EMPLOYEE SATISFACTION AND PERFORMANCE IN MANAGERIAL AND NON-MANAGERIAL LEVELS OF A STATE INSTITUTION FOR THE MENTALLY RETARDED

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DISSERTATION

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By

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CHAPTER I

LITERATURE, METHODOLOGY, AND SCOPE

Introduction

For over three decades, students of human relations in business have been researching elements of the complex relationship existing between worker productivity and satisfaction. Substantial effort, monetary and otherwise, has been exerted by academic and business organizations in an attempt to increase overall employee satisfaction, with the hope that, in the end, productivity would increase. It has, in fact, become commonplace in practice to assume that employee satisfaction directly leads to higher job performance. Popular acceptance has been given to statements like, "One highly satisfied with his job in turn performs well on it," and to their converse: "One dissatisfied tends to turn out only mediocre performance" (13, p. 20). These statements reflect what will be referred to as the "traditional assumption" about the performance-satisfaction relationship. From the initial Kornhauser-Sharp study (12) to the present day, most authorities have seemed to accept as fact the assumption that man can be motivated

to perform his job effectively and productively by merely creating a state of satisfaction within him. It seems as though they have been saying, "A satisfied worker performs at a high level because he is satisfied."

A body of literature examining the relationships between employee satisfaction and job performance has been produced. However, researchers are today virtually baffled in their efforts to fully account for the nature of past-reported correlations between the variables. While employee satisfaction has traditionally been assumed to lead directly to job performance, researchers have, in fact, reported only a very low or non-existent correlation between satisfaction and performance. Generally, the "traditional assumption" appears, at best, to be an oversimplification of the actual relationship, yet the literature on the subject has never explained the underlying dynamics and complexities of that relationship. Is the "traditional assumption" actually valid as a general rule, or does employee satisfaction tend to stem at least in part from, rather than strictly lead to job performance? Is job performance a basic factor underlying employee satisfaction? The present study is an effort to seek information from a type of organization rarely studied along such lines--a state institution for the mentally

retarded--which will shed significant light on the dynamics of this question. It is unique in that it focuses closely on the specific job duties of both managerial and non-managerial employees as a basis for understanding the relationship between employee satisfaction and performance.

Survey of the Literature

In 1955, Brayfield and Crockett released a survey of the literature on the relationship between employee satisfaction and job performance (3). In their survey they note the recency of the more salient studies and emphasize the fact that much of the literature is "peripheral" in the sense that it is incidental to other research objectives (3, p. 396).

In summarizing their literature survey, Brayfield and Crockett state:

> At this point we can summarize the findings for this research design [individual analysis]. The prototype study used a single overall index of employee attitudes variously titled job satisfaction or morale. Respondents were identified. A distribution of individual scores was related to some index of individual performance on the job. Customarily, a single occupational group was studied. When fourteen homogeneous occupational groups and one large sample of assorted hourly factory workers were studied, statistically significant low positive relationships between job satisfaction and job performance were found in two of the fifteen comparisons. These results, pointing to an absence of relationships, are in line with the findings of the pioneering Kornhauser and Sharp investigation (3, p. 402).
>
> . . . . . .

> The results from the study design which we have described in this section [group analysis] are substantially in agreement with the previous findings of minimal or no relationship between employee attitudes and performance. They do supply the hint that morale, as a group phenomenon, may have a positive relationship to performance on the job (3, p. 404).

Herzberg, Mausner, Peterson, and Capwell released a second survey of the literature on this subject two years later (6). They cite twenty-six studies of the relationship between employee satisfaction and job performance. (Appendix A, on page 100, presents these studies in greater detail.) Fourteen (54%) of these studies indicate that respondents with positive job attitudes (those more highly satisfied) show higher productivity than those with negative attitudes. Nine (35%) indicate that the two variables are not related. Three (11%) indicate that respondents with positive job attitudes are poorer producers than those with negative attitudes (6, p. 99). Furthermore, the manner in which satisfaction and productivity are related is not correlated with occupation or with study technique employed (6, p. 99). The apparent contradiction in these findings is explained as being the product of methodological differences and differences between the workers and work situations studied (6, p. 103).

Vroom has conducted a more recent survey of the literature (1964) though it has received generally less attention

than those aforementioned (18). (Appendix A, page 103, presents Vroom's survey in detail.) Twenty of twenty-three correlations between the two basic variables are positive (a chance occurrence of less than one-in-a-hundred), but the median correlation is quite low, +.14 (13, p. 22). It has been advanced that this low, positive correlation is not as yet adequately accounted for.

The Survey Research Center, under the direction of Likert and Katz, studied employee satisfaction and worker productivity in several organizational settings. The findings of the first study were made available in 1947. Viewing only clerical workers, this study yielded a virtual absence of correlation between the variables (18, p. 181). This absence of correlation prevailed despite the fact that respondents who were performing highly routine and repetitive work were generally less satisfied with their jobs than those performing work of a more technical nature (17, p. 96). The lack of relationship demonstrated between the two basic variables led the researchers, some of whom expected to find results confirming the "traditional assumption," to a different type of work setting for the second study. However, this study, as well--focusing on three hundred railroad laborers and seventy-two foremen--yielded virtually no

correlation between overall satisfaction and performance (18, p. 181). Still expecting ultimate substantiation of the "traditional assumption," researchers made a third study of twenty thousand agricultural equipment production employees. Tangible, physical production was recorded and used as a quantitative index of worker performance. Four types of employee satisfaction were incorporated into the study: (1) intrinsic job satisfaction, (2) satisfaction with the company, (3) satisfaction with supervision, and (4) satisfaction with rewards and mobility opportunities. No significant correlation between the performance and any of the satisfaction variables was found (17, p. 96).

Upon termination of the third study, the researchers remarked:

> We recognize the necessity of developing alternative theoretical schemes to show the determinants of each dimension of satisfaction and of productivity in work situations (17, p. 104).

In 1952, Weschler and Kahane conducted an illustrative case study of employee satisfaction and job productivity. The subjects in this study were professional, semi-professional, and clerical employees in a naval research laboratory. In "Division A" (the "authoritarian" unit) 39.3 per cent of the workers reported satisfaction while in "Division B" (the "permissive" unit) the corresponding figure was 63.2 per cent.

Yet, division productivity was rated "high" for the respective units by 57.1 per cent of those in "Division A" and 57.8 per cent of those in "Division B." The absence of a close satisfaction-productivity correlation is apparent. The Michigan researchers concluded:

> One of the most important hypotheses which has been largely substantiated . . . holds that high productivity is not necessarily a function of job satisfaction or morale (19, p. 7).

The range of reported correlations in Vroom's survey is +.86 to -.31 (18, p. 183). Both "individual" and "group" studies show virtually identical correlations. Katzell has suggested that the paucity of satisfactory productivity data may affect the magnitude of the correlation. But Vroom found that for "objective" measures of productivity the median correlation is .22 (N=7) and for "subjective" ratings of performance it is .12 (N=16)--a difference not statistically significant (18, p. 183).

Katzell, Barrett and Parker, in a 1961 study of seventy-two wholesale warehousing divisions in drugs and pharmaceuticals (11), have shown some types of objective performance criteria more closely related to satisfaction than others. The mean correlations for the forty-seven criteria of employee satisfaction and each of three criteria of production were: .28 for profitability, .21 for quantity, and -.02 for quality.

The bases for these differences were reported as not being clear (18, p. 183).

Likert's hypothesis that the correlation between employee satisfaction and job performance depends on the skill requirements of the job was tested on the following highly skilled jobs: insurance agent, supervisor, IBM operator, and control tower operator (air force). The median correlation between the variables for the highly skilled workers was .17 (N=8) while that for a group of lower skilled workers was .14 (N=15)--a difference not deemed statistically significant (18, p. 183).

A summation of the aforementioned three major literature surveys indicates that employee satisfaction and job performance are positively correlated (though frequently the correlation is quite low) in thirty-six studies and either negatively correlated or not correlated in twenty-eight. Despite an obvious need for innovative, in-depth research to account for these reported differences, relatively few salient studies have been conducted since the middle fifties (13, p. 21). Porter (16) and Lawler and Porter (13) have conducted two of the more significant recent studies incorporating innovative approaches.

The initial study by Porter views the employee satisfaction dimension through Maslow need-hierarchy theory. (Appendix B, page 106, presents a brief outline of Maslow's theory.) Essentially, employee need-satisfaction is defined as being part of the overall compensation package one receives from his job. In the study, questionnaires were sent to sixty-four foremen and seventy-five middle managers. Findings indicated that, (1) Vertical positioning in the organizational hierarchy affects need satisfaction. (2) Differences in need-fulfillment between lower and middle managers are greatest basically in the higher-order need categories, such as autonomy and esteem, with greater satisfaction at the middle-managerial level. (3) Higher-order needs are generally the least satisfied. (4) Self-realization is the most critical need in terms of both deficiency in satisfaction and importance. It is not significantly more satisfied at higher organizational levels (16, pp. 9-10).

Lawler and Porter, in the second significant study, used data from 148 middle and lower level managers in five organizations--one, a manufacturing firm; the others, social service and welfare agencies (13, pp. 24-25). Superior and peer ratings were obtained on work effort and performance. A questionnaire measuring employee satisfaction in the five

Maslow need-categories (security, social, esteem, autonomy, and self-realization) was used. (Appendix B, page 106, presents a brief description of Maslow's theory.)

Data collected offer some support for their hypotheses: (1) Need-satisfaction is related to job performance. (Superior ratings r=.32, significant at the .01 level) (Peer ratings r=.30, significant at the .01 level). (2) The relationship is stronger for managers than for non-managers. (This study focuses on managerial levels. Earlier studies conducted by others, on non-managerial levels, reflect lower correlations. Porter and Lawler believe the difference too great to be accounted for by methodology alone. Rather, they believe the difference to stem from whether the position is managerial or non-managerial.) (3) Satisfaction is more closely correlated to performance than to effort. (Superior ratings: performance and satisfaction r=.32; effort and satisfaction r=.23) (Peer ratings: performance and satisfaction r=.30; effort and satisfaction r=.20) (13, p. 26).

Lawler and Porter introduce a theoretical model which advances the idea that recognized job performance leads to extrinsic and intrinsic reward, which when compared with perceived equitable reward, yields satisfaction. This model, which is essentially the opposite of the "traditional

assumption," promises to shed light on the dynamics of the performance-satisfaction relationship.

The Present Study

The present study is a test of the tenets of the Lawler Porter Model in two separable hierarchial levels of a large state institution for the mentally retarded. The analytical framework is similar to that used by Lawler and Porter, but the present study is unique in that structured interviews are conducted with the subjects of two samples drawn from both managerial and non-managerial hierarchial levels of a single organization.

The study is significant for several basic reasons:

1. It contributes to a better theoretical understanding of the general psychology of employee job satisfaction by applying the need-hierarchy theory of Maslow to two distinctly different employee populations of a single organization.

2. It contributes to the theoretical development of the concept of the "total compensation package," by viewing employee job satisfaction as part of work compensation.

3. It is theoretical groundwork for the accomplishment of the objectives of scholars who are creating management-improvement tools which call for concern on the part of

organizations for simultaneous maximization of employee satisfaction and job performance levels.

4. It is an attempt to contribute to the resolution of the specific theoretical question regarding the employee satisfaction-job performance relationship, and the problems which stem from its unresolved state. In this context, Brayfield and Crockett have remarked:

> We are going to advance the proposition that the motivational structure of industrial workers is not so simple as implied in this formula. . . . [The "traditional assumption" that satisfaction leads to performance].
>
> It makes sense to us to assume that individuals are motivated to achieve certain environmental goals and that the achievement of these goals results in satisfaction. [Essentially, the Lawler Porter Model] (3, pp. 415-416).

That this question has not been resolved is further evidenced by Sutermeister in a recent statement:

> . . . The relation between need satisfaction, morale, employee job performance, and productivity is much too complex for us to assume that satisfaction of individuals' needs will automatically lead to better job performance and increased productivity (17, pp. 8-9).

The Lawler Porter Model is an innovative approach to this question in that job performance is placed in the forefront as a factor leading to employee satisfaction. The hypotheses of the present study are devised to test this

model against the "traditional assumption" in two differentiable hierarchies--one, managerial and one, non-managerial--of a single organization.

Hypotheses

1. In the two hierarchial settings studied, there is a statistically significant, positive correlation between employee satisfaction (measured through a structured interview) and job performance (measured by superiors and peers).

2. In the organization studied, the correlation between employee satisfaction and job performance is substantially greater than that between employee satisfaction and job effort (also measured by superiors and peers).

3. There is a differential opportunity within the organization studied for persons to satisfy their needs--with greater, and higher-order, potential job satisfaction attainable through performance in the managerial echelon: (a) The correlation between employee satisfaction and job performance is greater for the managerial sample than for the non-managerial sample. (b) Employee satisfaction in higher-order need categories is more closely correlated with job performance than is employee satisfaction in the lower-order need categories.

Assumptions Underlying Hypotheses

The Lawler Porter Model states that job performance works through a third variable--the intrinsic and extrinsic reward mechanism--to create employee job satisfaction. The implicit assumption is that employee satisfaction correlates more highly with (and stems more readily from) employee performance than it does with employee effort. Alternatively expressed, actual job performance is more rewarding and satisfying than the mere exertion of effort. It is further implicit that the exertion of job effort is not manifested in a one-to-one manner in job performance because of the effects of a multiplicity of situational constraints and of employee ability. Subscribing to the "traditional assumption," one would expect employee satisfaction to be first reflected through the exertion of a commensurate amount of job effort. (The employee exerts effort because he is grateful for his state of satisfaction.) Subsequently, only an imperfect manifestation of this job effort is expected in actual job performance. (Appendix G, page 167, presents the basic terminology utilized in the present study.)

Procedures for Treating Data

Job satisfaction questionnaires were distributed to, and structured interviews were held with, a randomly-determined

sample of fifty-four of the approximately seventy administrative, professional, quasi-professional, and supervisory employees of the state institution. Secondly, structured interviews, using the questionnaire as an interview guide, were held with 104 of the approximately 580 child-care and clerical workers of the organization. (Appendix D, page 113, presents the interview questionnaire form used.) Subsequently, the subjects were rated by superiors and where possible, peers, on a one-to-seven scale, in terms of the "quality of performance" and "amount of job effort" they demonstrated in their positions. (Appendix D, page 115, presents the performance and effort rating forms used.) Superior and peer ratings of the "quality of performance" were averaged together arithmetically for each respondent as were those for "amount of job effort." Responses to the job satisfaction questionnaire form were then tabulated, and the following data were ascertained for each individual: (1) overall employee job satisfaction (the arithmetic average of the scores for each of the items on the questionnaire), (2) employee job satisfaction in the security and social (lower-order) need categories, (3) employee job satisfaction in the esteem, autonomy, and self-realization (higher-order) need categories, and (4) employee satisfaction in strictly the monetary compensation

category. These data were subsequently grouped as "managerial" and "non-managerial." Simple correlation coefficients were then calculated by computer on the data within the framework of the hypotheses. The average values of the satisfaction variables were also calculated for analytical purposes. Subsequently, the Purdue Position Analysis Questionnaire and the "Data, People, Things Hierarchies" utilized in the Dictionary of Occupational Titles (5, pp. 649-650) were used as a means of obtaining specific information on the representative work positions and of differentiating between the managerial and non-managerial positions.

Scope and Limitations of the Study

The technique employed in the present study for the measurement of employee job satisfaction is not a survey of the surface attitudes employees hold as to their work surroundings. Drawing from the motivational theory of Maslow, it penetrates below the level of attitude to the bases of their determination--operative psychological needs. Because of the degree of depth involved in this technique, the probability of deliberate respondent distortion was believed to be minimized. The use of both superior, and where possible, peer, ratings of "quality of performance" and "amount of job effort," where there is no physical, tangible output from

the work process is thought to minimize the effects of differences in the way people rate others. Nevertheless, it must be recognized that present measurement of job satisfaction, and of employee performance and effort, is subjective. Job satisfaction measurement reflects not only the work position, itself, but the way it is perceived by--and the goals and aspirations of--the incumbent, as well. Although Vroom's research (18, p. 183) indicates there is no significant difference in magnitude of correlation between situations where productivity is quantitatively measured and where performance is subjectively rated, it must be stressed that superior and peer ratings of performance and effort reflect not only observed performance and effort, but the fact that some raters rate higher than others and that some are affected more by superficial factors such as personality and appearance, as well.

Brayfield and Crockett (3) reiterate the general acceptability of ratings of performance from superiors. Weschler and Kahane (19, p. 2) feel that where productivity is illusive, ratings represent as meaningful an alternative to measures of tangible production as can be found. Barrett has stated: "Experience and tradition have long favored the supervisor as a rater. . . . Nevertheless, the research

done to date strongly recommends peers as people who know who is doing a job and who isn't" (2, pp. 102-103).

In the strictest statistical sense, the universe of the present study consists only of the managers and non-managers of the explicit types studied within the present organization. In a broader sense, similar institutions appear tentatively represented. In yet a broader sense, conclusions drawn from this study serve as working hypotheses in other formal organizations, as well.

