>
<td>2 1 1</td>
</tr>
<tr>
<td>Social Total</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td>Esteem</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td></td>
<td>III-1</td>
<td>3 0 0</td>
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</tr>
<tr>
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<td>III-2</td>
<td>3 0 0</td>
<td>4 0 0</td>
</tr>
<tr>
<td></td>
<td>III-3</td>
<td>2 0 1</td>
<td>2 2 0</td>
</tr>
<tr>
<td>Esteem Total</td>
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<td>+0 -</td>
</tr>
<tr>
<td>Autonomy</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td></td>
<td>IV-1</td>
<td>2 1 0</td>
<td>3 1 0</td>
</tr>
<tr>
<td></td>
<td>IV-2</td>
<td>3 0 0</td>
<td>4 0 0</td>
</tr>
<tr>
<td></td>
<td>IV-3</td>
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<td>4 0 0</td>
</tr>
<tr>
<td></td>
<td>IV-4</td>
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<td>3 0 1</td>
</tr>
<tr>
<td>Autonomy Total</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td>Self-</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td>Actualization</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
<tr>
<td></td>
<td>V-1</td>
<td>2 1 0</td>
<td>4 0 0</td>
</tr>
<tr>
<td></td>
<td>V-2</td>
<td>3 0 0</td>
<td>4 0 0</td>
</tr>
<tr>
<td></td>
<td>V-3</td>
<td>3 0 0</td>
<td>2 1 1</td>
</tr>
<tr>
<td>Self-Total</td>
<td></td>
<td>+0 -</td>
<td>+0 -</td>
</tr>
</tbody>
</table>

Approaches significance
* p = .05
** p = .01
* p = .10

Table 3 presents data on the frequency of changes in size of mean NFD from the higher to the lower levels of management. The entries for this table were obtained in the following manner: Changes of mean NFD greater than .05 scale units from one management level to the next in Table 2 were counted as increases (+) or decreases (-) in deficiencies depending on
the direction of change. Increases or decreases of .05 or less scale units were counted as "no changes" (0s). (The decision to use .05 scale unit as a dividing line between "changes" and no changes was self-selected. The use of the .05 allowed for trends to show in the data while at the same time reducing the opportunity for chance fluctuations in sizes of means to obscure the trends.) In Table 3 the frequency of each type of changes, increases, decreases, or no changes—in size of mean deficiencies from higher to lower management levels—were recorded in the columns for each group. For example, for Esteem Item III-1 ("The feeling of self-esteem a person gets from being in my management position") Table 3 shows that in the 20 - 34 age group the mean deficiency increased three times in going from the top to the bottom management levels; in the 35 - 44 age group, there were three increases and one no change; and in the 45 - 54 age group there were two increases and one no change; in the 55+ age group there were one increase and two no changes. Combining the tabulations for all four age groups for this item shows that there were nine instances of increases, four of no changes, and no instances of decreases. Such a result is by a simple sign test, significant at the .01 level of confidence.

The major results of this section of the study are presented in the last set of three columns in Table 3. The three columns for the total sample show the total number of increases, decreases, and no changes for each of the 13 items. These columns also summarize the results for each of the five need
categories by totaling the item results within each category. Table 3 shows that need fulfillment deficiencies progressively increased from the top to the bottom of the management hierarchy for three of the five need categories--Esteem, Autonomy, and Self-Actualization. Eight of the ten specific items in these three categories--Esteem III-1, III-2; Autonomy IV-1, IV-2, IV-3, IV-4; and Self-Actualization V-1, V-2--showed trends of increase in deficiencies at or exceeding the .05 level of confidence, one item showed a trend significant at the .10 level of confidence, and only one of the 10 items, Esteem III-3, failed to produce a trend approaching significance. For the other two categories--Security and Social Needs--there were no significant trends within these items or categories. In the two lowest order need areas, security and social satisfaction, lower-level managers perceive themselves to be about as satisfied as higher-level managers. However, for the three highest-order need areas--Esteem, Autonomy, and Self-Actualization--lower-level managers perceive their positions significantly less satisfactory compared with higher-level managers. It is especially interesting to note that these overall findings were supported with regularity in each of the four age groups, showing that these trends are not merely a function of higher-level managers being older than lower-level managers.

In Table 4 the rank orders are in terms of the size of the mean NFD for each category of items for each subgroup of respondents. The category values on which these rankings are
based were calculated on the basis of the mean of the item
deficiencies within each category. For example, at the vice-
president level and within the 35 - 44 age group, the Self
Actualization category had the largest mean deficiency, followed
by the Autonomy, Security, Esteem, and Social categories.

**TABLE 4**

Rank of Mean Need Fulfillment Deficiencies for Five Need
Categories Within Subgroups of Respondents:
Five Management Levels by Four Age Groups

<table>
<thead>
<tr>
<th>Management Level</th>
<th>Age Group</th>
<th>Security</th>
<th>Social</th>
<th>Esteem</th>
<th>Autonomy</th>
<th>Self-Actualization</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>20-34</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>35-44</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>45-54</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
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<tr>
<td></td>
<td>55+</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Vice-President</td>
<td>20-34</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>35-44</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>45-54</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
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<tr>
<td></td>
<td>55+</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Upper-Middle</td>
<td>20-34</td>
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<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>35-44</td>
<td>4</td>
<td>5</td>
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<td>45-54</td>
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<td></td>
<td>55+</td>
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<td>4</td>
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<td>4.5</td>
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<td>35-44</td>
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<td>45-54</td>
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<td>5</td>
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<td>1</td>
</tr>
<tr>
<td></td>
<td>55+</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>2</td>
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<td>Lower</td>
<td>20-34</td>
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<td>4</td>
<td>3</td>
<td>2</td>
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<td>35-44</td>
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<tr>
<td></td>
<td>45-54</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td>55+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>
The outstanding feature in Table 4 is that the Self-Actualization and Autonomy need areas consistently ranked first and second, respectively, in terms of size of mean deficiencies in nearly all subgroups of respondents. Among the other three need categories, Esteem often ranked third in size of deficiencies, while the Social and Security need areas were about equal in being the areas with the smallest deficiencies.

Table 4 also shows that the different managerial levels produce similar rankings of the five need areas in terms of deficiencies, although there were a few exceptions. One exception was the president level, where deficiencies in Social needs and relatively higher ranks and those for Autonomy lower ranks than was the case with the other management levels. Another exception was the tendency for deficiencies in Esteem needs to receive somewhat higher ranks at lower compared with upper levels of management. The third finding apparent in Table 4 is that deficiencies in Security needs tended to rank higher for older individuals than for younger individuals (except at the chief executive level), whereas deficiencies in Social needs tend to receive somewhat higher ranks in younger compared with older manager groups at most levels.

Table 5 compares all five levels of management with each other and shows that there were very high correlations (rho .97) between the ranks (and mean scores) of the traits as selected by top management as selected by each of the other levels of management.
<table>
<thead>
<tr>
<th>Trait</th>
<th>President Mean Score</th>
<th>President Rank</th>
<th>Vice-President Mean Score</th>
<th>Vice-President Rank</th>
<th>Upper-Middle Mean Score</th>
<th>Upper-Middle Rank</th>
<th>Lower-Middle Mean Score</th>
<th>Lower-Middle Rank</th>
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Rank and mean scores are presented for each of the 13 personality traits. A mean score is based upon the number of times the trait is selected in its 12 comparisons with the other traits; therefore, the mean scores can vary from 0-12, with an average area mean of 6 for the total group of 13 traits.

Another finding emerging from Table 5 was the ranking position of objectives indicating cooperativeness and willingness to adjust to other individuals (conforming, cooperative, flexible, and sociable), in comparison with those indicating independence and individuality (aggressive, dominant, independence, and original). Within each management level the cooperative-type adjectives were on the average considerably higher ranked in perceived importance to success on the job than were the items depicting "rugged individualism." As can be seen in Table 5, the trait of cooperative even out-ranked and out-scored Intelligence; this was true for all levels of management.

Using a crude criterion of 4.00 or higher, for example, Very Important to Essential, to designate highly significant areas, it becomes apparent from the study of Table 6, no area scores achieved this level.
### TABLE 6
Means and Standard Deviations - Importance of Work Conditions for Five Levels of Management

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<th>Item</th>
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<th>Vice-President Mean</th>
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**TABLE 6--Continued**

Means and Standard Deviations - Importance of Work Conditions for Five Levels of Management
No area scores achieved the 4.00 criterion for the President's group. The following items, however, reached or exceeded the criterion:

1. Having the opportunity to talk over problems with my supervisor.
2. Knowing whose orders to follow.
3. Having knowledge of plant plans that affect me and my job.
22. Being consulted before decisions are made concerning me and my department.
23. Having sufficient authority for the job expected of me.

Upper-Middle management considered four conditions of work to be highly important. Items 1, 2, and 23 they shared with the two higher managerial levels. But unlike the President and Vice-President levels, they indicated concern with Item 7 (Knowing where I stand as far as my supervisor is concerned). It should be noted, by referring to Table 7 that both the President and Vice-President levels of management ranked Item 7 as being of considerable relative importance, and that Upper-Middle management level considered Item 23 high among their ordering of conditions of work. Lower-Middle management had many more conditions of work that they considered to be important than any other group. Items 1, 2, 22, and 23 they shared with President and Vice-President management levels. In addition, they shared Item 7 with the Upper-Middle management group. With regard to the following five items, they were unique in the importance attributed to them.

4. Having superiors who will help out, but not take over when I get into a jam.
5. Working under a superior who judges me solely in terms of my merit.

9. Working under a superior who recognizes the problems involved in my work.

12. Working in a plant where the responsibilities of every supervisor are clearly defined.

14. Working in a plant that is operated efficiently.

Lower management considered three conditions of work to be highly significant. Items 1 and 2 they shared with the other four top levels of management. They also shared Item 7 with Upper-Middle and Lower-Middle management groups; they shared with the President, Upper-Middle, and Lower-Middle Item 23 as significant.

Table 6 continues to show: Like the President management level, the Vice-President management level did not have any area scores reaching or exceeding the criterion. Each level of management did not have many area scores reaching or exceeding the criterion. Of the four items considered to be highly significant by the Vice-President level, all were included by the President level as well. Item 23, relating to authority, although ranked fifth in importance by the President level (see Table 7), approaches but did not reach the criterion by the Vice-President level.