Whitehead (20, pp. 4-8) has discussed the value of single-entity research. In the social sciences, particularly, such research is often chosen in preference to the broader research design because a better focus can be made on specific functional complexities. An overall entity is divided into its sub-parts, and the result is a detailed analysis of numerous elements or cases and how they interrelate. Extensive interviewing and accurate observation, where intricate variables interact in complex fashion, appear to be feasible generally when they are limited to a closed and familiar environment, such as a single organization. However, in the present study, the organization--or overall entity--is sizable and divisible into distinct elements, such as specific departments and employees each of which can be termed a separate case.

Though the "atmosphere" of a school for the mentally retarded differs from that of a business firm, the two organizational-types share the common characteristics of bureaucracy. Both are hierarchial organizations of work positions and people joined by authority and communications networks. Furthermore, though the present organization is rather unique in nature, the variables analyzed represent general phenomena found in all organizations. The scope of the present study is, in a sense, broader than the specific organization and organizational-type focused on.

In the broader, "judgmental" sense, then, the present samples appear to be tentatively representative of similar organizations. The phenomena studied are not unique to the present organization, but firm conclusions concerning human motivation, job satisfaction, work effort, and job performance, in general, cannot be drawn. Nevertheless, testable hypotheses can be advanced for similar formal organizations, and specific managerial prescriptions can be made for this organization.

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CHPATER II

THE SUBJECTS, THE POSITIONS, AND THE DATA

The Two Samples

The state institution for mentally retarded which serves as the focal organization of the present study is a major employer in its geographical area, employing almost one thousand people. (Appendix C, page 109, briefly describes this organization, together with the two samples of employees drawn therefrom on a random basis.) Of the approximately 970 people employed by the institution, about 580 hold child-care and clerical positions. These employees constitute the population from which the non-managerial sample was drawn--554 of their number constituting the child-care element and 26 constituting the clerical element. These employees hold positions which are non-administrative and non-professional in nature. The child-care workers are either "houseparents," "trainers," or "hospital aids," while the clerical employees are either secretaries or clerks. Of these 580 employees approximately 90 per cent are female. The sample labeled "non-managerial" consists of 90 of the 554 child-care employees and 14 of the 26 clerical people,

for 16 and 54 per cent representations, respectively, of the total populations.

Approximately 70 members of the organization are administrative, professional, quasi-professional, or supervisory employees. They are clearly differentiated from the child-care and clerical employees. A number of them do come into contact with the retardates, but they do so in a professional, rather than a daily-care, capacity. Twelve of the 70 are administrative employees; 30, professional or quasi-professional; and 28, supervisory. Representative job titles include "department head," "supervisor," "psychologist," "caseworker," and "accountant." The sample labeled "managerial" consists of 8 of the administrative element, 24 of the professional element, and 22 of the supervisory element.

Approximately 325 of the institution's employee force work in the academic school, the areas of maintenance, food service, motor transportation, and clothing service, or in the foster grandparent program, and they are not included in either the child-care-clerical, or the administrative-professional populations. There is a natural separation between these two populations so defined. Each is a distinct and separable group. Both the child-care and the clerical positions are equally operative or non-managerial from the

standpoint of organizational objectives and functions. Although child-care and clerical positions obviously differ in terms of the basic work setting, the two position-types are quite similar in terms of complexity of work duties, hierarchial placement, and amount of authority or employee freedom. The administrative and professional employees grouped together serve as the other population. Both are basically managerial from the standpoint of organizational objectives and functions and are similar in terms of sophistication of work duties, hierarchial placement, and amount of employee authority and freedom. The separation between the two populations is considered basic to the nature and testing of the hypotheses of the present study.

Employees in the sectors of the organization excluded from these two populations hold positions which are basically "hybrid" in nature. They are not clearly and distinctly child-care, nor are they clerical, administrative, or professional positions in the sense that those included are. Consequently, they do not fit accurately into the analytical framework which is predicated on differentiable hierarchial levels. Their inclusion in the present analysis would both destroy this natural break between the hierarchial levels

and add an unwanted degree of heterogeneity to the populations resulting in unwanted movement in the variables.

Data on the Subjects

The data obtained from the subjects of both the managerial and non-managerial samples of the present organization are classified as (1) employee job satisfaction data, (2) data on "quality of employee performance," and (3) data on "amount of employee job effort."

Employee Job Satisfaction

Employee job satisfaction was measured through a technique based on A. H. Maslow's need-hierarchy theory. (Appendix B, page 106, briefly describes this theory.) (Appendix D, page 113, displays the questionnaire-interview form used to record employee job satisfaction responses.)

The job satisfaction questionnaire was arrived at through a sequency of several steps: (1) A pool of twenty job-related questionnaire items was prepared from a review of previous questionnaires designed for this basic purpose and found in the literature on this subject. Considerable attention was paid to the questionnaire utilized in the Lawler-Porter study (4). Each of Maslow's need-satisfaction categories (security, social, autonomy, esteem, and

self-realization) was represented by several questionnaire phrases in the pool of items. (2) Modifications and additions were made to this pool. (3) The twenty-two resulting items were then tested, through a process of trial and error on organization members, to obtain the ten which appeared basic, representative, and understandable. Each hierarchial level or need category was represented by two separate items. These ten questionnaire items, plus an item referring to satisfaction with monetary compensation, subsequently became the formal employee need-satisfaction questionnaire to be utilized in the present study.

The employee job satisfaction questionnaire form was initially utilized as the basis of structured interviews with the subjects of the randomly-determined managerial sample. Following the interview, respondents were asked to sign the questionnaire form and state their job title and department. (Evidence in the literature indicates that identification of subjects does not materially affect responses. Gadel and Kriedt have reported: ". . . The distributions of answers obtained under the two conditions [identification and non-identification] were almost identical for each group . . .") (3, p. 208). The subjects were given an opportunity in the interview to obtain clarification as to the meaning of any

specific questionnaire item they might have felt unsure about. If there were no clarification questions, the interviewer merely proceeded through the questionnaire taking the items in sequence and recording responses.

The subjects of the randomly-determined non-managerial sample were subsequently interviewed with the questionnaire again serving as the basis of the structured interview. In addition to job satisfaction data, respondents' names, job titles, and departments were ascertained.

For both groups of subjects, the original wording of the questionnaire was supplemented during the interview with a series of clarifying questions, one relating to each separate item. The original questionnaire items were believed couched in terminology too nebulous and abstract for ready and consistent comprehension by every respondent. The series of supplementary questions was established through a process of trial and error to be used consistently along with the original terminology for clarification purposes. The questions were believed more readily meaningful to the subjects; they clarified the essence and narrowed the range of the meaning of the original items in the interest of increased validity and consistency. Basically, the original items were rephrased in readily understandable terms in the context of the positions

the subjects held. The supplementary, explanatory questions used in the interviews with the subjects of the focal organization are displayed in Table I.

TABLE I

SUPPLEMENTARY QUESTIONS

	Original Item		Supplemental Explanation
(1)	The feeling of security you have in your job	(1)	Do you feel your job here at _____ will be open to you as long as you want it and as long as you perform it satisfactorily?
(2)	The opportunity in your job to give help to other people	(2)	Would you recommend your job as a good opportunity to help others?
(3)	The prestige your job offers	(3)	Are you proud to tell your friends and relatives about your work here at _____?
(4)	The authority you have in your job	(4)	Do you feel you have enough authority in your job to perform it satisfactorily?
(5)	The opportunity for personal development in your job	(5)	Does your job give you the opportunity to develop new skills and abilities?
(6)	The pay your job offers	(6)	How satisfied are you with your paycheck?
(7)	The feeling of "being in the know" that you experience on your job	(7)	Do you feel that communications from the top are adequate in informing you of the things you need to know?

TABLE I--Continued

	Original Item		Supplemental Explanation
(8)	The opportunity to develop close friendships on your job	(8)	Do you receive sufficient opportunity in your job to develop close friendships with other workers?
(9)	The credit you get for your job efforts	(9)	Do you feel you receive all the credit you are due for your job efforts?
(10)	The opportunity for independent thought and action on your job	(10)	Do you feel that you have sufficient opportunity to make decisions for yourself in your job?
(11)	The opportunity to use your abilities on the job	(11)	Is your job a satisfactory outlet for your abilities and skills?

These explanatory questions served to focus the original questionnaire items in terms of the actual job context while retaining their orientation to the individual and his need-satisfaction dynamics. They appeared more understandable to the subjects, and used in conjunction with the original item, amplified the meaning intended in the interest of heightening validity to the greatest possible extent. Furthermore, they were used consistently in interviews with the subjects with the aim being to increase the reliability of the job satisfaction measurement process.

The quantitative scale used on the job satisfaction interview form to record responses was devised in a manner

which permitted numerical computation of results. To illustrate, "highly dissatisfied" was given a numerical value of one, while "highly satisfied" was valued at seven, with the remaining increments of dissatisfaction and satisfaction lying between these values, numerically.

Employee job satisfaction responses were computed for each subject in both samples by using the numerical scale four separate ways. First, overall job satisfaction was obtained. This is the arithmetic average of the scale values for each of the eleven items. Second, the arithmetic average of job satisfaction responses to questionnaire items one, two, seven, and eight was computed. These items represent the basic, lower-level Maslow need-satisfaction categories--the security and social levels. Third, the arithmetic average of job satisfaction responses to items three, four, five, nine, ten, and eleven was computed. These items represent the higher-order Maslow need-satisfaction categories--the autonomy, esteem and self-realization levels. Finally, responses of employee satisfaction with monetary compensation were recorded separately.

Each Maslow category was represented by two questionnaire items. Consequently, a test of the reliability of the need-satisfaction measurement process could be made.

Questionnaires which indicated a deviation in numerical value of two units or more between two items representing the same category were discarded as unreliable. Items one and seven represent the security category; two and eight, the social category; three and nine, the esteem category; four and ten, the autonomy category; and five and eleven, the self-realization category. Accordingly, if responses to items one and seven deviated by two points or more, the entire questionnaire was discarded and another subject was selected at random. This principle held true for each set of items.

The Maslow orientation of the job satisfaction index employed in the study couches job satisfaction measurement in terms of the human motivation dynamic within the individual. It does not deal with employee satisfaction in terms of surface job features, or more specifically, how satisfying these features are to specific individuals. Dealing with human need categories rather than with job features in the satisfaction measurement process, though it is still subjective, is considered a more accurate approach. According to Dunnette, Campbell, and Hakel (2, p. 143), the popular Herzberg two-factor theory of motivation, which deals directly in terms of job features rather than the dynamics of human need satisfaction, has never fully accounted for individual

differences in satisfaction. It is a general theory, and therefore, must necessarily be an oversimplification of reality. It is advanced by these theorists that individual differences in reactions to job features are too important to be by-passed through generalization: A "satisfying" feature for one individual may well "dissatisfy" another.

The approach inherent in the Maslow framework of the present technique is oriented to the individual, and is therefore considered a means of overcoming this problem. Basic needs are arranged in the order of their prepotency and the extent to which they are perceived as being satisfied is measured. There is no speculation as to what specific job features such as working conditions and opportunity for advancement should bring to the individual in the way of satisfaction.

Quality of Employee Performance

In the organization studied, concrete, tangible, physical production does not exist. Consequently, superior and peer ratings of overall "quality of performance" (or the "end-product" of an employee's work activity), though subjective, were utilized. ("Quality of employee job performance was recorded by superiors and peers of the subjects on

the rating form exhibited in Appendix D, on page 115.) "Quality of performance" displayed by subjects was pinpointed on a one-to-seven scale as it could best be described or summarized, as follows: "unsatisfactory" (a numerical value of 1), "poor" (2), "fair" (3), "good" (4), "very good" (5), "outstanding" (6), and "nearly perfect" (7). As a means of attempting to minimize the effects of inter-rater variation, in addition to the use of both superior and peer ratings where possible, raters were instructed that "good" performance should be considered as paralleling the performance of an "average" employee. This was an attempt at setting the "base-line" at a common point on the scale. As a further means of attempting to minimize distortion, it was stressed that raters were to rate overall or general performance. Despite these measures, the imprecision and subjectivity inherent in this type of measurement must be recognized.

Amount of Employee Job Effort

"Amount of employee job effort" was defined as being synonomous with the percentage of total or potential employee ability which was displayed in the job situation. ("Amount of employee job effort" was recorded on the rating form displayed in Appendix D, page 116.) Superiors and peers rating the subjects on this factor used a one-to-seven scale

blanketing the range of zero to one hundred per cent of potential ability displayed. The ratings obtained are subjective and must be viewed as a reflection of the differences between raters, as well as job effort.

Specific Information on the Positions

There are basic differences between the positions held by the subjects of the managerial sample--professional, administrative, supervisory positions--and those held by the subjects of the non-managerial sample--clerical and child-care positions. The two samples appear on the surface to be heterogeneous collections of positions with as much apparent difference among positions within the samples as between them. In terms of basic relationship to organizational objectives and functions, however, the former are essentially managerial while the latter are basically operative. The former require longer-range decision-making, authority over and responsibility for groups of subordinate employees, and generally strategic and professional involvement within the organization. The latter require only short-term, routine decision-making as the incumbent works in a "serving" capacity in the organization. There is an explicit distinction between the two sets of positions. If one would compare the content of the positions, it would be apparent

that the population of managerial positions ranks higher, and entails more sophisticated organizational duties and functions, than the population of non-managerial positions.

The basic differences in sophistication or complexity of work duties between the positions of the two samples are the factors which have been traditionally considered by researchers to be significant in accounting for differences in employee reactions to work situations. Consequently, these factors were believed at the outset to account for a substantial percentage of the hypothesized relationship between the satisfaction and performance variables. Obviously, they served as the basic reason for comparing the correlations between the two variables in two separable hierarchial levels.

The Lawler Porter Model holds foremost the tenet that actual performance of a position leads to employee satisfaction, rather than the reverse. The important question then logically becomes: What is the specific nature of the position being performed? Performance of what? An analytical description of the typical positions of the two populations was made in order to pinpoint specifically what the subjects' job performance entailed and to better evidence the contrast between the two populations. Recognition of this basic difference between the two populations is vital to the process

of testing the validity of--and to understanding--the Lawler Porter Model. Present hypotheses suggest that performance of a managerial position should generally lead to greater overall satisfaction than performance of a non-managerial position. More specifically, they suggest that higher performance levels, in terms of quality, in managerial positions should be reflected more closely in commensurate satisfaction levels than is the case in non-managerial positions--that managerial job duties, themselves, are more sophisticated and involving, and more intrinsically satisfying.

The instrument employed in the present study, through the permission of its author, to quantify the substance of representative work positions was the Purdue Position Analysis Questionnaire. This questionnaire, presently in its experimental stages, is the innovative result of research conducted by McCormick at Purdue University. As one phase of the developmental research, McCormick is attemption to create quantitative profiles of the content of work positions (5).

The managerial sample of the present study is composed of subjects who, on the average, hold work positions which rank rather high in complexity on the Position Analysis Questionnaire. The PAQ analyzes positions in terms of

"Information Input," "Discrimination and Perceptual Activities," "Decision Making and Reasoning," "Information Processing," "Use of Stored Information," "Work Output," "Interpersonal Activities," "Supervision and Coordination," "Job Context or Situation," "Responsibility," and several miscellaneous aspects. The position, "Department Head," represents a higher-level administrative position within the managerial sample. The positions, "Psychologist" and "Accountant," represent professional positions while the position, "Caseworker," represents one which is quasi-professional. The position, "Supervisor," is also included in the managerial sample. In terms of the PAQ factors, these positions can be termed "relatively sophisticated." The more descriptive and representative job characteristics are as follows:

1. There is substantial use of written, pictorial, and quantitative--as well as verbal--information input.

2. Events and circumstances, as well as the behavior of others, must be carefully observed.

3. Decision making centers on matters with a high or above average level of importance.

4. Logic and scientific reasoning are highly involved in problem solving.

5. Frequently, information must be analyzed, synthesized, and grouped.

6. A college, and sometimes an advanced degree, one to four years of job-related experience, and six months to two years of training, are generally required of the incumbent.

7. Communications involve advising, negotiating, persuading, instructing, interviewing, exchanging information, and writing.

8. There is very frequent job-related personal contact with the executives, professionals, middle managers, supervisors, clerical personnel, sales personnel, trainees, and residents of the organization, as well as the general public.

9. General to immediate supervision is given subordinates; job authority flows from ten to one hundred personnel.

10. General supervision or direction is received.

11. The positions are characterized by "limited" to "intermediate" structure. (There is often little routinization of activities, considerable opportunity for innovation.)

The non-managerial sample, on the other hand, constitutes positions which are of lesser magnitude in terms of sophistication or complexity of work duties in the framework of the Position Analysis Questionnaire. The position of "attendant" represents a typical position within the non-managerial sample. In terms of the PAQ factors, this position has a lesser degree

of sophistication than those in the managerial sample. The more descriptive job characteristics are as follows:

1. There is nominal use of written materials, moderate use of verbal information input.

2. There is moderate observation of events or circumstances, but considerable observation of the behavior of others.

3. Decision making centers on routine matters involving basically common sense.

4. Information processing activities are infrequent and minor.

5. Elementary school (through the sixth grade), up to a year of job related experience, and two to five days of training are required of the incumbent.

6. Mobility and agility are required, and there is continual standing, moving, and walking.

7. Formal communications are of rather minor importance, relatively speaking, to the position.

8. There is very frequent job-related personal contact with supervisors, trainees, and patients.

9. No supervision is given.

10. Immediate supervision is received.

11. The position often involves frustrating situations, strained relations, and personal sacrifice, repetitive

activity, distraction, responsibility for the safety of employees and assets.