Turning to Table 7, from the rank difference correlation one possibly could say that men in the five managerial levels assess the importance of job conditions in much the same manner.
TABLE 7

Ordinal Position of Work Conditions in Terms of Importance
For Five Management Levels and Rank Order Correlations

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<th>Rank</th>
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<td>Vice-President</td>
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<td>Lower-Middle</td>
<td>Lower</td>
</tr>
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<td>2</td>
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<td>15</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>15. Plant with long-range objectives</td>
<td>18</td>
<td>21</td>
<td>21</td>
<td>21.5</td>
<td>21</td>
</tr>
<tr>
<td>16. Peers recognize importance of my job</td>
<td>15</td>
<td>18</td>
<td>17</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>17. Know what others are doing</td>
<td>11.5</td>
<td>9</td>
<td>9</td>
<td>11.5</td>
<td>11</td>
</tr>
<tr>
<td>18. Cooperation among peers</td>
<td>19.5</td>
<td>15</td>
<td>18</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>19. Peers recognize problems</td>
<td>21.5</td>
<td>18.5</td>
<td>19</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>20. Peers help out</td>
<td>19.5</td>
<td>20</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>21. Share in policy making</td>
<td>21.5</td>
<td>22</td>
<td>22</td>
<td>21.5</td>
<td>22</td>
</tr>
<tr>
<td>22. Consulted on decisions affecting my job</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>5.5</td>
<td>4</td>
</tr>
<tr>
<td>23. Sufficient authority</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>24. Can have say at meetings</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
TABLE 7--Continued

Ordinal Position of Work Conditions in Terms of Importance
For Five Management Levels and Rank Order Correlations

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>President versus Vice-President</td>
<td>.824**</td>
</tr>
<tr>
<td>President versus Upper-Middle</td>
<td>.258**</td>
</tr>
<tr>
<td>President versus Lower-Middle</td>
<td>.869**</td>
</tr>
<tr>
<td>President versus Lower</td>
<td>.905**</td>
</tr>
<tr>
<td>Vice-President versus Upper-Middle</td>
<td>.899**</td>
</tr>
<tr>
<td>Vice-President versus Lower-Middle</td>
<td>.905**</td>
</tr>
<tr>
<td>Vice-President versus Lower</td>
<td>.910**</td>
</tr>
<tr>
<td>Upper-Middle versus Lower-Middle</td>
<td>.799**</td>
</tr>
<tr>
<td>Upper-Middle versus Lower</td>
<td>.825**</td>
</tr>
<tr>
<td>Lower-Middle versus Lower</td>
<td>.715**</td>
</tr>
</tbody>
</table>
The answers of the respondents to Part a of each item in need fulfillment ("How much of the characteristic is there now connected with your management position?") were subtracted from the answers to Part b of each item ("How much of the characteristic do you think should be connected with your position?") to provide a measure of perceived deficiencies in need fulfillment. This method assumes that the larger the differences between the answers to Part a and b of each item, the greater the perceived deficiency in need fulfillment.

Table 8 presents the mean differences between Parts a and b for each item for each subgroup of respondents. Examination of the table shows that trends in size of deficiencies from large through medium to small companies differ depending on the level of management.
### TABLE 8

Mean Need Fulfillment Deficiencies
For Each Need Category and Item:
Three Sizes of Companies by Five Management Levels

<table>
<thead>
<tr>
<th>Need Category</th>
<th>Item</th>
<th>Management Level</th>
<th>Size of Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>Security</td>
<td>I-1</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>0.81</td>
</tr>
<tr>
<td>Social</td>
<td>II-1</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>II-2</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>0.50</td>
</tr>
<tr>
<td>Esteem</td>
<td>III-1</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>1.46</td>
</tr>
<tr>
<td></td>
<td>III-2</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>1.41</td>
</tr>
<tr>
<td></td>
<td>III-3</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>0.66</td>
</tr>
<tr>
<td>Autonomy</td>
<td>IV-1</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>1.59</td>
</tr>
<tr>
<td></td>
<td>IV-2</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vice-President</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper-Middle</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower-Middle</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>1.50</td>
</tr>
</tbody>
</table>
Table 8 also shows one other trend: perceived deficiencies increase as one goes from higher to lower levels of management within each of the three categories of different sized companies. (The only consistent exception to this finding exists between the Upper-Middle and Lower-Middle levels in small companies, where the lower-level group indicated smaller perceived deficiencies for almost all items.)

<table>
<thead>
<tr>
<th>Need Category</th>
<th>Item</th>
<th>Management Level</th>
<th>Size of Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>IV-3</td>
<td>President</td>
<td>-</td>
<td>0.32</td>
</tr>
<tr>
<td></td>
<td>Vice-President</td>
<td>0.69</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Upper-Middle</td>
<td>0.97</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>Lower-Middle</td>
<td>1.24</td>
<td>1.41</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>1.72</td>
<td>1.30</td>
</tr>
<tr>
<td>IV-4</td>
<td>President</td>
<td>-</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>Vice-President</td>
<td>0.31</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>Upper-Middle</td>
<td>0.54</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>Lower-Middle</td>
<td>0.74</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>1.12</td>
<td>1.13</td>
</tr>
<tr>
<td>Self-Actualization</td>
<td>V-1</td>
<td>President</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Vice-President</td>
<td>0.80</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>Upper-Middle</td>
<td>0.88</td>
<td>1.15</td>
</tr>
<tr>
<td></td>
<td>Lower-Middle</td>
<td>1.17</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>1.51</td>
<td>1.57</td>
</tr>
<tr>
<td>V-2</td>
<td>President</td>
<td>-</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>Vice-President</td>
<td>0.83</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td>Upper-Middle</td>
<td>1.00</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>Lower-Middle</td>
<td>1.31</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>1.53</td>
<td>1.09</td>
</tr>
<tr>
<td>V-3</td>
<td>President</td>
<td>-</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>Vice-President</td>
<td>0.85</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>Upper-Middle</td>
<td>1.15</td>
<td>1.15</td>
</tr>
<tr>
<td></td>
<td>Lower-Middle</td>
<td>1.26</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>1.53</td>
<td>1.43</td>
</tr>
</tbody>
</table>
appears to be an interaction between management level and size of company that must be considered in drawing conclusions about the effect of company size on perceived deficiencies in need fulfillment. This interaction-type effect is shown in Table 9.

**TABLE 9**

Summary of Comparisons of Sizes of Mean Deficiencies For Different Sized Companies Within Each Management Level

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Frequency By Management Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vice-Pres-</td>
</tr>
<tr>
<td>Large versus small Companies</td>
<td>-</td>
</tr>
<tr>
<td>Large ≥ Small</td>
<td>-</td>
</tr>
<tr>
<td>Large ≤ Small</td>
<td>-</td>
</tr>
<tr>
<td>Large versus medium Companies</td>
<td>-</td>
</tr>
<tr>
<td>Large ≥ Medium</td>
<td>-</td>
</tr>
<tr>
<td>Large ≤ Medium</td>
<td>-</td>
</tr>
<tr>
<td>Medium versus small Companies</td>
<td>9</td>
</tr>
<tr>
<td>Medium ≥ Small</td>
<td>3</td>
</tr>
<tr>
<td>Medium ≤ Small</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 9 summarizes the comparison of size mean deficiencies between each pair of sizes of organizations. This table shows clearly the change in trends between Lower-Middle and Upper-Middle levels of management. In each set of comparisons--large versus small, large versus medium, and medium versus small--mean deficiencies were larger in the larger sized companies below that level, and larger in the smaller sized companies above that level.
The data presented in this part of the research study which show that lower levels of management have consistently greater NFD are supported strongly even with the variable of size of company controlled. To determine the effects of size of company on perceived deficiencies, the vertical level of position must be taken into account; also, to determine the effect of level of position on perceived deficiencies, the size of company has relatively little effect because the same conclusions are reached in both instances regardless of company size.
V. Discussion

The results of this study tend to support the investigation carried out by Porter (1961) using the same set of need satisfaction questions. Porter's study was based on a small sample from three companies which found consistent decreases in need fulfillment deficiencies between bottom management and the level immediately above it. This current descriptive study reveals generally the same finding at the two lowest levels, but also indicates this trend continues up to the very top management levels. Porter's and this current study suggest that the two highest order need areas, Autonomy and Self-Actualization, produce the largest need fulfillment deficiencies.

The two studies show some other similarities and some differences in findings. An example of one of the differences is that Porter's previous investigation indicated a trend of decreasing deficiencies with increasing management level in the Security need area, while the current descriptive study failed to find any meaningful trend in the Security area. Specific similarities between the two studies involved the Social need area which seemed to produce no trend in either study, and the Esteem and Autonomy areas which seemed to produce definite trends in both studies. In summary, where comparisons between the results for the Porter study and present
descriptive study can be made—at the Lower and Lower-Middle levels of management—the studies tend to be in agreement.

The results of this current descriptive study can also be compared with those of a previous investigation by Rosen (1961a). The Rosen study reported on satisfactions with conditions of work given by managers from three levels (plus a group of staff managers). Greater satisfaction with work conditions was found at higher management levels, but the three levels seem to produce similar rankings of conditions in terms of degree of dissatisfaction. Security needs seem about as well satisfied at bottom level and the highest level of management.

Larger Organizations: Previous studies of the effects of size of work unit on job attitudes have consistently found that smaller sized units result in more favorable employee attitudes. This study shows that there was not a clear-cut superiority of small organizations over large organizations in producing maximum job satisfaction within management. At the two lowest levels of management (and at the presidential level), small organization size did seem to be related to small perceived deficiencies in need fulfillment. However, the picture was almost exactly reversed at the upper-middle and vice-presidential levels, where managers in larger organizations indicated greater need satisfaction than those in smaller companies. Taken as a whole, the results for perceived need deficiencies do not show small companies producing more
favorable attitudes across all levels of management.

The results of this current study in relationship to size of company suggest that there may be a point reached in the organizational hierarchy in which there is an advantage to the size of such organizations. The dividing line would seem to be in the middle-level of management. Probably the best conclusion that can be drawn from the data on the effect of organization size on perceived deficiencies in need fulfillment is that if organizational level is taken into account there is no simple relations between size and job satisfaction within management.

In each of the five need areas, except that of social needs, managers from larger sized companies tended to attach about the same importance to a particular need area as did managers from smaller companies. Individuals in the larger companies consistently considered the social needs to be more important than did managers in smaller companies regardless of management level. This finding might indicate either that more socially oriented individuals tend to join larger rather than smaller companies, or that the size of organization has some influence on an individual's perception of the importance of social needs after he has joined a company.

Traits: There was little difference between levels of management in how they ranked the 13 common personality traits in terms of perceived importance for success in their respective jobs. This finding applies to the relative perceived importance among these 13 traits. Another finding was the
relatively high ranks obtained for the traits showing a concern for adapting to the feelings and behavior of other—the cooperative-type items—compared with the relatively low ranks for traits showing a strong emphasis on personal and individual capabilities—the independent-type items. It would seem that the original, dominant, independent individuals in lower managerial levels would have to conform in their behavior to their perceptions of the type of person who gains success in their positions, or else they would probably have to forego a rapid advancement up the organizational ladder as individuals who fit the successful stereotype. It seems in this case the organization would probably suffer the loss of some degree of originality and independence in its future top echelon executives. It appears that many top-level executives may be advocating a specific type of behavior. If it can be assumed that the higher the individual is in the organization the greater such behavior as originality and independence is demanded by the job requirements, the question then becomes one of how organizations insure that individuals who are best suited in these types of traits will be the ones that are likely to advance to top management positions.