12. The position is characterized by "considerable structure" (there is only moderate deviation from pre-determined routine).

The positions, "secretary" and "clerk" represent two other positions within the non-managerial sample. In terms of the basic PAQ factors, these positions, also, possess a lesser degree of sophistication than the managerial positions. The more descriptive job characteristics are as follows:

1. There is considerable use of written and verbal information input.

2. Events, circumstances, and behavior are seldom observed in detail.

3. Decision making centers on matters of below average importance which require only a limited amount of reasoning.

4. Information processing activities primarily involve transcribing and filing.

5. A high school diploma, less than one year of job-related experience, and one to four weeks of training are required of the incumbent.

6. Finger, and hand-arm, manipulation are required.

7. Formal communications involve exchanging information.

8. There is occasional to moderate job-related personal contact with professionals, middle managers, clerical personnel, service workers, the public, and patients.

9. No supervision is given.

10. General to immediate supervision is received.

11. The positions require precision and attention to detail and are characterized by "considerable structure" (there is only moderate deviation from routine).

Differences between the two sets of positions are readily apparent. The PAQ factors of decision making, information handling, education and experience, communications, supervision, and job structure tend to indicate the greatest differential--with the managerial positions being more sophisticated and complex.

As a means of providing a more quantitative picture of the differential in complexity between the two samples, the "Data, People, Things" hierarchies employed in the Dictionary of Occupational Titles (1, p. 649-650) were utilized. Essentially, these hierarchies pinpoint job relationships specific to these three factors in terms of their level of complexity, are as follows:

(0) Synthesizing
(1) Coordinating
(2) Analyzing
(3) Compiling

(4) Computing
(5) Copying
(6) Comparing
(7) No significant relationship

Job relationships to people, in descending complexity, are as follows:

(0) Mentoring
(1) Negotiating
(2) Instructing
(3) Supervising
(4) Diverting
(5) Persuading
(6) Speaking-signaling
(7) Serving
(8) No significant relationship

Job relationships to things, in descending complexity, are as follows:

(0) Setting up
(1) Precision working
(2) Operating-controlling
(3) Driving-operating
(4) Manipulating
(5) Tending
(6) Feeding-offbearing
(7) Handling
(8) No significant relationship

The previously described managerial positions can be placed on these hierarchies as follows:

Department Head:	Data (0), People (1), Things (8)
Psychologist:	Data (0), People (1), Things (8)
Accountant:	Data (2), People (1), Things (8)
Supervisor:	Data (2), People (3), Things (8)
Caseworker:	Data (2), People (1), Things (8)

The previously described non-managerial positions can be placed on the hierarchies as follows:

Attendant: Data (6), People (7), Things (7)

Clerical: Data (5), People (7), Things (7)

It is evident from this classification scheme that the positions within each of the two samples are quite homogeneous, but that there exists a substantial differential between the samples--with the managerial positions being more complex in terms of relationships to data and people, and with no offsetting differential in terms of relationship to things.

One of the basic weaknesses of earlier studies of performance and satisfaction is that specific, detailed descriptions of the positions being studied were not obtained. Positions were merely labeled "assembly line," "low skilled," or "Plant X jobs," or whatever. No specific description of the work duties was presented. During the period when the "traditional assumption" was the basic interpretation researchers made of the dynamics of the question, this condemnation was not so serious. Employee satisfaction led to employee effort, it was thought, and effort was manifested to whatever degree possible in the performance of job duties, whatever the job design process dictated they be. What the job duties actually were was not considered significant for

they were not believed a feasible or practical means of generating change in employee satisfaction levels. It seems that they were believed the "sacred" function of advancing technology.

With the advent of the approach manifested in the Lawler Porter Model, the specific duties of work positions gain recognition as a feasible and practical variable at the crux of employee satisfaction. The creation of meaningful, absorbing, or challenging performance can now be readily seen as perhaps a more worthy endeavor than the establishment of a set of mere "human relations gimmicks" (or other such means of creating employee satisfaction which are not intrinsic to actual job duties) in an effort to force employees to perform their jobs efficiently regardless of how monotonous, structured, and routine technology causes them to be. American technology has brought forth material abundance for the majority. But the question must be asked: Has this abundance been worth the cost of high specialization in the work positions which have created it? The Lawler Porter Model points to a strong argument for reconsidering the nature of the work position, which has been shaped perhaps too exclusively by technology.

In the context of the Lawler Porter Model, the specific nature of the position determines the network of rewards (extrinsic and intrinsic) which leads to employee satisfaction or dissatisfaction. The Purdue Position Analysis Questionnaire represents a frontier in the advancement of the science of collecting and making explicitly known specific position information. With this breakthrough, the tenets of the Lawler Porter Model can be refined in that positions can be better differentiated and described. Detailed analyses of exactly what leads to specific degrees of employee reward and satisfaction can be conducted. The Lawler Porter Model places job performance in the foreground as the general factor leading to employee satisfaction while the Position Analysis Questionnaire breaks that general factor down into its specific elements.

(Purdue Position Analysis Questionnaires representing two specific work positions--one from the managerial sample and one from the non-managerial sample--are presented in Appendix D, page 117.)

The Correlations

The three basic types of data collected from both the managerial and the non-managerial respondents have been described. The next step in the research methodology employed

is to ascertain the magnitude of the correlations between the data in accordance with the hypotheses. The Lawler Porter Model holds that recognized job performance leads to intrinsic and extrinsic reward, which, when compared with "perceived equitable reward," leads to job satisfaction (or dissatisfaction). It follows as a logical corollary to the model that performance of managerial work positions would differ from that of non-managerial positions in terms of potential reward and satisfaction. Additionally, it follows that varying levels of performance quality within the two specific groups of positions would tend to differ in this respect as well: the greater the "quality of performance" displayed, the greater the subsequent reward and resulting job satisfaction. A correlation analysis appears to be a logical means of testing the Lawler Porter Model against the "traditional assumption." The specific correlations and relationships between correlations considered necessary for a thorough analysis of the variables in accordance with the three basic hypotheses involve (1) performance and satisfaction, (2) effort and satisfaction, (3) managerial versus non-managerial performance and satisfaction, (4) managerial versus non-managerial effort and satisfaction, (5) higher-order versus lower-order satisfaction and performance, and (6) managerial versus non-managerial higher-order satisfaction and performance.

Relationship One: Performance and Satisfaction

This correlation focuses on the relationship between "overall employee job satisfaction" and "quality of employee performance" for both the managerial and the non-managerial samples grouped together as a composite sample. It serves as a test of Hypothesis I, which states, in essence, that there is a statistically significant, positive correlation between satisfaction and performance.

It is deemed germane to the analysis to ascertain whether "quality of performance" and "overall job satisfaction" are significantly correlated at all. The survey of the literature on this question, presented in Chapter One, indicated that, at best, all that should be expected is a rather low, positive correlation. Substantiation of the Lawler Porter Model in both populations of the present organization is dependent upon the existence of a statistically significant correlation between these two variables--the greater the magnitude of the correlation, the greater the substantiation.

Relationship Two: Effort and Satisfaction

This correlation focuses on the relationship between "overall employee job satisfaction" and "amount of job effort" for both the managerial and the non-managerial samples grouped together as a composite sample. The

magnitude of Correlation Two vis-à-vis that of Correlation One serves as a comparison test of Hypothesis Two, which states, in essence, that the correlation between satisfaction and performance is substantially greater than that between satisfaction and effort.

The "traditional assumption" as to the dynamics of the satisfaction-performance relationship would be empirically upheld in the present organization if this correlation were substantially greater than that between employee job satisfaction and performance. It appears fundamental to assume that the mere exertion of effort on the job, in itself, is not rewarding or satisfying. A significant, positive correlation here, rather, would indicate that employees of the institution are satisfied with non-performance aspects of their overall employment situation and that this state of general satisfaction is manifested through commensurate employee work effort (as an expression of a type of appreciation to the management of the organization). Furthermore, if Relationship Two were substantially greater than Relationship One, indications would be that employee effort is not being reflected in a direct, one-to-one manner in work performance. Actually, the Lawler Porter Model would have to be discarded as being invalid in the present overall organizational

setting if this were the case. However, if the two correlations did not differ substantially, but were both significant, the dynamics of the relationship would appear to be such that a composite of both the "traditional assumption" and the Lawler Porter Model are explanatory as to what actually takes place. Effort would be tied to satisfaction, suggesting the operation of the "traditional assumption." Performance would also be tied to satisfaction, which is in line with the Lawler Porter Model. The relationship would appear circular, with satisfaction leading to effort; effort, to performance; and performance, to satisfaction.

Relationship Three: Managerial Performance and Satisfaction versus Non-Managerial Performance and Satisfaction

This is the relationship between "overall employee job satisfaction" and "quality of employee performance" determined separately for the managerial and the non-managerial samples. Relationship Three serves as a test of section (a) of hypothesis Three, which states, in essence, that the correlation between satisfaction and performance is greater for the managers than for the non-managers.

Relationship Three views performance and satisfaction, rather than effort and satisfaction, within the two samples, separately. Performance and satisfaction are focused upon

as this relationship is predicated on the substantiation of the Lawler Porter Model in the present organization, or at least, in the managerial population of the organization. In other words, it must be more explanatory than the "traditional assumption." Substantiation of the Lawler Porter Model and non-substantiation of the "traditional assumption" render the performance-satisfaction correlation germane to the analysis and discount the effort-satisfaction correlation.

Conventional wisdom surrounding the question, drawn from empirical evidence gathered in previously studied organizations, indicates that the performance-satisfaction correlation would be greater for the managerial sample than for the non-managerial sample. This would be expected because of the greater amount of intrinsic or higher-order job satisfaction assumed to accompany the performance of managerial positions.

Relationship Four: Managerial Effort and Satisfaction versus Non-Managerial Effort and Satisfaction

This is the relationship between "overall employee job satisfaction" and "amount of employee effort" determined for the managerial and the non-managerial samples separately. It would become germane to the analysis if the "traditional assumption" were substantiated in the composite of both

populations of the present organization instead of the Lawler Porter Model, or if neither were substantiated in the managerial and non-managerial samples taken together as a composite unit. Stated differently, it would become vital if the correlation between "overall employee job satisfaction" and "amount of employee effort" were not substantially smaller in magnitude than that between "overall employee job satisfaction" and "quality of employee job performance" for the composite sample. If it were not substantially smaller, the satisfaction-effort relationship could not be discarded. It would have to be analyzed in each sample separately. This comparison serves as such an analysis. It is a test of the Lawler Porter Model vis-à-vis the "traditional assumption" on each sample separately to ascertain if either theory is substantiated in either sample alone.

Relationship Five: Higher-Order Satisfaction and Performance versus Lower-Order Satisfaction and Performance

This is the relationship between "higher-order employee job satisfaction" and "quality of performance" vis-à-vis that between "lower-order employee job satisfaction" and "quality of performance" determined for the composite sample. It serves as a test of section (b) of Hypothesis Three, which states, in essence, that higher-order satisfaction is more

closely correlated with performance quality than is lower-order satisfaction.

In accordance with the Lawler Porter Model, higher-order job satisfaction (satisfaction in the esteem, autonomy, and self-realization categories), a form of satisfaction thought more intrinsic to work performance, should generally stem more readily and directly from recognized performance than would the more extrinsic form of satisfaction associated with the lower-order need categories (social and security). Lower-level need satisfaction is thought more extrinsic in terms of its reward and is further removed from the performance of actual job duties.

Relationship Six: Managerial Higher-Order Satisfaction and Performance versus Non-Managerial Higher-Order Satisfaction and Performance

This is the relationship between "higher order job satisfaction" and "quality of performance" for the managerial sample vis-à-vis that between "higher-order job satisfaction" and "quality of performance" for the non-managerial sample. It follows logically from the two foregoing comparisons and is a further test of Hypothesis Three. Assuming the validity of the Lawler Porter Model, this relationship between higher-order satisfaction and performance should be closer for the

managerial sample than for the non-managerial sample. The managerial type of work position is thought to be one resulting in greater intrinsic reward and greater satisfaction in the higher-order need categories.

As a complement to the correlation analysis, an analysis of the average values of the satisfaction variables, presented in Appendix F, page 148, views the Lawler Porter Model within the two populations while holding quality of performance constant. Performance is viewed as an "achieved reality"--irrespective of its quality--and the position-incumbent match is analyzed.

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CHAPTER III

DISCUSSION OF FINDINGS

Introduction

Two separate explanatory models of the dynamics of the performance-satisfaction relationship have been suggested. The tenets of the original model have been labeled the "Traditional Assumption." The more recent explanation has been referred to as the "Lawler Porter Model." The original model can be illustrated as follows (Figure One).

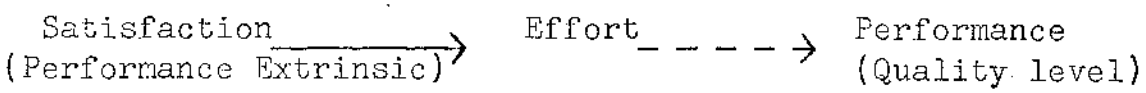

Fig. 1--The "Traditional Assumption"

The model advances the idea that performance-extrinsic employee satisfaction (the result of factors in the work situation secondary to actual work activity) leads to commensurate employee effort which is imperfectly manifested in quality of employee performance. It follows that the greater the satisfaction level, the greater should be the subsequent exertion of effort.

The more recent Lawler Porter Model can be illustrated as follows (Figure Two).

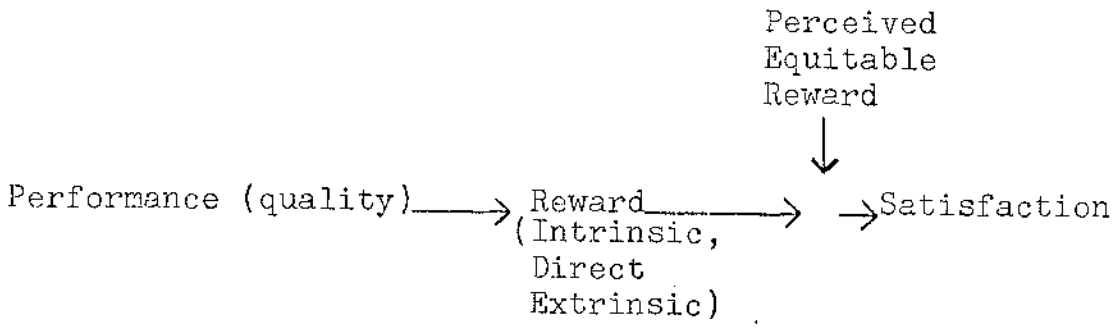

Fig. 2--The Lawler Porter Model

This model advances the idea that work performance leads to extrinsic and intrinsic employee rewards which in turn lead to employee satisfaction if the rewards are perceived to be equitable by the employee receiving them. Effort is not stressed in the model as a significant variable. It follows that the higher the performance level, in terms of quality, in a specific work position, the greater should be the correlation between job satisfaction and performance. Additionally, it follows that the more intrinsically rewarding the work performed, the greater the level of job satisfaction.

It has been hypothesized that if the correlation between performance and satisfaction is substantially closer than that between effort and satisfaction, the Lawler Porter Model

is supported in the present organization. If the reverse is proved to be the case, the "traditional assumption" is substantiated. The Lawler Porter Model links performance and satisfaction more closely than it does effort and satisfaction, while the "traditional assumption" links effort and satisfaction more closely.

These hypotheses are predicated on the fact that effort is not manifested in a one-to-one manner in performance. Variations in employee ability and various situational factors prevent this from happening. Effort and performance are separable variables, essentially, because of variation in individual ability, knowledge, and skill; in physical working conditions; in the physical work structure; and in the social work setting. If the differentiation between the effort and performance variables were not clear, the "traditional assumption" could not be discarded, nor could the Lawler Porter Model be validated, on the basis of the present data. In fact, a "composite" of both models would perhaps become more descriptive of reality than either alone. Thus, performance and effort must be separable.

Performance is a function of effort, ability, and situational variables. The separability of performance and effort was expected from the beginning. If one could hold constant

the potential and certain effect of the situational factors, he could see that differences in individual ability, alone, are enough to separate performance and effort. To illustrate, a person with a considerable amount of ability, say eight on a one-to-ten scale, could display effort equivalent to 50 per cent of total ability, and consequently, perform at a level of four on that scale. Another individual with lesser job ability, say six on that scale, would have to display effort equivalent to two-thirds of his total ability to bring his performance level to four. Performance and effort, theoretically speaking, are obviously separable factors. In these two situations, performance is four, while effort is represented by 50 and 66.7 per cent, respectively, of total ability.

In the focal organization, superior and peer ratings of performance and effort confirmed the separability of the two factors. If they were not separable, the correlation coefficients indicating the relationships between effort and satisfaction and between performance and satisfaction would be identical. They are obviously not.

Explanatory Presentation of Correlation Analysis

Satisfaction and Performance

Chapter Two presents the specific correlations which were deemed vital to a thorough testing of the three

hypotheses, together with underlying reasons for their importance. Relationship One centers on the correlation between overall employee job satisfaction and quality of employee performance for both the managerial and the non-managerial samples grouped together into a composite unit or sample. Hypothesis One states, in essence, that there is, in the present organization, a statistically significant, positive correlation between satisfaction and performance. It is germane to the substantiation of the Lawler Porter Model in the two populations of the organization to ascertain the magnitude of this relationship. It appears absolutely necessary for unqualified substantiation of the model that this relationship be statistically significant despite the fact that the most prevalent correlation coefficient found between these variables in past studies is a low, positive one. Table Two presents data on this relationship.

TABLE II

RELATIONSHIP ONE: PERFORMANCE AND SATISFACTION

Variables	Sample	Correlation	t	Significance
Job Satisfaction Quality of Performance	Composite	+.148	1.86	--

Table Two indicates that the simple correlation coefficient between overall employee job satisfaction and superior and peer ratings of quality of performance for the composite sample consisting of both managerial and non-managerial employees is +.148. A *t* test of significance was made on this coefficient (8, p. 485). The present *t* value of 1.86 obtained indicates that this coefficient is significant only at the .10 level of confidence. It does not appear significant at the .05 level, which is generally considered the lower limit of significance. In a statistical sense, then, no significance can be ascribed to this correlation.

In light of this observation, it becomes important to consider the correlation between satisfaction and effort. It becomes vital, also, to divide the composite managerial-non-managerial sample into its separate units to ascertain whether this correlation is significant for either sample alone, and also, whether it is greater than the correlation between effort and satisfaction for each sample separately.

In addition to making a statistical interpretation of the foregoing correlation, it is meaningful to analyze it in the context of previous research findings. Prior researchers, who have studied basically non-managerial

employees, report only a very low correlation between these two variables. Satisfaction and performance have not typically shared a very close relationship.

Countless efforts have been made to boost non-managerial employee performance levels by first increasing satisfaction through work-extrinsic and "human relations" measures, but the "traditional assumption" that increased satisfaction should lead to increased performance levels has not been evidenced with any degree of frequency. In Brayfield and Crockett's summary of salient research (2), only two of fifteen studies indicate even a low, positive correlation. In the Herzberg summary (5), nine of twenty-six studies indicate no relationship between the variables, while the remainder are split, albeit unevenly, between a positive and a negative relationship. In Vroom's survey (10), twenty of twenty-three correlations are low, positive values with the median correlation equal to +.14. Other studies, including one focusing upon higher-skilled jobs (10, p. 183) reflected a generally low, positive correlation. Lawler and Porter (6, p. 26), however, recently found a +.31 correlation between satisfaction and performance for managerial employees--a correlation statistically significant at the .01 level. In light of earlier studies, the present correlation of +.15 is

exactly what would be expected if the composite sample had been composed strictly of non-managerial employees. One-third of the composite sample, however, is composed of managerial employees. One would therefore expect Relationship One to be somewhat greater than it is in order for its managerial correlation to be in line with that of Lawler and Porter, unless the non-managerial correlation is lower than that in previous studies.

Satisfaction and Effort

How does the correlation between overall employee job satisfaction and amount of job effort for the composite sample (Relationship Two) compare with that between satisfaction and performance for that sample (Relationship One)? This comparison was devised in order to serve as an overall test of Hypothesis Two. In order to be supported, Hypothesis Two dictates that Relationship One be substantially greater than Relationship Two. It is already apparent, however, that Hypothesis Two (and hence the Lawler Porter Model) cannot receive support in the composite sample regardless of the value of Relationship Two because of the insignificance, statistically speaking, of Relationship One. Nevertheless, it is necessary that the value of Relationship Two be ascertained in order to test the "traditional assumption" in that

sample. The "traditional assumption" would receive support there if it is substantially greater than Relationship One. If this were the case, the variable, "amount of job effort," would be linked more closely with satisfaction than performance is. Furthermore, it would appear that the employees of the organization obtained their job satisfaction from non-performance aspects of their overall job situation and reflected this satisfaction through a relatively commensurate display of job effort. (Effort, obviously, would not be directly manifested in performance in a one-to-one manner.) Table Three presents data on this question.

TABLE III

RELATIONSHIP TWO: EFFORT AND SATISFACTION

Variables	Sample	Correlation	*t*	Significance
Job Satisfaction Amount of Effort	Composite	.00	-	--

Table Three data indicate, however, that the correlation between effort and overall job satisfaction is .00, or non-existent. The *t* test of significance indicates that the value of this correlation must be .15 on the composite sample

in order to be significant at the .05 level. (Interestingly, Lawler and Porter found a correlation ranging from +.20 to +.23 between satisfaction and effort (6, p. 26). The "traditional assumption" is no more, and perhaps even less, explanatory than the Lawler Porter Model of the dynamics of the relationship as it exists in the composite population. However, since neither correlation coefficient is statistically significant, it can be concluded that, for both populations considered as a single entity, neither theoretical model is actually substantiated. Consequently, it does not appear necessary to advance a composite of the two models in order to account for the dynamics of the overall satisfaction-performance relationship. In summation, for the composite population of managers and non-managers, Hypothesis Two, like Hypothesis One, does not appear supported. However, it appears from the difference between the two correlations that the tenets of the Lawler Porter Model could well be operative "somewhere" within the composite sample, and that there, they could prove to be more explanatory than those of the "traditional assumption." Consequently, Relationship Three is considered next.

Managers versus Non-Managers

Relationship Three centers on the correlations between overall employee job satisfaction and quality of performance as they exist separately in the managerial and non-managerial samples. The original purpose of these correlations was to ascertain whether this relationship was greater for the managerial sample than for the non-managerial sample. Relationship Three was originally predicated on general substantiation of the Lawler Porter Model in the composite population of the organization. It had to appear at least as explanatory of reality as the "traditional assumption." However, neither turned out to explain reality in the composite population. Because the Lawler Porter Model was not even close to unconditional substantiation in the composite sample, the determination of whether it is clearly substantiated in favor of the "traditional assumption" in either sample alone assumes significance in the overall analysis. In terms of the hypothesis, this will test Hypothesis Two in the two samples separately. It directly tests Hypothesis Three (a), as well. Table Four presents these data.

Table Four indicates that the simple correlation coefficient (r) between the performance-satisfaction variables for the managerial sample is +.41. The t value of 3.26

TABLE IV

RELATIONSHIP THREE: MANAGERIAL PERFORMANCE AND SATISFACTION VERSUS NON-MANAGERIAL PERFORMANCE AND SATISFACTION

Variables	Sample	Correlation	*t*	Significance
Job Satisfaction Quality of Performance	Managerial	+.41	3.26	.01
Job Satisfaction Quality of Performance	Non-managerial	+.03	.34	--

obtained for this coefficient indicates that it is statistically significant at the .01 level. According to Fisher's table of the values of the correlation coefficient for different levels of significance (8, p. 575), with this size of sample, *r* must be only .34 to be significant at the .01 level. The coefficient of determination (r^2) for this *r* value is .17, indicating that seventeen per cent of the variation in one variable is attributable to that in the other.

This statistically significant correlation is generally greater than that between these two variables in prior studies. Vroom's survey reported a median coefficient of +.14 (10, p. 22). Lawler and Porter's recent study of

managerial employees (6, p. 26) produced statistically significant correlations ranging from +.30 to +.32.

Hypothesis One is substantiated in the managerial population of the present organization. In the non-managerial population, however, this conclusion cannot be drawn. Here, the correlation between the variables, satisfaction and performance, is +.03. The non-managerial sample is approximately two-thirds of the composite sample; consequently, the low, positive correlation was evidenced for the composite sample. The t value of .34 obtained for this coefficient indicates that it is not statistically significant. Consequently, in the non-managerial sample, Hypothesis One is clearly refuted. The Lawler Porter Model cannot be substantiated in this sample despite the negligibility of the value of the correlation coefficient between effort and satisfaction in this sample.

In the managerial sample, the Lawler Porter Model (and Hypothesis Two) will receive substantiation if the value of the correlation coefficient between effort and satisfaction (Relationship Four) is substantially less than the value of +.41 obtained for the coefficient of correlation between performance and satisfaction. Table Five presents these data.

TABLE V

RELATIONSHIP FOUR: MANAGERIAL EFFORT AND SATISFACTION VERSUS NON-MANAGERIAL EFFORT AND SATISFACTION

Variables	Sample	Correlation	t	Significance
Job Satisfaction Amount of Effort	Managerial	+.10	.73	--
Job Satisfaction Amount of Effort	Non-managerial	-.02		--

Table Five indicates that Relationship Four has a value of +.10 for the managerial sample. Lawler and Porter obtained r values ranging from +.20 to +.23 between these variables in their study (6, p. 26). The t value of .73 obtained for this coefficient indicates that it is not statistically significant. Accordingly, the correlation between performance and satisfaction is substantially greater than that between effort and satisfaction in the managerial sample. The former is statistically significant while the latter is not. (In fact, the present differential is greater than that in the Lawler Porter study.) Hypothesis Two is verified in the managerial sample. The Lawler Porter

Model is, consequently, clearly substantiated and the "traditional assumption" is refuted in the managerial population.

In the non-managerial sample, the Lawler Porter Model was not supported. However, it becomes important to consider how the "traditional assumption" fared in this sample. As Table Five points out, it did not fare well at all. The correlation coefficient between amount of job effort and overall employee job satisfaction is -.02. The *t* test indicates that this coefficient is clearly insignificant. It would have to equal .19 to be significant at the .05 level of confidence. Consequently, Hypothesis Two is clearly refuted in the non-managerial sample. Neither the Lawler Porter Model nor the "traditional assumption" appears explanatory of reality in the non-managerial population.

Higher-Order versus Lower-Order Satisfaction

Hypothesis Three refers to a "differential opportunity" within the present organization for persons to satisfy their needs through performance. Part (a) of the hypothesis is substantiated. There is, indeed, a differential opportunity between the two populations. Part (b) of Hypothesis Three posits that employee job satisfaction in the higher-order need categories is more closely correlated with quality of

job performance than is employee satisfaction in the lower-order categories for the composite sample. However, since overall job satisfaction and quality of performance are not significantly correlated in the non-managerial sample, neither higher-order satisfaction nor lower-order satisfaction are logically expected to be related to performance quality with a high degree of significance in the composite sample. This expectation must be kept in mind as this overall correlation is interpreted. Table Six presents data on this question.

TABLE VI

RELATIONSHIP FIVE: HIGHER-ORDER SATISFACTION AND PERFORMANCE VERSUS LOWER-ORDER SATISFACTION AND PERFORMANCE

Variables	Sample	Correlation	t	Significance
Higher-Order Job Satisfaction Quality of Performance	Composite	+.155	1.97	.05
Lower-Order Job Satisfaction Quality of Performance	Composite	+.09	-	+

Relationship Five serves as a test of Hypothesis Three (b). As Table Six indicates, for the composite sample, the coefficient of correlation between quality of performance and higher-order job satisfaction is +.155. The t value of 1.97 obtained for this coefficient indicates that it is statistically significant at the .05 level. The coefficient of determination for this r value is .02, indicating that two per cent of the variation in one variable is attributable to that in the other.

For the composite sample, the coefficient of correlation between quality of performance and lower-order job satisfaction is +.09. The t test indicates that this coefficient is clearly insignificant.

In summation, the correlation between higher-order satisfaction and performance quality is greater than that between lower-order satisfaction and performance quality. The former is statistically significant while the latter is not. The difference is great enough for statement (b) of Hypothesis Three to be considered substantiated in the composite sample. However, both conventional wisdom and previous findings suggest that the margin between the size of the higher-order satisfaction and performance correlation and that of the lower-order satisfaction and performance

correlation should be greater within the managerial sample. In fact, it appears that the composite sample margin may be a function of that in the managerial sample.

It becomes significant, therefore, to ask the question: Is higher-order job satisfaction equally attainable through performance in both samples? Or, as anticipated, is it more attainable in the managerial sample? The validity of the Lawler Porter Model in the managerial sample, and non-substantiation of this model in the non-managerial sample, tends to suggest this differential. Relationship Six is a test of this question. It centers on the correlation between higher-order job satisfaction and quality of performance for the managerial sample, as opposed to that for the non-managerial sample. Table Seven presents these data.

In the managerial sample, the value of the correlation coefficient for the relationship between higher-order job satisfaction and performance quality is +.43. The t value of 3.47 obtained for this coefficient indicates that it is statistically significant at the .01 level. The coefficient of determination for this r value is .18, indicating that eighteen per cent of the variation in one variable is attributable to that in the other. Based on the observed validity of the Lawler Porter Model in this sample, it appears that

a higher performance level (in terms of quality) tends to lead to higher-order job satisfaction.

TABLE VII

RELATIONSHIP SIX: MANAGERIAL HIGHER-ORDER SATISFACTION AND PERFORMANCE VERSUS NON-MANAGERIAL HIGHER-ORDER SATISFACTION AND PERFORMANCE

Variables	Sample	Correlation	t	Significance
Higher-Order Job Satisfaction Quality of Performance	Managerial	+.43	3.47	.01
Higher-Order Job Satisfaction Quality of Performance	Non-managerial	+.06	.59	--

In the non-managerial sample, the value of the correlation coefficient for the relationship between higher-order job satisfaction and performance is +.06. The t value of .59 indicates that this coefficient is clearly insignificant. It would have to be .19 to be significant even at the .05 level. In light of the absence of validity of the Lawler

Porter Model in this sample, as indicated, this low coefficient is fully expected here.

The correlation between higher-order job satisfaction and performance quality is substantially greater for the managerial sample than for the non-managerial sample--great enough, in fact, for this correlation to appear significant in the composite sample. The former is statistically significant while the latter is not. There is indeed a "differential opportunity" in the present organization for employees to satisfy their needs intrinsically through performance, with greater higher-order satisfaction possible or attainable through performance in the higher echelons. The managerial type of work position is evidenced as resulting in potentially greater job satisfaction in the higher-order need categories.

General Discussion of Correlation Analysis

As yet, there has been relatively little systematic analysis of the relationship between the job design process and variables such as employee performance and job satisfaction (3, p. 421). The activity in which an incumbent must engage in order to perform his job, his schedule of job duties, is a function of the process of "job design." The tenets of the Lawler Porter Model stress this process as

the basis, or focal point, of employee satisfaction. If job design results in a work position characterized by "interesting," challenging, or sophisticated activity, it could be hypothesized, in the framework of the Lawler Porter Model, that a high level of performance quality or productivity would tend to lead to a commensurately high level of employee satisfaction. Additionally, it could be hypothesized that a lower level of performance quality would lead to a commensurately low level of employee satisfaction.

On the other hand, if the job design process, because of the dictates of the functional structure of an organization, or because of organizational climate, the machine system, or technology in general, results in a work position the duties of which are "uninteresting," "monotonous," or non-sophisticated, it could be hypothesized that high performance quality comes only when it is engineered or forced. More specifically, expectations would be that high-level productivity in these situations often results from organizational demands or is engineered into the setting. Consequently, a low level of employee satisfaction and a low correlation between satisfaction and performance result. The differential in the relationship of performance and satisfaction between the two basic types of positions can be

seen. It appears that satisfaction level varies with the level of performance in the case of managerial positions because of the operation of intrinsic rewards. In the case of non-managerial positions, organizational demands can enforce high levels of performance, but in the process, employee satisfaction is both driven down absolutely and separated from performance quality. The intrinsic reward, it appears, is not present to generate employee satisfaction. As previously suggested, the question should be asked: Is the job design process for these non-managerial jobs too rigid or fixed? Do we need massive job re-design?

Gellerman has discussed the machine-paced job situation, as one in which the incumbent is merely a follower of procedures and rules. Activities are rigidly engineered and the relationship between performance quality and employee satisfaction, notes Gellerman, is expected to be quite low. This situation is in definite contrast with the work position in which craftsmanship and creativity can be employed. Here, the two variables are closely related (4, p. 247-248). These situations appear to parallel the two focused upon in the present study--the former paralleling the managerial situation and the latter, the non-managerial situation.

Gellerman has further noted the idea that in worksettings where performance is more complex and involving, the employee can be himself more during his work hours. He can have a psychological advantage and it is reflected in overall job satisfaction (4, p. 250). This type of setting appears to parallel the managerial case in the present organization.

Argyris has made the point that lower-level, nonmanagerial positions offer rewards which are basically extrinsic to actual performance. They are delayed and indirect in nature. He has also suggested that the correlation between employee satisfaction and quality of performance in such situations is accordingly quite low. Higher-level, managerial positions, on the other hand, offer rewards which are more intrinsic--rewards which are direct and immediate. Here, he suggests a higher consequent correlation between satisfaction and performance (1, pp. 66 and 94). Argyris's expectations seem confirmed in the present study.

Vroom has discussed briefly the relative merits of the "traditional assumption" and its "reverse" (essentially, the Lawler Porter Model) and has suggested that the latter is clearly the more plausible in situations where performance

leads to intrinsic reward or where it leads directly to extrinsic reward (10, p. 182). The correlation analysis indicates that in the managerial population of the present study, performance leads to intrinsic reward. Appendix E, page 140, indicates that for the managers, performance tends to lead directly to extrinsic reward (monetary compensation satisfaction), as well.

As Appendix E indicates, in the non-managerial population of this study (unlike the managerial population) monetary compensation does not appear to be free to fluctuate in accordance with employee performance. Satisfaction with this factor is not directly related to performance. Consequently, where there exists little intrinsic reward and overall satisfaction must depend upon this extrinsic form of reward, satisfaction and performance appear to deviate.