Motivation: Regardless of their status, men within the hierarchy are oriented rather specifically toward conditions of work that will permit them to function effectively in carrying out their responsibilities. The managerial hierarchy, like any other social structure, has role differentiation: each position serves a function of the organization. But each
role holder contributes only a segment of the necessary conditions that will lead to organizational effectiveness whether he is a supervisor or a president. The efforts of any one man or managerial level cannot insure organization success.

It seems plausible that commonality existed within the five levels of management studies because the organization made equivalent demands upon them. Consequently, only those variables directly related to job success were given maximum weight. This speculation does not parallel the writings of Katona (1951) who has suggested an identification of the executive with goals and welfare of the organization. If Katona's contentions were borne out, one would have expected dominant concern with factors leading to organizational effectiveness, not job effectiveness.

The major implications of the findings of this descriptive study of nearly 1,000 managers appears that the vertical location of management positions is an important factor in determining the extent to which managers feel that they can satisfy the three higher-order psychological needs of a Maslow-type system of need hierarchies. Also, it appears that there does exist a differential opportunity within management to satisfy Esteem, Autonomy, and Self-Actualization needs. This descriptive study does not necessarily show lower- and middle-level managers to be highly dissatisfied; it does show them to be more dissatisfied than managers at top-level positions. The measure of satisfaction (or dissatisfaction) used in this current study
took into account the fact that higher levels of management should be expected to provide greater rewards. The increasing dissatisfaction at lower levels of management represents the increasing difference between what is expected and what is obtained. Lower-level managers' expectations in most of the specific need satisfaction areas are much more divergent from their perception of reality than the concern for top managers. For this situation to change, it would seem that either lower-level managers would have to change their expectations, or upper-level managers would have to change the chances for satisfaction in lower management, especially in the highest order need areas.

The Self-Actualization, Autonomy, and Esteem needs seem to be the most critical areas of need fulfillment deficiencies at all levels of management, with the possible exception of the presidential level. These three areas have been mentioned, in other studies, as ones that are relatively unsatisfied at the non-management worker level, but the implicit assumption has also been that these are probably well satisfied throughout management. The results of this current descriptive study cast some doubt on this assumption. These three need areas are not nearly so well satisfied within management as the social and security needs areas. It would seem reasonable to conclude that fairly large numbers of managers are not satisfied with their opportunities to obtain the amount of Self-Actualization they think should be available from their jobs.
The same conclusions would hold true for the Esteem and Autonomy need areas, although to a slightly lesser extent.

Instrumental Limitations: (a) Validity - It appears that the validity of the sampling technique was reduced because the sample is biased in two ways; first, the sample included individuals who were not members of the population: a sample of 1,500 managers on a mailing list who were not members of the American Management Association were sent the questionnaire. A second way the sample was biased arises through the selection of the sample that was not representative of the population: a sample of only 5 percent of the members of the American Management Association were sent the questionnaire. Therefore, the sample validity is decreased in this study, for it did not approximate the population parameter and could not be classified as a representative sample. (b) Reliability - It is felt that additional subjects included in the sample of this study would contribute a decreasing impact on the reliability of the data. The information collected by the questionnaire and the conclusions from such data might be correct in every way but this investigator could not be sure. Therefore, the reliability of sampling technique leaves a question of its consistency.

Sample Limitations: (a) The nature of the minimum number of subjects (3,000) required for this study was made after considerations of cost limitations, worth of the study, the time involved, and collecting the sample. It was felt within
these limits the sample would yield certain statistical data characteristics of the sample population. Taking the assumption that the larger the sample the better, it was hoped to have at least 66 percent of the sample measured in the analysis and statistical treatment of the data. A small rate of return, approximately 32 percent, reflected on the validity and reliability of the study. (b) Having selected the subjects randomly, every effort was made to ensure and encourage the subjects to participate in the study. No assurance was obtained that participation would be given. The reduced number of questionnaire returns (958) restricted the outcome or affected the randomization procedure, indicating the sample is biased. The number (2,049) of the sample failing to respond had its effect on the final report of the study. With the limited sample return, the biased sample required a greater effort to guarantee that each subject in the population yield data equally likely to that of the complete sample.

The limitations of the present study are: (a) The results for perceived need deficiencies do not show small companies producing favorable attitudes across all levels of management, (b) the results show that there was not a clear-cut superiority of small organizations over large organizations in producing maximum need fulfillment satisfaction within management. This study ignores the fact that motivation is affected by the possibility of attainment of the desired object or end state, (c) this investigation does not in itself establish the relative
weights of the questionnaire as compared to the many other techniques in the assessment of management personnel, (d) it is not known if the results of the study are generalized to respondents less experienced in management to older executives, or to industrial populations, (e) the design of this study does not allow one to determine precisely the process through which past performance affects leadership and influences the perception of need fulfillment.