Rosen and McCallum report a study of 385 production workers. Their production rates vary drastically, but the satisfaction factor was virtually non-differentiable between the top 40 and the lower 40 producers (9, p. 437). Here, it is clear that there is no close correlation between satisfaction and productivity. This phenomenon can be interpreted (with the help of the Lawler Porter Model) to mean that the job is so non-involving, so non-rewarding, that high

production means no greater satisfaction than low production. (The "traditional assumption" has difficulty accounting for this situation. With satisfaction virtually at the same level for each employee studied, how can one account for the widely varying degrees of effort exertion necessary for the varying production records?)

The Lawler Porter Model appears, on the surface, the more feasible explanation of these findings. But both theorists and practitioners have warned against overlooking the potential operation of social factors, such as the informal work group, in such situations. They have suggested that such factors can often serve as the "third variable" in the performance-satisfaction relationship. Gellerman, for instance, has reported that when performance and satisfaction are inversely related (as they are in the Rosen and McCallum study for one-half of the sample), one could well have a "frozen work group" operating below the surface. Such a group holds as the price of membership, restricted productivity. Group members report high satisfaction because of the fact that they are included in the work group. The phenomenon of "group membership," then, when the group is cohesive and negative in its effect upon performance,

potentially drives the performance and satisfaction variables apart (4, pp. 247-248).

Consequently, as the present study was being conducted, the phenomenon of group membership was observed. In the present organization, no evidence was found which indicated that such a group was operating to increase satisfaction at the expense of performance. Informal groups and carpools were found to exist, but none which appeared to be of an extremely cohesive and negative nature. On the contrary, the relatively non-cohesive groups which were found to exist appeared, more often than not, positive in their effect upon quality of performance--or, at the very least, neutral.

A final word about the Lawler Porter Model is in order. This model implies that recognized performance leads to reward which, in turn, leads to job satisfaction. The type of satisfaction stressed in the model is performance-related satisfaction, in contrast with the performance-extrinsic form of satisfaction generally embodied in the "traditional assumption." The values of the appropriate correlation coefficients indicated that employee satisfaction sensed in "Time Period One" did not tend to lead to subsequent effort and performance, commensurate in nature, in "Time Period Two." In the composite sample, as well as in the two samples

separately, these coefficients were not statistically significant. (Effort exertion, in the present research setting, seems to stem more from the sheer fact that it is necessary in order to sustain organizational membership.) The point is, however, that a significant, positive correlation between effort and satisfaction, so long as it is significantly less than that between performance and satisfaction, would not serve as a refutation of the Lawler Porter Model. Lawler and Porter (6), themselves, found a correlation of this nature between effort and satisfaction. It would be a logical expectation that performance-related satisfaction would tend to "cycle back around" and tie with subsequent effort, and imperfectly with subsequent performance. This would not result in substantiation of the "traditional assumption" so long as the tie between satisfaction and preceding performance were greater than that between satisfaction and subsequent effort exertion. The significant requirement is that the "primary direction" of the performance-satisfaction relationship move <u>from</u> performance <u>to</u> satisfaction. This does not preclude a lesser, yet tangible, relationship moving from satisfaction to effort.

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CHAPTER IV

SUMMARY AND CONCLUSIONS

The present study took place in a unique but important organizational setting--an institution for the mentally retarded. The study centered on the universal phenomena of work performance and human satisfaction. An analysis has been made of the validity of the tenets of the Lawler Porter Model of employee job satisfaction, which states the idea that performance leads to rewards which, in turn, lead to satisfaction. This model is in marked contrast with the older, "traditional assumption" that satisfaction leads to performance, as it is essentially its converse. Two populations--one labeled "managerial," and the other, "non-managerial"--were selected within the focal organization. Random samples were drawn from each. Data were collected on job satisfaction, performance, and effort, as well as on the nature of specific work positions. Job satisfaction measurement was accomplished through structured interviews; performance and effort data were gathered through superior and peer ratings. The Position Analysis Questionnaire was utilized to describe the work positions of the two populations. As a means of

testing the hypotheses, seven basic correlations were computed on the data. The correlation analysis tested the Lawler Porter Model within the two populations by allowing the level of performance, in terms of quality, to fluctuate as a variable. Differences between managerial and non-managerial job situations were noted in considerable detail. Table Eight summarizes the basic correlations computed.

TABLE VIII

THE CORRELATION ANALYSIS

Relationship Number	Variables*		Sample	Correlation	Significance
1	S_o	P	Composite	+.148	--
2	S_o	E	Composite	-.00	--
3	S_o	P	Managerial	+.41	.01
			Non-managerial	+.04	--
4	S_o	E	Managerial	+.10	--
			Non-managerial	-.02	--
5	S_h	P	Composite	+.155	.05
	S_l	P	Composite	+.09	--
6	S_h	P	Managerial	+.43	.01
			Non-managerial	+.06	--

*S_o, overall job satisfaction; P, performance; E, effort; S_h, higher-order satisfaction; S_l, lower-order satisfaction.

As Table Eight indicates, two satisfaction-performance correlations are statistically significant at the .01 level. One satisfaction-performance correlation is significant at the .05 level. The more highly significant correlations--those between satisfaction and performance--are located within the managerial sample. One composite sample correlation is significant. The remaining coefficients are statistically insignificant.

Table Nine ties the specific correlations and relationships between correlations to the relevant samples and indicates whether the hypotheses and theoretical models relevant to the specific correlations and relationships are supported, or not supported. The hypotheses of the present study, and the theoretical models they stem from, are summarized in this table.

From Table Nine, the following conclusions become readily apparent:

1. Hypothesis One acquires substantiation in the managerial population.

2. Hypothesis Two is supported in the managerial population.

3. Hypothesis Three (a) is supported in the composite population.

TABLE IX

HYPOTHESES AND MODELS

Relationship Number	Sample	Relevant Hypotheses*		Relevant Models**	
		Supported	Not Supported	Supported	Not Supported
1	Composite	. .	1	. .	. .
1 *vis-à-vis* 2	Composite	. .	2	. .	LP TA
3	Managerial	1+	. .	. .	. .
	Non-managerial	. .	1+	. .	. .
3 *vis-à-vis* 4	Managerial	3a 2+	. .	LP	TA
	Non-managerial	3a	2+	. .	LP TA
5	Composite	3b	. .	LP	. .
6	Managerial	3b	. .	LP	. .
	Non-managerial	. .	3b	. .	LP

*Summarized, the hypotheses read: (1) There is a statistically significant, positive correlation between satisfaction and performance. (2) The correlation between satisfaction and performance is significantly greater than that between satisfaction and effort. (3) There is a differential opportunity for need satisfaction, with greater and higher-order satisfaction attainable in the higher echelons: (a) the correlation between satisfaction and performance is greater for managers than for non-managers, (b) higher-order satisfaction is more closely correlated with performance than is lower-order satisfaction.

**LP, the Lawler Porter Model; TA, the "Traditional Assumption."

+These hypotheses were advanced in the context of the composite managerial-non-managerial population, but were analyzed within the separate populations, as well.

4. Hypotheses One and Two are not supported in the composite population.

5. Hypotheses One, Two, and Three (b) are not supported in the non-managerial population.

6. Hypothesis Three (b) is supported in the composite and the managerial populations.

In terms of the two relevant theoretical models,

1. The Lawler Porter Model (unlike the "traditional assumption") is supported in the managerial population.

2. Neither the Lawler Porter Model nor the "traditional assumption" is evidenced as receiving support in the non-managerial population.

3. The Lawler Porter Model appears to receive limited support in the composite population, but this can be attributed to its substantiation in the managerial population.

In the present study, then, the Lawler Porter Model obtains direct substantiation within the managerial population, alone. The "traditional assumption" is given no support in either population. Stated differently, the assumption that employee satisfaction leads to work performance through the exertion of commensurate effort is by no means evidenced in the present organization. The impression

that it is "the general rule" is certainly not reinforced. In fact, the converse is evidenced in managerial situations: employee job satisfaction tends to stem in part from job performance.

Both overall and higher-order job satisfaction are evidenced as stemming from recognized performance in the managerial population. In neither population does employee job satisfaction appear to manifest itself in the amount of effort displayed on the job. Neither overall job satisfaction nor higher-order job satisfaction tend to stem from recognized performance within the non-managerial population. Only within the managerial population does job satisfaction clearly appear to stem from, more than it leads to, work performance.

The findings of the present study can be considered tentative hypotheses of the situation as it exists in similar organizations within the state, and for that matter, elsewhere. Furthermore, it is hypothesized that they tend to approach representative descriptions of formal organizations of similar size because they reflect the behavior of common phenomena.

The organization studied is similar in nature to the eight other state schools for the mentally retarded in Texas

and basically similar to the seven other mental health institutions in the state. They are all operated under the same governing board. Each of the state schools has basically similar resident populations--all of them serving those deemed mentally retarded. They all operate with identical personnel classifications, approximately the same basic percentages of administrative, professional, child-care, clerical, and service employees, similar operating policies, and the same basic salary structure. Furthermore, each organization is predicated on the same basic objective--proper care and maximum possible development of mentally retarded people.

Conclusions and observations drawn from the present study can accordingly be considered applicable to the other state schools in Texas. Furthermore, they are generally applicable in other State of Texas organizations of similar scope having the same basic hierarchial breakdown between administrators, professionals, and patient-care attendants--such as the seven state hospitals. In addition, they are applicable, in the broad sense, to similar institutions and organizations in other states. As a general rule, direct applicability can be found in other organizations (1) if

they are of similar size or scope and (2) if they are composed of the same basic types and proportions of employees.

Countless organizations of all types are of similar size, but the requirement that there be patient-care personnel in the organization is essential before findings drawn from the non-managerial sample can be applied to that organization. Although non-managerial people in other organizations may be similar in terms of their psychological characteristics, generalization is limited because the work setting--that of providing care to people--is unique, and because the variables measured in this study are, to a great extent, functions of the work setting. Only to the extent that non-managers in differing organizations perform jobs which are similar in the type of rewards they offer, would present findings be approximated. If these jobs offer basically extrinsic reward--primarily monetary compensations--present findings would tend to be duplicated. If, on the other hand, they offer greater opportunities for craftsmanship, challenge, and absorbing involvement, this would not be the case.

Conclusions drawn from the managerial sample, on the other hand, tend to be more generally applicable in differing organizations. Managerial jobs universally share a common array of functions and responsibilities despite the

unique objectives of their particular organizations. These jobs tend, generally, to offer greater intrinsic reward. In situations where the same degree of reward in terms of status, prestige, autonomy, and self-realization is offered, present managerial findings should be approximated.

Additionally, present findings are deemed a valuable contribution to the literature on this subject. Vroom (3) has criticized the practitioners and theoreticians in the field of Industrial Psychology for conducting atheoretical research. The present study has been shaped to avoid such criticism. Herzberg et al., have suggested future research directions: "The findings of this research should be related to the existing body of psychological theory . . ." (6, p. 112). The present study draws from a current and previously tested theoretical model of need-satisfaction and utilizes a current, but as yet little tested, model of the relationship between performance and satisfaction variables.

The Lawler Porter Model has undergone only limited testing. Heretofore, it had only been tested on 148 managerial subjects (2). In the present study, both managerial and non-managerial work positions serve as the focus of further testing of this model in a state institution for the mentally retarded, an approach not taken to this matter and

an organizational setting not previously studied in such a manner. The scope of the conclusions drawn from this study is somewhat narrowed by virtue of its unique organizational setting--though, it can be advanced, only "somewhat" because of the universality of the phenomena analyzed.

From the correlation analysis, it is evident that the best means of simultaneously maximizing administrative concern for both people (job satisfaction) and production (performance) in this and similar organizations is to create a work position which is as substantive as possible. It appears evident that the generally low correlation previously reported between performance and satisfaction stems from the fact that the nature of reward typically studied positions in practice provide incumbents is largely performance-extrinsic. The potential (intrinsic) reward which comes from substantive performance has not been focused upon in previous research, it appears. It becomes evident that the job design process in formal organizations should, as far as possible, be viewed as a means of generating intrinsic employee satisfaction--rather than solely as a means of reflecting what technology and organizational pressure dictates, leaving job satisfaction basically a work-extrinsic phenomenon.

Gellerman has remarked: "The maintenance of high morale must be considered a permanent responsibility of management" (1, p. 248). How can this responsibility be most efficiently discharged? Through secondary, performance-extrinsic means of increasing satisfaction? Or through direct means of increasing satisfaction by upgrading, broadening, and giving dimension to, the substance of the work? The Lawler Porter Model suggests the latter is the more feasible long-term alternative. It would seem that if work positions were structured so that a larger percentage of the reward which stemmed from them were intrinsic, satisfaction and performance would parallel more closely. More specifically, if they were structured where the employee sensed prestige or craftsmanship in his work, where he had significant work-related authority, where he could continually develop and utilize new skills and abilities, and where he could exert independent thought and action in his work, such a parallel would seem more likely. It appears as if these are the necessary prerequisites for a close satisfaction-performance relationship. Extrinsic job satisfaction does not appear to lead to commensurate performance. It seems that intrinsic satisfaction can stem, in a manner which parallels quality of performance, only from more substantive work performance. It has become

evident, then, that substantive work is a vital part of the compensation package. Specific attention, then, should be paid by the management of this type of organization to the job design process. Jobs should be designed so that increments of performance more directly lead to intrinsic reward--so that performance is tied more closely to satisfaction. In the present organization, a high level of performance quality is not reflected as often as it should be in a high level of employee satisfaction.

Furthermore, emphasis should be placed on improvement of compensation policy and practice in order that monetary compensation be tied more closely to quality of performance. In the present organization, the tie is not direct. Second, the wisdom underlying various means of increasing employee satisfaction which are secondary or extrinsic to actual work performance needs to be reconsidered. Are these means the more efficient long-term approach to the question of employee satisfaction? Third, effort needs to be exerted in building a managerial and supervisory philosophy wherein job performance is deemed the legitimate source of employee satisfaction. Such a philosophy, if manifested in the proper managerial and supervisory style and practice, would permit employees the freedom, and generate inside them the inclination and

motivation, to seek intrinsic job satisfaction. Fourth, a greater emphasis needs to be placed on pinpointing what employees actually do in their work positions so that they can be properly trained, retrained, and generally equipped to seek and obtain both extrinsic and intrinsic reward from performance of such positions. Fifth, organizational planning procedures, formal structure, and control policies need to be shaped in a direction which harmonizes with this approach to employee satisfaction. Planning needs to be reshaped in the direction where the individual employee can set his own objectives. Organizational structure needs to be viewed more flexibly allowing greater freedom of relationship. Control needs to become less punitive and centered more on the goals of the individual worker.

It has become apparent from the absolute value analysis, detailed in Appendix F, page 148, that in this and similar organizations, non-managerial employees do not bring the same set of operative needs to their work settings as managerial employees do. In the former case, operative needs are more of a lower-level nature. However, in the present organization (and it can be hypothesized that this would tend to be the case in similar organizations), managerial work positions appear to satisfy their incumbents more fully

than non-managerial positions satisfy theirs. This conclusion can be drawn despite the fact that those performing the more substantive positions tend to desire more of the higher-level, intrinsic type of reward from their work.

In a concluding vein it can be stated that both the "human" and the "physical" aspects of the present organization were vitally involved in the analysis. This dual nature sets the study apart from those previously conducted. Use of the Position Analysis Questionnaire in the present study resulted in a detailed and objective indication as to the nature of the specific work positions held by the subjects. The job satisfaction questionnaire interview form was an attempt at the measurement of the way the human being responds to the overall work setting. The relationship between the "human" and the "physical" organizational aspects is, in a sense, the target of this analysis. Perhaps, it is inevitable that there will be a type of chasm between these two sides of an organization causing a divergence between work performance and job satisfaction, particularly at the lower echelons.

Broadly speaking, an essential question stems from this. Must the physical work setting (technology) be fixed causing employee satisfaction to stem only from factors extrinsic to

job performance or should technology be flexible so that employee satisfaction can stem universally from job performance? The Lawler Porter Model suggests the latter is theoretically the sounder alternative. Implicit in the theory underlying the model is the superiority of the situation in which job satisfaction and work performance are closely correlated, in which performance leads to satisfaction (satisfaction tends to be intrinsic), and in which both satisfaction and performance are evidenced at high levels. In the present study, only the managerial population of the organization approaches this situation. It can be hypothesized that only in the managerial sectors of similar organizations does this basic situation exist. In fact, it can be hypothesized that performance and satisfaction tend to diverge as one approaches the lower echelons of most formal organizations.

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APPENDIX A

THE HERZBERG SURVEY

Morale Positively Related to Productivity*

Occupation	Attitude Measure	Productivity Measure
Sewing Machine Operators	Attitude Questionnaire (Hoppock)	Ratings by Supervisor on "Efficiency"
Employees of a Mail Order House	Morale Questionnaire	Production Efficiency and Error Index
Handicapped Sewing Machine Operators	Interviews; Ratings of Attitudes	Earnings (Piece-work)
County Agricult. and 4-H Club Agents	Attitude Questionnaire	Ratings by Supervisors
Farmers	Attitude Questionnaire	Net Earnings
High School Teachers	Attitude Questionnaire	Achievement by Students
Office Workers in Industrial Plant	Questionnaire (Attitude toward superior)	Ratings by Executives
Carpenters and Bricklayers	Attitude Questionnaire	Labor Cost and Materials Cost per Building Unit
Aircraft Maintenance Crews	Attitude Questionnaire	Technical Competence and Supervisory Ratings
Insurance Agents	Statements and Ratings of Attitudes	Sales; Supervisor's Ratings
Factory Workers	Self-Estimate of "Mood"	Percentage of "Standard" Output
Insurance Agents (Two Studies)	Attitude Questionnaire	Number of Policies Sold

THE HERZBERG SURVEY--Continued

Occupation	Attitude Measure	Productivity Measure
Bus Conductors	Attitude Questionnaire	Earnings, Supervisor's Ratings, "Offenses"
Office Personnel in an Insurance Company	Attitude Questionnaire and Test of Knowledge of Company; Participation in Activities	Proficiency Ratings; Test on General Facts and Principles
Office Employees of an Insurance Company	Interview Including Questions on Job Attitudes	Group Productivity Records (Personnel costs per unit)
Grocery Store Clerk	Ratings on Basis of Interviews; Open-Ended Questionnaire; Projective Techniques	Work History Records
Civilian Accounting & Clerical Personnel at an AAF Base	Attitude Questionnaire; Supervisor's Rating of Morale	Supervisors Ratings; Number of Errors; Amount of Work Accomplished (where possible)
IBM Machine Operators in an Insurance Company	Attitude Questionnaire	Supervisor's Rating of Performance
Semi-skilled Factory Workers	Attitude Questionnaire	Measures of Output
College Students who had Full- or Part-time Work Experience	Subjective Estimate of "Pleasantness" or "Unpleasantness" of a Work Group	Check List of "Efficiency" Items
Factory Girls	Questionnaire	Efficiency Ratings

THE HERZBERG SURVEY--Continued

Occupation	Attitude Measure	Productivity Measure
Aircraft Factory Employees	Self-Estimate of Morale; Attitude Questionnaire; Group Morale Questionnaire	Merit Ratings
Linotype Operators	Attitude Questionnaire	Supervisor's Ratings
Members of Section Gangs doing Railroad Track Maintenance	Intensive Interview	Supervisor's Ratings
Railroad Workers	Interview	Supervisor's Ratings

*A reproduction of Table 3, 4, and 5 in Herzberg, Frederick, Bernard Mausner, R. O. Peterson, and Dora Capwell, Job Attitudes: Review of Research and Opinion, Pittsburgh, Psychological Service, 1957, pp. 90-100.

THE VROOM SURVEY*

Author and Year	Population	Correlation	Production Criterion	N
Baxter (55)	Insurance Agents	.23 (.26)	R** (O)	233
Bellows (55)	Control Tower Operators (A.F.)	.055	R	109
Bernberg (52)	Hourly-paid Employees	.05	R	890
Brayfield (55)	Female Office Employees	.14	R	231
Brayfield & Mangelsdorf (55)	Plumbers Apprentice	.203	R	55
Brayfield & Marsh (55)	Farmers	.115	R	50
Brody (45)	Piece-work Employees	.68	O	40
Fleishman, Harris & Burtt (55)	Equipment Manufacturing Employees	.31	R	58
Gadel & Kriedt (52)	IBM Operators	.08	R	193
Giese & Ruter (49)	Departments in Main-order Company	.19	O	25
Hamid (53)	Insurance Agents	.22	O	552
Heron (54)	Bus Drivers	.308	O	144
Lawshe & Nagle (53)	Departments in Office	.86	R	14

THE VROOM SURVEY--Continued

Author and Year	Population	Correlation	Production Criterion	N
Lopez (62)	Administrative-Technical Employees	.12	R	124
Mann, Indik & Vroom (63)	Truck Drivers--	.14	R	28
	Large Groups	.21	O	. .
	Positioners--	.18	R	24
	Small Groups	.02	O	. .
Mossin (49)	Sales Clerks	.03	R	94
Sirota (58)	Electronics Employees	.11	R	377
	Supervisors	.13	R	145
Vroom (60)	Delivery Company Supervisors	.21	R	96

*A reproduction of Table 6-1, "Correlation Studies--Job Satisfaction and Job Performance," from V. H. Vroom, Work and Motivation, New York, Wiley & Sons, 1964, pp. 184-185.

**R refers to performance ratings; O refers to objective measures of productivity.

APPENDIX B

MASLOW'S NEED-HIERARCHY CLASSIFICATION

A. H. Maslow's representation of human motivation is based on the "prepotency" of needs. Human needs are arranged in a hierarchy with the most basic first to be satisfied. Once a need is satisfied, it no longer motivates; higher-order needs dominate. At the lower-level of the hierarchy lie the most basic of all human needs: those of a physiological nature. Represented here are hunger, thirst, sex, taste, smell. This category of needs dominates when unsatisfied. Next in order of prepotency are the safety needs: safety from extreme temperature, the other elements, wild animals, criminals, tyranny. The next category on the hierarchy represents the need for love: giving and receiving affection. Also within this category is the need for belongingness (friends, family, place in the work group). The next plateau on the hierarchy embodies the need for esteem: a stable, firmly-based evaluation of self. Additionally, it can be self-respect, self-esteem, the esteem of others, status, and self-confidence. It is based on real capacity and achievement. The pinnacle of the hierarchy is self-realization: fulfilled potential or creative power.

It is expressed in the statement, "What a man can be, he must be." Only a rare individual achieves full satisfaction at this level--for all the lower-level needs must be satisfied first. The hierarchy of needs is not totally or absolutely fixed. For a few individuals, self-esteem is more important than love. For some, the higher-order needs may be completely lost. (See A. H. Maslow, "A Theory of Human Motivation," Psychological Review, L [July, 1943], 370-396.)

In studies of formal organizations, the physiological and safety levels of the original hierarchy are viewed together as the overall security category. The autonomy category is generally added to esteem and self-realization to make-up the higher-order needs. These modifications of the initial need hierarchy--not original with the present study--are made in the interest of full adaptability to organizational study. (See L. W. Porter, "A Study of Perceived Need Satisfaction in Bottom and Middle Management Jobs," Journal of Applied Psychology, XLV [February, 1961], 1-10.)

APPENDIX C

THE ORGANIZATION STUDIED

The organization which provides the setting for the present study is a large Texas school for mentally retarded young persons. Since commencing operations in 1960, the organization has served a thirty-five county area of Texas. Resident capacity has grown to 1750 beds, 550 of which are for bedfast residents.

Along with thirty-nine dormitories, the well-equipped campus houses administrative, academic, maintenance, and volunteer services buildings, in addition to a gymnasium, a swimming pool, a laundry, a non-denominational chapel, and various shops.

Residents of the school, generally between six and thirty years of age upon admission, are persons of both sexes found to be retarded-intellectually, emotionally, socially, and frequently, physically. Of the resident population: about one-fourth are considered "mildly retarded," with Intelligence Quotient test scores falling between fifty and seventy, and hence thought to be "educable"; about one-fourth are "moderately retarded," with IQ scores between thirty-five and fifty and considered "trainable"; about one-fourth are considered "severely

retarded," with IQ scores between twenty and thirty-five; and the remaining fourth, "profoundly retarded," with IQ scores below twenty. (It is estimated that about three per cent of the general United States population is retarded and that within this percentage, about eighty-five per cent are "mildly retarded.")

The organization is managed with a "team approach" to resident care. The personnel are divided into six teams--four of them working with ambulatory residents and two with the bedfast and semi-ambulatory. Each team consists of a psychologist (who serves as coordinator), a physician, a social worker, supervisors, dormitory directors, therapists, trainers, and houseparents. Each team has responsibility for a given "level" of retardation.

The organization has also held intact its formal structure with its traditional lines of authority. In a sense then, there exists "an organization within an organization." Operationally speaking, however, there is a partial separation as the formal organization is basically administrative while the team organization is resident-oriented.

The present study samples both managerial and non-managerial level people within the organization. Administrative department heads plus professional, quasi-professional,

and supervisory people from the six teams, essentially, constitute the former group. Trainers, houseparents, hospital aids, and members of the clerical staff constitute the latter sample.

APPENDIX D

SATISFACTION QUESTIONNAIRE

You are being asked to think about your job. Certain aspects of your job will be the subject of questioning. You will be asked to state HOW SATISFIED YOU ARE with those specific aspects. Check the space under the most appropriate answer. Note that this information is for an independent research project. It will not be seen by your superiors at _____. And certainly, nothing you say will be held against you. Consequently, you are asked to be completely objective in your answers. Please fill in the following for tabulation purposes:

Name _____ Job Title _____ Department _____

HOW SATISFIED ARE YOU WITH EACH OF THE FOLLOWING: (Check appropriate column)	DISSATISFIED				SATISFIED		
	Highly	Moder-ately	Fairly	Feel Neutral	Fairly	Moder-ately	Highly
1. The feeling of security you have in your job	____	____	____	____	____	____	____
2. The opportunity in your job to give help to other people	____	____	____	____	____	____	____
3. The prestige your job offers	____	____	____	____	____	____	____
4. The authority you have in your job	____	____	____	____	____	____	____
5. The opportunity for personal development in your job	____	____	____	____	____	____	____

6. The pay your job offers

7. The feeling of "being in the know" that you experience on your job

8. The opportunity to develop close friendships on your job

9. The credit you get for your job efforts

10. The opportunity for independent thought and action on your job

11. The opportunity to use your abilities on the job

Rating Form

for

"QUALITY OF PERFORMANCE"

You are being asked to rate on a "one-to-seven" scale, the over-all quality of performance that _____ displays on the job, as you have observed it in recent weeks. Think in terms of the end-result, or product, of the individual's activity, not the percentage of his ability that he appears to put into his job. Report average performance. Do not be overly influenced by a single, recent observation. Note: The rating you make is for independent research purposes and will not be used against either the rater or the person being rated.

USE THE FOLLOWING SCALE

1 2 3 4 5 6 7

Minimum Performance

Maximum Performance

Rating Form

for

"AMOUNT OF JOB EFFORT"

You are being asked to rate on a "one-to-seven" scale, the over-all amount of effort that _____ appears to "put into" his job, as you have perceived it in recent weeks. Think in terms of what the individual "puts into" his job: Does he seem to be using his full ability or potential on the job? What percentage of his ability is he using? Do not be overly influenced by the most recent single observation you have made. Note: The rating you make is for independent research purposes; it will not be seen by the management of _____; it will not be used against you or the person being rated.

USE THE FOLLOWING SCALE

1 2 3 4 5 6 7

Minimum Effort

Maximum Effort

Instruction Pages for the

POSITION ANALYSIS QUESTIONNAIRE (PAQ)

Occupational Research Center
Department of Psychology
Purdue University

INSTRUCTIONS FOR USE BY ANALYSTS

General

This Position Analysis Questionnaire (PAQ) is to be used in characterizing various aspects of positions. It consists of a listing of elements, each of which is descriptive of, or infers or implies, some human behavior or activity, or some aspect of the work situation that impinges upon the worker.

Before attempting to use the PAQ, the analyst should read carefully each item in the Questionnaire. In doing so, the analyst will become familiar with both the structure of the various items and the organization of the items into sections of the Questionnaire. In addition, he should be familiar with the job to be analyzed and with the various aspects of the work situation. If there is a need to develop such a familiarity, this typically should be accomplished through interview and observation techniques.

In the case of some elements, it may be necessary, during an interview with the incumbent or his supervisor, to ask questions that are specifically relevant to the element in question, in order to elicit information for use in responding to the element.

Organization of the PAQ

The Position Analysis Questionnaire is organized by major divisions. These divisions are listed below, along with a "question" that can be kept in mind in considering the elements within each division.

1. Information Input (What are the sources of information used by the incumbent, and what sensory and perceptual skills are involved?)

2. Mediation Processes (What mental, reasoning, decision-making, information processing, and other mediation processes are involved?)

3. Work Output (What are the overt physical activities that the incumbent carries out as the consequence of the intervening mediation processes?)

4. Interpersonal Activities (What are the interpersonal activities and relationships of the position?)

5. Work Situation and Job Context (In what physical and social situation does the incumbent work? And what are some of the sociological and psychological concomitants of the work?)

6. Miscellaneous Aspects

In analyzing a position it may be helpful to keep the above frame of reference in mind, as a means of providing "structure" to the analysis.

Specific Instructions

When an item applies to a job, provide the information requested:

An item may apply to a job either because it is "universal," or because the analyst has decided that it applies. In either situation, the analyst is to provide the information requested by entering the appropriate response in the space provided. For a given item, one of four general "types" of information may be required. These different types of information can be recognized by the code letter in the blank space preceding the item. The types of information, and their "identification" in the PAQ, are given below:

How to Identify	Information to be Recorded
I ___	Importance of item to the job. When the letter "I" appears in the space preceding the item (and when the item applies to the job) rate the item in terms of its Importance to the job, using the scale below. Importance should be considered to refer to the relative extent to which the item in question applies to the job being analyzed, considering such factors as the relative amount of time involved, the possible degradation in overall job performance that might result if the incumbent would be deficient in fulfilling this aspect of his job, etc.

Code	Importance
1	Very minor (is an incidental, minor aspect of the job)
2	Low (is of below average importance to the job)
3	Moderate (is a moderately important aspect of the job)
4	High (is an aspect of substantial importance to the job)
5	Extreme (is a very important aspect of the job--one of the most important)

T ___ Amount of Time

Code	Time
1	Infrequently/rarely
2	Under 1/3 of the time
3	Between 1/3 and 2/3 of the time
4	Over 2/3 of the time
5	Almost continually

U ___ Extent of Use

Code	Extent of Use
1	Nominal/very infrequent
2	Occasional
3	Moderate
4	Considerable
5	Very Substantial

How to Identify	Information to be Recorded--(Continued)
S	Special Code. When an "S" identifies an item, there is a special code for use with that particular item; this special code appears immediately below the item. This code does not apply to any other item.
X	Check items. Where an "X" identifies an item, simply check the space if the item applies to the job.

POSITION ANALYSIS QUESTIONNAIRE INFORMATION*

Analysis of A Managerial Position and a Non-Managerial Position Held by Members of the Sample

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INFORMATION INPUT

SOURCES OF JOB INFORMATION

Rate the following items in terms of the extent to which they are used by the worker as sources of information in performing his job.

Visual Sources of Job Information

U 5,1**	Written materials
U 3	Pictorial materials
U 4,1	Quantitative materials
U 1	Measuring devices
U 1	Work-aid devices
U	Mechanical devices
U	Materials in process
U	Materials not in process
U 1	Visual displays
U	Natural environment
U 1	Man-made environment
U 4,4	Behavior
U 5,3	Events or circumstances
U	Art or decorative objects or arrangements

Non-visual Sources of Job Information

U 5,3 Verbal sources

U 1,4 Sounds

U 1 Tactual

U 1,3 Odor

U 1 Taste

DISCRIMINATION AND PERCEPTUAL ACTIVITIES

Discrimination Activities

S 1,1 Near visual discrimination

Code	Degree of Precision
1	Gross
2	Intermediate
3	Substantial

Rate the following items in terms of how important they are to completion of the job.

I 1 Far visual discrimination

I 1 Depth discrimination

I 1,2 Color discrimination

I 1,2 Sound pattern discrimination

I 1,4 Sound discrimination

I 1 Body movement discrimination

I 1 Postural discrimination

Estimation Activities

In this section are various operations involving estimation or judging activities. In each case consider activities in which the worker may use any or all sensory cues available to him, e.g., visual, auditory, tactual, etc.

I 1 Estimating speed of moving parts

I 1 Estimating speed of moving objects

I 1 Estimating speed of processes

I 3 Judging quality

I 1 Estimating quantity

I 1 Estimating size

I 3,1 Inspecting

MEDIATION PROCESSES

DECISION MAKING AND REASONING

S 5,1 Decision making (indicate by code the level of decision making (typically) involved in the job, considering: the number and complexity of the factors that are taken into account; the variety of alternatives available; the consequences and importance of the decisions; the background experience, education, and training required; the precedents available for guidance; and other relevant considerations.

Code	Level of Decision
1	Low
2	Below average
3	Average
4	Above average
5	High

S 4,1 Reasoning in problem solving (indicate by code the level of reasoning that is required of the worker in applying his knowledge, experience, and judgment to problems)

Code	Level of Reasoning in Problem Solving
1	Use of common sense to carry out simple, or relatively uninvolved instructions
2	Use of some training and/or experience to select from a limited number of solutions the correct information required by the job
3	Use of relevant principles to solve practical problems and to deal with a variety of concrete variables in situations where only limited standardization exists
4	Use of logic or scientific thinking to define problems, collect information, establish facts, and draw valid conclusions
5	Use of principles of logical or scientific thinking to solve a wide range of intellectual and practical problems

INFORMATION PROCESSING ACTIVITIES

In this section are various human operations involving the "processing" of information or data. Rate the following items in terms of how important the activity is to the completion of the job.

I 3 Synthesizing/integrating

I 3 Analyzing information or data

I 2,1 Grouping/filing

I 1 Encoding/decoding

I 1 Transcribing

USE OF STORED INFORMATION

I 3,1 Short-term memory

S 7,2 Education

Code	Education (given level or equivalent)
1	Little or no formal education
2	Elementary school (through sixth grade)
3	Some high school (but not diploma)
4	High school diploma
5	Beyond high school (but not degree)
6	College degree
7	Advanced degree (M.S., Ph.D., M.D., etc.)