Further investigation is needed in the area of the construction and in the development of more refined procedures on test of factors that may be involved and in determining the extent to which psychological needs are fulfilled. Theories of research are needed which map in detail the relationship among the different ways of measuring satisfaction, the various kinds of satisfaction and a number of independent and dependent variables. The causes of the relationships between personnel and job attitudes should be further and adequately explored. Further research, interdisciplinary in nature, is needed to delimit more specifically the degree to which other values vary cross-culturally and the impact they have upon organizational behavior—that is, performance, supervision, policy formation, absenteeism, and turnover. Other research projects and investigations should be initiated. Among these are (a) investigations of job performance that affect working personnel's job attitude, (b) leadership ability, (c) self-perception in one's job, (d) redefinition of motivational concepts, for example, attitudes, drive, desire, wish, need, and
goal, (e) the role of association, habit and conditioning, (f) relation to the theory of inter-personal relations, (g) organizational structure (size, supervision, ratio, and authority structure), (h) organization functions or processes (communications and coordination), (i) small company structure, (j) organizational and manager behavioral variables, (k) organizational environment (resources availability and social aspects).

These as well as certain other less important questions seem necessary to investigate in determining how well a manager does his job and his potential for future growth as well as discovering characteristic traits which may affect managerial psychological need satisfaction. These as well as other important questions must be considered as the psychological need theory attempts to become more positive and definite. Through continued "follow-up" research the complexities of persons' and organizations' behavior might be approached in a more fruitful manner by relating changes in need fulfillment satisfaction to organization or personnel.
VI. Conclusion and Summary

This study investigated perceptions of five levels of management jobs, from the first level of supervision to that of president. Specifically studied were perceptions of need fulfillment deficiencies and need importance; comparison of the perceived need fulfillment deficiencies of managers in large and small organizations; and comparison of differences between the five levels of management in perception of the relative importance of 13 personality traits for success in their respective management jobs. Five need areas were selected for investigation and comparison because of their relevance to the concept of a hierarchy of prepotency of needs and their relevance to management positions. The five need areas were security, social, esteem, autonomy, and self-actualization.

One of the most useful systems for any psychologist studying motivation in the industrial situation is the grouping of motives and needs according to a hierarchy of prepotence. As Maslow (1943, 1954) states in his theory, there are basic or primary needs. Once these are satisfied, the individual moves to the higher-order needs. Finally, if the individual has achieved some degree of satisfaction of first-order and middle-order needs, he may then spend effort trying to satisfy the highest-order need, that of self-actualization—the "desire for self-fulfillment, namely...the tendency to become
actualized in what he is potentially. . .the desire to become more and more what one is, to become everything that one is capable of becoming. . ." (Maslow, 1954, p. 91). Undertaken also, in this current study was the question of whether or not motivational commonality exists among the five levels of management regarding what managers want from their jobs and the importance they attach to various job conditions. The perceptions regarding these needs were obtained by the responses to a questionnaire completed by 958 management individuals throughout the country in various industrial and institutional organizations.

The following are the major conclusions:

1. The vertical location of management position appears to be important in determining the extent to which psychological needs are fulfilled.

2. Self-actualization and autonomy need areas seem to consistently rank first and second, respectively, in terms of size of mean deficiencies in higher-level management. Among the other three need categories, esteem seems to rank third in size of deficiencies, while social and security need areas appear to be equal in areas with the smallest deficiencies.

3. The greatest differences in frequency of need fulfillment deficiencies between president, vice-president, and lower-level management positions seem to occur in the esteem, security, and autonomy need areas. These needs seem to be more often satisfied in upper-middle and lower management. The highest-order need of self-actualization appears to be the most critical need area of those studied, in terms of both perceived deficiencies in need fulfillment and perceived importance to the middle management levels.
4. Self-actualization and security appear to be seen as more important areas of need satisfaction than the areas of social, esteem, and autonomy by individuals in lower and lower-middle management positions.

5. The size of the organization in combination with organizational level seem to interact with definite effect on perceived deficiencies in need fulfillment.

6. In the social need area, individuals in larger companies seem to consistently consider their needs to be more important than did managers in smaller companies, regardless of management level.

7. A high degree of commonality appear to exist within the management levels studied. In a sense, it can be assumed that "management" is a cohesive class sharing common motivations if its responsibilities are defined in terms of job rather than organizational effectiveness. Distinction, with regard to status and occupational role, may be important only if it relates to responsibilities tied to organization rather than positions.

8. There seem to be much agreement on personality traits indicating cooperativeness relative to traits indicating independence within all management levels. A moderate trend for cooperative type traits was perceived as relatively more important for lower management jobs than for lower-middle and upper-middle management positions. The trait of cooperative out-ranked the trait intelligence; this was true for all levels of management.

It seems the safest and firmest conclusion that can be drawn from the data on the effect of the individual and the organizational size upon perceived deficiencies in need fulfillment is that there is not a simple relationship within management. Large numbers of managers even at upper levels within organizations are not satisfied with their opportunities to obtain the amount of self-actualization they think should
be available from their jobs. The same conclusion would apply for esteem and autonomy areas although to a slightly lesser extent.
References


Herzberg, F. Job attitudes in the Soviet Union. *Personnel Psychology*, 1965, 18, 245-251. (a)

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Porter, L. W. A study of perceived need satisfaction in bottom and middle management jobs. Journal of Applied Psychology, 1961, 45, 1-10. (a)


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Appendix A

Part I Questionnaire

Thirteen (13) items classifiable into a Maslow-type need hierarchy system.

"On the following pages will be listed several characteristics or qualities connected with your management position. For each such characteristic, you will be asked to give three ratings:

(a) How much of the characteristic is there now connected with your management position?

(b) How much of the characteristic do you think should be connected with your management position?

(c) How important is this position characteristic to you?"