S 4,2 Job-related experience

Code	Job-related Experience
1	None
2	Less than 1 year
3	1 - 2 years
4	3 - 4 years
5	5 years or more

S 5,2 Training

Code	Training
1	Little or no training
2	2 - 5 days
3	1 - 4 weeks
4	2 - 11 months
5	1 - 2 years
6	3 - 4 years
7	5 years or more

S 2,1 Using mathematics

Code	Level of Mathematics
1	Basic
2	Intermediate
3	Advanced
4	Very advanced

WORK OUTPUT

USE OF PHYSICAL DEVICES

In this section are included various classes of devices that people use or operate on their jobs. Rate the following items in terms of how important the use of each type of device is to the completion of the job.

Hand Tools

Manually-powered

I ____ Precision tools

I ____ Gross tools

I ____ Long-handle tools

I 2 Handling devices

Powered

I ____ Precision tools

I ____ Gross tools

Other Hand Devices

I ____ Drawing and related devices

I ____ Applicators

I ____ Measuring devices

I ____ Technical and related devices

Stationary Devices

I 1 Machines/equipment

Control Devices

I ____ Activation controls

USE OF PHYSICAL DEVICES--(Continued)

Control Devices--(Continued)

I ___ Detent setting controls

I ___ Variable setting controls

I ___ Keyboard devices

Frequent adjustment controls (used in making frequent adjustments of mechanisms)

I ___ Hand-operated controls

I ___ Foot-operated controls

Continuous controls (used continuously in operation or use)

I ___ Hand-operated controls

I ___ Foot-operated controls

Mobile and Transportation Equipment

I 1 Man-powered vehicles

I 1 Powered land vehicles

I ___ Powered sea vehicles

I ___ Air vehicles

I 2 Man-powered mobile equipment

I ___ Powered mobile equipment

I ___ Operating equipment

I ___ Remote-controlled equipment

INTEGRATIVE MANUAL ACTIVITIES

I 1,3 Handling objects/materials

I 1,1 Arranging/positioning

I ___ Feeding/off-bearing

I ___ Material-controlling

I ___ Assembling

I ___ Manually modifying

I ___ Setting-up

GENERAL BODY ACTIVITIES

I 1,5 Mobility

I 1,2 Agility

Indicate by code the approximate proportion of working time during which the worker is engaged in the following activities.

T 1 Balancing

T 1,5 Standing

T ___ Climbing

T 1,5 Walking

S 1,4 Moving actions

Code	Amount of Weight
1	Lifting or carrying less than 10 lbs.
2	Lifting up to 20 lbs. or carrying up to 10 lbs.
3	Lifting up to 50 lbs. or carrying up to 25 lbs.
4	Lifting up to 100 lbs. or carrying up to 50 lbs.
5	Lifting over 100 lbs. or carrying over 50 lbs.

MANIPULATION/COORDINATION ACTIVITIES

Rate the following items in terms of how important the activity is to completion of the job.

I 1 Finger manipulation

I 1,3 Hand-arm manipulation

I Hand-arm steadiness

I Eye-hand-foot coordination

I Blind positioning

INTERPERSONAL ACTIVITIES

This section deals with different aspects of interpersonal relationships involved in various kinds of work, including communications.

Communications

Rate the following items in terms of how important the activity is to the completion of the job.

Oral (communicating by speaking)

I 5 Advising

I 4 Negotiating

I 4,1 Persuading

I 4 Instructing

I 4 Interviewing

I 4 Exchanging information

I 3 Public speaking

COMMUNICATIONS--(Continued)

Written (communicating by written/printed material)

I 4 Writing

Other communications

I 1 Signaling

I 1 Code communications

MISCELLANEOUS INTERPERSONAL RELATIONSHIPS

I 1 Entertaining

I 1 Serving/catering

AMOUNT OF PERSONAL CONTACT

S 5,5 Job-related personal contact (indicate by code the extent of job-related contact with others, individually or in groups, required by the job, e.g., contact with customers, patients, students, the public, superiors, subordinates, fellow employees, etc. Consider only personal contact which is definitely part of the job. For example, entertaining customers during or following regular working hours is frequently considered to be part of the job.)

Code	Extent of Personal Contact
1	Very infrequent
2	Infrequent
3	Occasional
4	Frequent
5	Very Frequent

TYPES OF PERSONAL CONTACT

This section lists types of individuals with whom the worker may have personal contact. Check (X) those types of individuals with whom the worker has personal contact, if such contact is frequent and important to the job. Do not check if contact is incidental.

TYPES OF PERSONAL CONTACT--(Continued)

X X	Executives/officials
X X	Professional personnel
X X	Middle management personnel
X X,X	Supervisors
X X	Clerical personnel
X	Manual and service workers
X X	Sales personnel
X	Buyers
X	Public customers
X X	The public
X X,X	Students/trainees
X X	Clients/patients
X	Special interest groups

SUPERVISION AND COORDINATION

Supervision Given

S 1 — Line management/supervision (use this category for those who are responsible, in a line management relationship, for the management or supervision of personnel or of groups of personnel in an organization, and who have such responsibilities as a major aspect of their position; indicate the level of the activity using the code below)

Code	Level of Line Management/Supervision
1	Immediate supervision
2	General supervision
3	General direction
4	Manages operations

Check (X) the following items if they apply:

X ___ Supervises fellow workers

X X ___ Supervises assistants

X ___ Supervises non-employees

X X ___ Coordinates activities

X X ___ Staff functions

S 6 ___ Number of personnel supervised

Code	Number
1	Less than 5
2	6-10
3	11-20
4	21-50
5	51-100
6	More than 100

Supervision Received

S 2,1 ___ Supervision received (indicate by code the level of supervision typically received)

Code	Level of Supervision
1	Immediate supervision
2	General supervision
3	General direction
4	Nominal direction

WORK SITUATION AND JOB CONTENT

PHYSICAL WORKING CONDITIONS

This section lists various working conditions. Check (X) those conditions to which the worker is frequently exposed and are considered part of the work location environment. Do not check if such exposure is incidental.

Outdoor

X ____ Out-of-door environment

Indoor (do not consider indoor temperature conditions related to weather, e.g., heat in summer)

X ____ High temperature

X ____ Low temperature

X ____ High humidity

Outdoor/Indoor

X ____ Air pollution

X ____ Vibration

X ____ Improper illumination

X ____ Dirty environment

X ____ Awkward or confining work space

X ____ Physical hazards

X X Noise

Noise intensity

S 1,1 Noise intensity (indicate by code the dominant level during exposure to unsatisfactory noise levels; rate this item only if Item Noise above was rated)

Noise intensity--(Continued)

Code	Noise Intensity
1	Moderate
2	Loud
3	Very loud

PSYCHOLOGICAL AND SOCIOLOGICAL ASPECTS

This section includes various psychological and sociological aspects of jobs. Indicate by code the importance of these aspects as a part of the job. If the item does not apply, leave it blank.

I 3 Civic obligations

I 3,4 Frustrating situations

I 3,4 Strained personal contacts

I 3,4 Personal sacrifice

I 3 Social value conflicts

S 2,2 Non-job-related social contact

Code	Opportunity for Non-job-related Social Contact
1	Very infrequent
2	Infrequent
3	Occasional
4	Frequent
5	Very Frequent

MISCELLANEOUS ASPECTS

WORK SCHEDULE, METHOD OF PAY, AND APPAREL

This section includes categories relating to work schedules, method of pay, and apparel worn during work. Check (X) those that apply to the position.

WORK SCHEDULE, METHOD OF PAY, AND APPAREL--(Continued)

Continuity of work (as relevant to total year; check one of these two)

X X,X Regular work

X ___ Irregular work

Regularity of working hours (check one of the following three)

X X,X Regular hours

X ___ Variable shift work

X ___ Irregular hours

Day-night schedule (check one of the following three)

X X,X Typical day hours

X ___ Typical night hours

X ___ Typical day and night hours

Type of remuneration/income (check each one that applies)

X X,X Salary

X ___ Hourly

X ___ Incentive pay

X ___ Commission

X ___ Tips

X ___ Supplementary compensation

X ___ Self-employed

WORK SCHEDULE, METHOD OF PAY, AND APPAREL--(Continued)

Apparel worn (check any which may apply during working hours)

X X Business suit or dress

X X Specific uniform

X Work clothing

X Informal attire

X Apparel style specified

X Apparel style optional

JOB DEMANDS

In this section are listed various types of demands that the job situation may impose upon the worker, usually requiring that he adapt to these in order to perform his work satisfactorily. Rate the following items in terms of how important they are on the job.

I 1,2 Specified work pace

I 1,3 Time pressure of situation

I 3,3 Repetitive activities

I 2,1 Precision

I 4,1 Attention to detail

I 2 Speed of discrimination

I 2 Vigilance: infrequent events

I 2 Vigilance: continually changing events

I 4,4 Working under distractions

I 4 Updating job knowledge

T 1 Travel

RESPONSIBILITY

This section includes types of responsibility which may be associated with the decisions and actions of the worker. Indicate by code the degree of each type of responsibility involved in the job.

S 1,3 Responsibility for the safety of others (indicate by code the degree to which the work requires diligence and effort to prevent injury to others. Do not consider hazards beyond the control of the individual concerned with the job.)

Code	Degree of Responsibility for the Safety of Others
1	Very limited
2	Limited
3	Intermediate
4	Substantial
5	Very substantial

S 4,3 Responsibility for assets (indicate by code the degree to which the worker is directly responsible for waste, damage, defects, or other loss of value to assets, such as materials, products, parts, equipment, cash, etc., that might be caused by inattention or inadequate job performance)

Code	Degree of Responsibility for Assets
1	Very limited
2	Limited
3	Intermediate
4	Substantial
5	Very substantial

S 4,2 Job structure (indicate by code the amount of "structure" of the job, that is, the degree to which the job activities are "pre-determined" for the worker by the intrinsic nature of the work, the procedures, or other job characteristics; the more highly-structured jobs permit less deviation from pre-determined patterns, and little if any need for innovation, decision making, or adaptation to changing situations)

RESPONSIBILITY--(Continued)

Code	Amount of Job Structure
1	Very high structure (virtually no deviation from pre-determined job routines, e.g., routine assembly work, etc.)
2	Considerable structure (only moderate deviation from pre-determined work routine is possible, e.g., bookkeeper, stock handler, etc.)
3	Intermediate structure (considerable variability from a "routine" is possible; work activities vary considerably from day to day or even from hour to hour, but usually within some reasonable and expected bounds, e.g., carpenter, automobile mechanic, machinist, etc.).
4	Limited structure (relatively little routinization of activities; the job is characterized by considerable opportunity for innovation and necessity of making decisions, e.g., store manager, industrial engineer, etc.)
5	Very low structure (virtually no established routine of activities; the position involves a wide variety of problems which must be dealt with, and the solutions to these problems allows for unlimited resourcefulness and initiative, e.g., research chemist, corporation vice-president, college professor, etc.)

*The outline utilized in presenting the position information is an abbreviated form of the Position Analysis Questionnaire.

**The left number designates the managerial position; the right, the non-managerial position.

APPENDIX E

SATISFACTION WITH MONETARY COMPENSATION

A Seventh Relationship

A seventh group of correlations was calculated on the data. It centers on the relationship between employee satisfaction with monetary compensation and quality of employee performance. Specifically, it focuses on how this relationship relates to that between overall employee job satisfaction and quality of performance as it exists in both the managerial and non-managerial samples, separately, and in the composite sample. The basis of these correlations is predicated on original substantiation of the Lawler Porter Model in the present organization, or at least in one of the samples drawn from it. However, unqualified substantiation of the model, in a sense, depends upon a certain relationship between these variables. If the correlation between satisfaction with monetary compensation and quality of performance is substantially greater than that between overall employee job satisfaction and quality of performance, substantiation of the model can be considered weakened. Monetary compensation is more extrinsic than intrinsic to actual work performance. Such a correlation would indicate, then, that

subjects appear to be more satisfied with an aspect of the job extrinsic to performance than they are with the actual performance of the position, and that this must work through the dynamic interaction of effort, ability, and the situation to manifest itself in a commensurate performance level.

Discussion of Findings

Table Ten indicates the magnitude of the correlations. For the composite sample, the correlation between satisfaction with monetary compensation and quality of performance is +.09. The t test indicates that for the composite sample, this coefficient must be at least .16 to be significant at the .05 level. The coefficient of correlation for the relationship between overall job satisfaction and quality of performance for the composite sample is +.15, which is insignificant. Monetary compensation satisfaction is tied to performance in a manner which is close in magnitude to the relationship between performance and overall job satisfaction in the composite sample. However, the closeness stems more from the relative weakness of the performance-satisfaction relationship than from the relative strength of the monetary compensation satisfaction-performance relationship.

TABLE X

RELATIONSHIP SEVEN: MONETARY COMPENSATION SATISFACTION AND PERFORMANCE VERSUS OVERALL JOB SATISFACTION AND PERFORMANCE

Variables	Sample	Correlation	t	Significance
Monetary Compensation Satisfaction Performance	Composite	+.09	-	--
Job Satisfaction Performance	Composite	+.15	-	--
Monetary Compensation Satisfaction Performance	Managerial	+.34	2.69	.01
Job Satisfaction Performance	Managerial	+.41	3.26	.01
Monetary Compensation Satisfaction Performance	Non-managerial	-.04	-	--
Job Satisfaction Performance	Non-managerial	+.03	-	--

The relationship between overall job satisfaction and quality of performance within the non-managerial sample is not close: +.03. What is the relationship between monetary compensation satisfaction and performance within this sample? Table Ten indicates that it is -.04. The t test assures that this coefficient is insignificant. It would have to be .19 to be significant at the .05 level. Not only is the correlation insignificant in magnitude, it is a correlation of the wrong direction. Granted, if the inverse relationship were significant, it could be implied that "dissatisfaction" with monetary compensation might be leading to increased performance, but this is not the case. Despite the fact that the Lawler Porter Model has not been evidenced as a valid explanation of reality within the non-managerial sample, the "traditional assumption" has been shown to be no more explanatory--earlier through the absence of a significant relationship between overall job satisfaction and effort, and presently, through the absence of a significant relationship between monetary compensation satisfaction and performance.

The relationship between overall employee job satisfaction and quality of performance within the managerial sample, however, is statistically significant: +.41. Furthermore,

that between overall job satisfaction and amount of job effort in this sample was not statistically significant: +.10. The Lawler Porter Model was therefore substantiated while the "traditional assumption" was refuted. What is the correlation between monetary compensation satisfaction and job performance quality in this sample? It appears that, if this relationship turns out to be significant, the heretofore unqualified validation of the Lawler Porter Model within the managerial sample may become, in a sense, weakened. A factor extrinsic to actual performance will also be significantly related to performance quality, suggesting the possible operation of the tenets of the "traditional assumption" and possibly implying the need for a composite model.

The coefficient of correlation between monetary compensation satisfaction and performance quality in the managerial sample, as Table Ten indicates, is +.34. The value for *t* of 2.69 indicates that this coefficient is clearly significant at the .01 level.

The two satisfaction-performance coefficients are significant. They are quite close in magnitude. It appears, consequently, that a qualification must be placed on the validity of the Lawler Porter Model in the managerial sample. However, it is also true that if the "traditional assumption"

were operating, monetary compensation satisfaction would have to be tied closely to amount of job effort--actually more closely than it is tied to quality of performance. Consequently, this relationship was checked. However, it proved to be clearly insignificant. The relationship between monetary compensation satisfaction and performance quality is substantially greater than that between monetary compensation satisfaction and effort. Therefore, a composite explanatory model combining the tenets of the Lawler Porter Model and the "traditional assumption" is not called for.

Nevertheless, the close tie between satisfaction with monetary compensation and performance quality for the managerial sample is puzzling. It could well be that compensation policies are much more equitable in terms of job performance for the managerial population than they are for the non-managerial population. It could be, then, that satisfaction stemming from performance parallels satisfaction with monetary compensation simply because monetary compensation tends to parallel performance quality. At any rate, monetary compensation satisfaction is not being manifested in commensurate effort (and subsequently, imperfectly in performance) as the "traditional assumption" dictates. In the managerial sector of the present organization, monetary

compensation is evidently free to reflect (to fluctuate with) quality of performance; while in the non-managerial sector, this does not appear to be the case.

APPENDIX F

THE ABSOLUTE VALUE COMPARISONS

The Comparisons

As a complement to the correlation analysis, comparisons of the average values of the satisfaction variables were considered meaningful. The Lawler Porter Model states that performance leads to reward which ultimately results in satisfaction (or dissatisfaction). The basic tenet which stems directly from this model is simply that the greater the quality of performance displayed, the greater the subsequent reward and resulting employee satisfaction. This was, of course, the basis of the correlation analysis. Performance was viewed as a variable. Performance can be looked upon as an "accomplished fact," as well, without regard for its level or quality. The "absolute value" comparisons between the satisfaction variables, which are presented subsequently, hold employee performance constant, rather than viewing it as the variable, "quality of performance." The assumption underlying this analysis is that minimum acceptable performance of a job is actually all that is necessary for the incumbent to sense the reward his position holds. This is not a repudiation of the possibility

that greater reward and satisfaction are associated with better performance; it merely recognizes that minimum acceptable performance is all that is necessary for meaningful job satisfaction data.