For each of these 13 items the respondents were instructed to answer the above three questions by circling a number on a rating scale extending from 1 to 7, where "low numbers represent low or minimum amounts, and high numbers represent high or maximum amounts." A typical item appeared as follows on the questionnaire:

"The opportunity for independent thought and action in my management position:

(a) How much is there now?
   (min) 1 2 3 4 5 6 7 (max)

(b) How much should there be?
   (min) 1 2 3 4 5 6 7 (max)
(c) How important is this to me?
(min) 1 2 3 4 5 6 7 (max)"

Only the answers to Parts a and b of each item were used to assess the degree of deficiency.

Listed below are the categories of needs studied in this investigation, along with the specific items used to elicit information on each category. The items were randomly presented in the questionnaire, but are here listed systematically according to their respective need categories. The categories are arranged in approximate hierarchial order (least prepotent). The categories and their hierarchial arrangement are in general agreement with the classification system used by Maslow (1954): the categories and their specific items follow -

I. Security Needs

1. The feeling of security in my management position.

II. Social Needs

1. The opportunity, in my management position, to give help to other people.

2. The opportunity to develop close friendships in my management position.

III. Esteem Needs

1. The feeling of self-esteem a person gets from being in my management position.

2. The prestige of my management position inside the company (that is, the regard received from others in the company).

3. The prestige of my management position outside the company (that is, the regard received from others not in the company).
IV. Autonomy Needs

1. The authority connected with my management position.

2. The opportunity for independent thought and action in my management position.

3. The opportunity, in my management position, for participation in the setting of goals.

4. The opportunity, in my management position, for participation in the determination of methods and procedures.

V. Self-Actualization Needs

1. The opportunity for personal growth and development in my management position.

2. The feeling of fulfillment a person gets from being in my management position (that is, the feeling of being able to use one's own, unique capabilities, realizing one's potentialities).

3. The feeling of worthwhile accomplishment in my management position.
Appendix B

Part II of the Questionnaire - 13 Personality Traits

The relevant part of Part Two of the questionnaire contained 13 personality traits arranged in 78 forced-choice pairs. Each trait was paired once with every other trait so that 78 pairs constituted a complete paired comparison matrix. The respondents were instructed as follows: "The purpose of this part of the questionnaire is to obtain a picture of the traits you believe would best qualify a person for your present management position. There are not right or wrong answers. In each pair of words, circle the one you think is relatively more important for success in your present management position. Although specific words will be repeated, no pair of words will be duplicated. Make each choice a separate and independent judgment, and do not omit any pair."

The traits appeared as follows on the questionnaire:

independent - self-controlled
conforming - persevering
independent - sociable
conforming - poised
flexible - independent
independent - persevering
independent - poised
conforming - self-controlled
conforming - original
conforming - intelligent
flexible - original
independent - intelligent
conforming - independent
cooperative - dominant
conforming - sociable
flexible - persevering
conforming - flexible
intelligent - original
cooperative - energetic
flexible - intelligent
independent - original
conforming - energetic
flexible - poised
intelligent - persevering
cooperative - flexible
conforming - dominant
flexible - self-controlled
intelligent - poised
cooperative - independent
conforming - cooperative
flexible - sociable
intelligent - self-controlled
cooperative - intelligent
aggressive - sociable
energetic - sociable
intelligent - sociable
coop erative - original
aggressive - conforming
energetic - poised
original - sociable
coon operativ e - persevering
aggressive - cooperative
energetic - self-controlled
original - self-controlled
coop erative - poised
aggressive - dominant
energetic - persevering
original - poised
coooperativ e - self-controlled
aggressive - energetic
energetic - original
original - persevering
coop erative - sociable
aggressive - flexible
energetic - intelligent
persevering - poised
dominant - energetic
aggressive - independent
energetic - independent
persevering - sociable
dominant - flexible
aggressive - intelligent
energetic - flexible
persevering - self-controlled
dominant - independent
aggressive - original
dominant - sociable
poised - self-controlled
dominant - intelligent
aggressive - persevering
dominant - self-controlled
poised - sociable
dominant - original
aggressive - poised
self-controlled - sociable
dominant - poised
dominant - persevering
aggressive - self-controlled
Appendix C

Part III of the Questionnaire

The relevant part, Part Three of the questionnaire, contained 24 items roughly categorized into four major areas: (1) relations with managers and executives; (2) company policies and practices; (3) peer relationships; and (4) opportunity for self-expression. The following instructions were given: "The conditions of work listed in this section have been given by managers as things they consider to be important in their work. Obviously, you may not think they are of equal importance. Would you respond to how important you think each condition is by using the following alternatives:

Five response categories are provided having an assigned weight from 4 through 1, respectively. They are (4) Essential - defined as: a condition of work you feel must be present in your job. If it were not present, you would try to find another job as soon as possible; (3) Very Important - defined as: a condition of work you feel is highly desirable. If your job did not have this characteristic you would seriously consider looking for another job; (2) Quite Important - defined as: a condition of work that you consider to be desirable. If a job did not have this characteristic you might consider looking for another job but probably would not
actually do so; (1) Of Little Importance - defined as: a condition of work you would rather have than not have. If your job did not have this characteristic, you might complain but you would never consider looking for another job."

An evaluation by rating each of the 24 items was made by using the scale below:

4 - Essential
3 - Very Important
2 - Quite Important
1 - Of Little Importance

The twenty-four conditions of work used as stimuli items were:

Area I Relations with Managers

1. Having the opportunity to talk over problems with my manager.
2. Knowing whose orders to follow.
3. Working under a manager who explains any changes he makes.
4. Having managers who will help me out, but not take over when I get into a jam.
5. Working under managers who judge me solely in terms of merit.
6. Working under managers who delegate as much of their authority as possible.
7. Knowing where I stand as far as my manager is concerned.
8. Working under men who attempt to develop their subordinates.
9. Working under managers who recognize the problems involved in my work.
10. Working under a man who will take over and do the job for me when I get in a jam.
Area II  Company Policies and Practices

11. Having knowledge of managerial plans that affect me.
12. Working in an organization where the responsibilities of every manager are clearly defined.
13. Working for a company that stresses experience more than education for promotion.
14. Working for a company that is efficiently operated.
15. Working for a company that has clear-cut, long-range objectives.

Area III  Relations with Peers

16. Having the other managers at my level recognize the importance of my work.
17. Having knowledge of what others are doing in as much as it may affect me and my job.
18. Having mutual cooperation among the managers at my level.
19. Working with fellow managers who recognize the problems involved in my work.
20. Working with fellow managers who will help me out when I get into a jam.

Area IV  Opportunity for Self-Expression

21. Having the opportunity to share in the company policy-making decisions.
22. Being consulted before decisions are made which concern me and my department.
23. Having sufficient authority for the job expected of me.
24. Having management meetings where everyone can have a say.
Appendix D

The last part of the questionnaire contained a number of personal data questions, enabling the respondents to be classified on several types of independent variables. Used from this part of the questionnaire were: size of company for which the respondent worked and the level of his position within his organization.

1. Name

2. Age (check one): Indicate your age in one of the age categories
   20 - 34 __; 35 - 44 __; 45 - 54 __; 55+ __

3. Education (check one by circling the highest level attainment):
   a. grade school 1 2 3 4 5 6 7 8 Degree yes__ no__
   b. high school 1 2 3 4 Degree yes__ no__
   c. college 1 2 3 4 Degree yes__ no__

4. Position Level (check one)
   __ a. chairman of the board
   __ b. President
   __ c. Vice-President - or equivalent in company
   __ d. Division manager
   __ e. Plant manager
   __ f. Major department manager
   __ g. Sub-department manager
   __ h. First-level supervisor (foreman)
   __ i. Second-level supervisor (foreman)

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5. Approximate level of department manager (check one):
   _a. upper-middle
   _b. lower-middle
   _c. lower

6. List your category of position______________________________

7. Approximately how many employees (management and non-management) are there in your company? Check one:

<table>
<thead>
<tr>
<th>Size</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 49</td>
<td></td>
</tr>
<tr>
<td>50 - 199</td>
<td></td>
</tr>
<tr>
<td>200 - 499</td>
<td></td>
</tr>
<tr>
<td>500 - 999</td>
<td></td>
</tr>
<tr>
<td>1,000 - 4,999</td>
<td></td>
</tr>
<tr>
<td>5,000 - 9,999</td>
<td></td>
</tr>
<tr>
<td>10,000 - 49,999</td>
<td></td>
</tr>
<tr>
<td>50,000 - 99,999</td>
<td></td>
</tr>
<tr>
<td>100,000 - 299,999</td>
<td></td>
</tr>
<tr>
<td>300,000 and over</td>
<td></td>
</tr>
</tbody>
</table>

8. To whom are you accountable?____________________________________

9. Type of Company (check one):
   _a. Manufacturing
   _b. Transportation
   _c. Insurance
   _d. Public Utilities
   _e. Finance
   _f. Wholesale
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_g._ Retail Trade

_h._ Other categories not mentioned above

10. How many levels of supervision are there in your organization?

11. How many levels of supervision are there above your position?

12. How many levels of supervision are there below your position?

13. Size of company (check one):

_a._ Large

_b._ Medium

_c._ Small

Arbitrarily, the sample was divided into three groups, in the size dimension. The ranges and median sizes, for this study, for three categories were:

<table>
<thead>
<tr>
<th>Category</th>
<th>Range of Size</th>
<th>Median Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Companies</td>
<td>5,000 and over</td>
<td>20,600</td>
</tr>
<tr>
<td>Medium Companies</td>
<td>500 - 4,999</td>
<td>2,200</td>
</tr>
<tr>
<td>Small Companies</td>
<td>1 - 499</td>
<td>224</td>
</tr>
</tbody>
</table>

From the median sizes for the three groups it can be seen that adjacent groups differ by a factor of about 10, with the two extreme groups—large and small—differing by a factor of 100.
Appendix E
Mr. Jeffrey Trullinger  
Department of Psychology  
Western Kentucky University  
Bowling Green, Kentucky

Dear Mr. Trullinger:

Thank you for your letter of August 23. Since my questionnaire was developed for research purposes, it is available for anyone to use in their own research.

Sincerely yours,

Lyman W. Porter  
Professor of Administration and Psychology

LWP/bar
January 27, 1972

Mr. Jeffrey Trullinger  
P. O. Box 126  
Boyertown, Pennsylvania  19512

Dear Mr. Trullinger:

Mr. Hayes has handed to me your interesting letter of October 29th, and first off, I must apologize for being this late in getting back to you with a reply. Frankly, we do not often make our membership lists available for research purposes and there has been, accordingly, a good deal of internal discussion about your proposed project.

I'm happy to tell you, however, that we would like to cooperate. AMA's Vice President of Research is Dr. John W. Enell who now has your letter and your intended survey. Would you like to work out with him the details of your project?

Good luck to you.

Yours sincerely,

John P. R. Budlong  
Vice President  
Communication Services

JPRB:xn1  
cc: James L. Hayes  
John W. Enell