The specific comparisons are as follows:

Comparison Number One: The absolute value of overall employee job satisfaction for the subjects of the non-managerial sample (the arithmetic average of the values of the non-managerial questionnaires) vis-à-vis that for the subjects of the managerial sample.

Comparison Number Two: The absolute value of employee satisfaction with monetary compensation (represented by the arithmetic average of numerical values for respondents to this item on the questionnaire) for the subjects of the non-managerial sample vis-à-vis the absolute value of the same factor for the subjects of the managerial sample.

Comparison Number Three: The absolute value of employee satisfaction with monetary compensation for the subjects of the non-managerial sample vis-à-vis the absolute value of overall employee job satisfaction for the subjects of the managerial sample.

Comparison Number Four: The absolute value of employee satisfaction within the lower-order need categories and with

monetary compensation (the arithmetic average of questionnaire responses to these items) for the subjects of the non-managerial sample vis-à-vis the absolute value of overall employee job satisfaction for the subjects of the managerial sample.

Discussion of Findings

In the correlation analysis, it was ascertained that for the non-managerial sample, job satisfaction was completely separated from performance level. The correlation coefficient between these two variables in this sample was much lower than that in the managerial sample. Additionally, it becomes meaningful to consider whether, holding performance constant, the average absolute level of employee job satisfaction, as well, is lower for the non-managerial sample.

Based on the tenets of the Lawler Porter Model, managerial positions logically should lead to substantial intrinsic, in addition to extrinsic, reward--and therefore, greater job satisfaction (direct job satisfaction which is higher-order in nature). A less substantive, non-managerial position, on the other hand, should lead to reward which is primarily extrinsic in nature--and therefore, lesser job satisfaction (satisfaction which is of a lower-order). If

satisfactory performance of a job requires absorbing activity, it is proposed that the satisfaction experienced by the incumbent is potentially greater.

Even though average quality of performance in the non-managerial sample is close to that in the managerial sample, (on the one-to-seven scale utilized, it is 5.2 for the managerial sample and 4.9 for the non-managerial sample), the divergent nature of the relationship between performance and job satisfaction in the two samples suggests considerable potential deviation in average satisfaction levels. Is the average level of job satisfaction in the non-managerial sample considerably lower than that in the managerial sample? Or, is it about the same, despite the fact that it is not significantly correlated with performance quality in the non-managerial sample? Considering the statistically significant correlation between overall job satisfaction and performance in the managerial sample, the absolute value of satisfaction there can deviate only so far from that of performance. In the non-managerial sample, the potential deviation is unbounded. A high level of job performance could conceivably be associated with low employee satisfaction, or low performance, with high satisfaction in the extreme cases. The question becomes: What did the overall

work situation, on the average, bring in the way of employee job satisfaction, viewing performance as an achieved fact rather than as a variable? Table Eleven presents data on this question.

TABLE XI

COMPARISON NUMBER ONE

Factor	Sample	Average Values
Overall Job Satisfaction	Non-managerial	6.1
Overall Job Satisfaction	Managerial	6.0

As presented in Table Eleven, Comparison Number One centers on the average absolute value of overall employee job satisfaction for the non-managerial sample as it relates to the same for the managerial sample. Conventional wisdom would suggest that the average value should be lower in the non-managerial sample because of the objectively greater overall reward associated with the managerial position. Contrary to expectation, the value is slightly greater for the subjects of the non-managerial sample: 6.1 for the non-managerial sample as compared with 6.0 for the managerial sample. The values are quite close. Yet, it is apparent from the correlation analysis in the non-managerial sample

that those individuals generally indicating greater satisfaction from their work positions are not those displaying the higher quality of performance. Furthermore, those less satisfied tend not to be those displaying lower quality of performance. For this population, it has been determined that performance quality does not lead to job satisfaction and that satisfaction does not lead, through effort, to performance. They both appear separable and independently determined.

Why is the level of employee satisfaction so high, absolutely and relatively, for the non-managers? It is suggested, as a means of explanation, that the index recorded satisfaction in need categories which were not fully operative for these subjects--the higher-order need categories. That these categories were not fully operative was suggested by the response patterns. Two separable patterns were evidenced. One indicated generally high satisfaction in both lower- and higher-order categories. The other indicated higher satisfaction in the higher-order categories. The first was the predominant response of the managers; the second, that of the non-managers. Maslow's concept of the prepotency of needs indicates that lower-order categories are relatively satisfied before those of a higher-order

become operative. The first pattern was similar to the normal expectation in situations where higher-order categories have become operative. The second suggested that lower-order categories were still operative (relatively unsatisfied) and that the higher-order categories had not, as yet, become operative. Satisfaction within a non-operative need category tends to be sensed readily for little is required for satisfaction. The result was a somewhat spurious response of higher satisfaction within these categories.

That this response was spurious seemed to be supported by the fact that higher-order need-satisfaction was not closely correlated with the performance levels of the members of the non-managerial sample. The correlation between these variables, as Chapter Three pointed out, was +.06--a coefficient not statistically significant--yet performance quality and higher-order job satisfaction should have been closely correlated if responses were to operative categories.

However, distortion of the correlation analysis resulting from the inclusion of the spurious response to non-operative need categories in the non-managerial satisfaction measurement process does not appear to be substantial. The correlation between overall job satisfaction and performance quality (a correlation incorporating non-operative categories

as well as operative ones) for the non-managers is not substantially different from that between monetary compensation satisfaction and performance (a correlation excluding non-operative need categories) for this sample. The former correlation is +.03, while the latter is -.04.

Comparison Number Two centers on the average absolute value of employee satisfaction with monetary compensation for the subjects of the non-managerial sample as it relates to the same value for the managerial sample. Table Twelve presents this data.

TABLE XII

COMPARISON NUMBER TWO

Factor	Sample	Average Values
Monetary Compensation Satisfaction	Non-managerial	4.8
Monetary Compensation Satisfaction	Managerial	5.4

The absolute value of non-managerial satisfaction with monetary compensation should be less than that for the managerial respondent if monetary compensation is actually closer to the more operative needs of the non-managerial subjects. By definition from Maslow, a more operative need

tends to be less satisfied. Table Twelve indicates that these expectations are not refuted. The absolute value of monetary compensation satisfaction for the non-managers is 4.8 (on a one-to-seven scale) while that for the managers is 5.4. Consequently, it must be concluded that not only does monetary compensation satisfaction correlate more closely with performance in the managerial sample, it is slightly greater in magnitude in that sample.

Comparison Number Three compares average satisfaction with monetary compensation for the non-managerial sample with overall job satisfaction for the managerial sample. This appeared to be a meaningful comparison between the two samples because it incorporated the factor thought very close to the more operative needs of the members of the non-managerial sample and it encompassed the operative need categories of the subjects of the managerial sample. Table Thirteen presents this data.

Table Thirteen indicates that average monetary compensation satisfaction for the non-managerial sample is 4.8 while overall job satisfaction for the managerial sample is 6.0. Operative need satisfaction, then, appears to be of a lesser magnitude within the non-managerial sample than within the managerial sample.

TABLE XIII

COMPARISON NUMBER THREE

Factor	Sample	Average Values
Monetary Compensation Satisfaction	Non-managerial	4.8
Overall Job Satisfaction	Managerial	6.0

Finally, Comparison Number Four centers on the average absolute value of employee satisfaction with both lower-order need categories and monetary compensation for the subjects of the non-managerial sample as it compares with average overall job satisfaction in the managerial sample. This comparison was initially considered the more valid measure of operative need-satisfaction in both samples, eliminating anticipated distortion caused by the inclusion of non-operative need categories in the satisfaction-measurement process. Table Fourteen presents this data.

Table Fourteen indicates that average lower-order and monetary compensation satisfaction for the non-managerial sample has a value of 5.3, while average overall job satisfaction in the managerial sample is 6.0. Indeed, it appears that operative job satisfaction in the managerial population

is somewhat greater, on the average, in an absolute sense, than that in the non-managerial population. But operative need-satisfaction levels are quite close.

TABLE XIV

COMPARISON NUMBER FOUR

Factor	Sample	Average Values
Lower-order and Monetary Compensation Satisfaction	Non-managerial	5.3
Overall Job Satisfaction	Managerial	6.0

There is an organizational explanation underlying this observation. Not only do the non-managerial subjects appear to appraise their positions less critically in terms of the higher-level need-satisfaction they offer, they also, generally speaking, appear to sense a warm feeling of social satisfaction and importance through their constant involvement and contact with the young mentally retarded residents. Many of the non-managerial subjects, though they are not searching for autonomy, esteem, and self-realization as such, are most receptive to the moderately rewarding feeling or psychological state which results from dealing in a close,

day-to-day manner with young people so greatly dependent upon them. There is ample basis, then, for lower-order social need satisfaction.

Members of the managerial sample, on the average, do not experience this close, day-to-day relationship with the residents. Consequently, they do not sense this close sense of human involvement in their work positions which must be meaningful to the child-care employee--despite its objectively non-substantive nature from the standpoint of managerial involvement.

Discussion of Findings

In the present organization, members of the non-managerial sample appear more likely to be conditioned by prior existence to be receptive to the lower-order, as opposed to the higher-order, rewards of the work situation. By way of contrast, members of the managerial sample appear more likely to be receptive to the higher-order rewards, as well. The former subject, on the average, appears to be the type of individual still concerned about security. Monetary compensation is an important feature of his work position in this context. Yet, satisfaction with this feature was not evidenced in the present study as being tied to performance quality. It appears to be a performance-extrinsic aspect of the work situation. The

managerial subject, on the other hand, is more likely to be receptive to features of the work position which satisfy the esteem, autonomy, and self-realization need areas. Consideration of both the objective work position and the subjective reactions of the incumbent are vital to an understanding of the relative satisfaction levels. Ideally, a psychological "match" should exist between the position and its incumbent. The less sophisticated non-managerial position should be perceived as a challenging and satisfying endeavor by its incumbent, just as is the managerial position, by its incumbent. Differences between positions should be paralleled by like differences between employees. What the position has to offer should parallel what the incumbent needs.

The high level of average overall job satisfaction within the non-managerial sample suggests there are differences between the people who constitute the two populations, as well as between their work positions. It is not difficult to ignore individual differences in such analyses. Discussing the matter of individual differences, MacKinney (A. C. MacKinney, P. F. Wernimont, and W. O. Galitz, "Has Specialization Reduced Job Satisfaction?", Personnel, XXXIX [January, February, 1962], 8-17) recently stated:

> The most compelling argument against specialization as a major cause of job dissatisfaction lies in the fact of individual differences. This is the central fact of life in the behavioral sciences, and yet the would-be reformers apparently believe that all people must react in exactly the same way to the same job. The observer says to himself, "That job would drive me nuts in half an hour." From this he somehow concludes that it must drive everyone else nuts as well. This simply is not so! (For that matter, it's highly probable that many of the workers interviewed by sympathetic social scientists privately regard their questioner's activities as a pretty terrible way to earn a living, too.)

Job differences between the two samples, alone, would suggest significantly higher average satisfaction for the managers than for the non-managers if the human element were held constant. But individual differences operate to change this. The non-managerial position appears to better fit one type of person and the managerial position, a different type. In the present study, this difference has been manifested in the contrast between operative need categories. Perhaps, the basic factor underlying these operative need differences can best be summed up as fuller acceptance of "middle class" work norms and values in the case of the managerial incumbent. Such norms and values are generally long-range and universally grounded and include: a direct search for status, esteem, autonomy, and self-realization in the work setting; the desirability of education as manifested in efforts to acquire such; a self-image as a capable organization member;

a tendency to save money, defer pleasure. (See Kenneth Keniston, The Uncommitted, New York, Dell Publishing Company, Incorporated, 1965.) Relative alienation from such values means that the individual tends to better fit the non-managerial work position. Job level and size are just not correlated directly with employee satisfaction; cultural and value differences in the backgrounds of employees prevent such a relationship. (See Charles L. Hulin and Milton R. Blood, "Job Enlargement, Individual Differences, and Worker Responses," Psychological Bulletin, LXIX [January, 1968], 41-55.)

It has been advanced that the bulk of the American population has generally advanced in an upward direction on Maslow's need-hierarchy. When it was situated basically at the low levels of the hierarchy, secondary and extrinsic sources of employee satisfaction were all that was necessary. As it advanced, intrinsic, direct, performance-related sources of satisfaction gradually became necessary. In this context, Gellerman (Saul W. Gellerman, Motivation and Productivity, New York, American Management Association, Incorporated, 1963) has stated:

> Barring a major depression that would shatter these expectations, the trend of employee desires is likely to continue shifting away from [extrinsic] wages toward less tangible [intrinsic] kinds of rewards from work, such as dignity, stimulation, and personal growth . . .

Within the focal organization, it is apparent that only in the managerial population is this non-alienated, advancing majority represented to any significant degree.

In terms of the Lawler Porter Model, this operative need differential or alienation factor appears directly manifested in the level and nature of the perceived equitable reward. The lower the operative need level and the greater the alienation, the lower the absolute level of, and the more extrinsic, the perceived equitable reward. Accordingly, the perceived equitable reward should be lower and more extrinsic for the subjects of the non-managerial sample.

A rough impression of the level and nature of the perceived equitable reward can be inferred from the measured job satisfaction response. More explicitly, whether the perceived equitable reward is greater than the reward presently sensed from a position is suggested by the level of operative need satisfaction. If job satisfaction is maximum, indications would be that the two rewards match. If job satisfaction is less than maximum, yet generally high, indications would be that the former type of reward is not far

above the latter--equitable reward is not far above present reward. The non-managerial subjects indicate this level of job satisfaction. Consequently, their perceived equitable reward does not appear to be far above presently sensed reward. If presently sensed reward is in actual fact not far from what the Position Analysis Questionnaire indicates actual job reward to be (basically extrinsic and lower-level), then it appears that perceived equitable reward is basically extrinsic and of a lower level. The managerial subjects indicate this basic level of job satisfaction, as well--only slightly higher. Consequently, their perceived equitable reward appears to be even closer to presently sensed reward. Here again, if presently sensed reward is actually not far from what the Position Analysis Questionnaire indicates actual job reward to be (basically intrinsic and higher-level), then it appears that, for them, perceived equitable reward is basically intrinsic and of a higher level. In both samples, what the incumbent perceives as being an equitable return from the position, what he perceives it presently offers, and what it objectively appears to offer--all three--are evidently not far apart. In the managerial situation, all three are on a higher level than in the non-managerial situation. The differences between the two levels are

approximated by both the Position Analysis Questionnaire data (in job terms) and the operative need-satisfaction data (in human terms).

Differences between the two basic types of work positions and between the two basic types of incumbents appear to parallel each other. One set of positions appears objectively absorbing and complex while the other appears not. One set of "perceived equitable rewards" appears basically intrinsic and higher-level in nature stemming from a higher-level of operative needs and from fuller acceptance of middle class work norms and values. The other set of rewards appears basically extrinsic and lower-level in nature stemming from a lower-level of operative needs and from lesser acceptance of middle class work norms and values. The result is apparently a relatively satisfactory match between the two groups of positions and the two groups of incumbents.

APPENDIX G

TERMINOLOGY

1. Employee Job Satisfaction--the extent to which an employee's job situation is perceived as fulfilling his needs.

   (Note: Job Satisfaction has been given a variety of meanings, some of which correspond quite closely to the concepts of morale and attitude. Generally speaking, attitudes are thought to relate to specific job features while morale is either a composite of an individual's attitudes or a group phenomenon. The present definition, however, parallels quite closely Guion's concept of morale. (See R. M. Guion, "Industrial Morale (A Symposium) The Problem of Terminology," Personnel Psychology, Volume 11, 1958, p. 62.)

2. Operative Need Category--a need category which is not fully satisfied. Needs become operative in priority from lower- to higher-order.

3. Lower-Order Need Categories--the security and social need categories. These categories tend to be extrinsic to actual work duties performed.

4. Higher-Order Need Categories--the esteem, autonomy, and self-realization categories. These categories tend to be intrinsic to actual work duties performed.

5. Quality of Performance--superior and peer ratings on a one-to-seven scale (averaged together) of the "product" or end-result of a subject's work activity.

6. Amount of Job Effort--superior and peer ratings on a one-to-seven scale (averaged together) of the percentage of a subject's potential ability demonstrated in the work position.

7. Managerial Population--administrative, professional, quasi-professional, and supervisory members of the focal organization.

8. Non-managerial Population--child-care and clerical members of the focal organization.

9. Composite Population--the "managerial" and "non-managerial" populations considered as a single unit.

10. Managerial Work Position--a position which appears to have the potential of satisfying the full range of needs on Maslow's hierarchy. This is a position with

managerial authority and with considerable variation in work activity (a small amount of routine). The position is not rigidly structured.

11. Non-Managerial Work Position--a position which appears to have the potential of satisfying basically the lower-order needs on Maslow's hierarchy. This is a position with no managerial authority and with little variation in work activity (a considerable amount of routine). The position is rather rigidly structured.

12. Perceived Equitable Reward--the reward (output) an incumbent perceives as being necessary from the organization in order to balance the contribution (input) he makes to that organization.

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