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THE IMPORTANCE OF PAY: AN EMPIRICAL TEST OF LAWLER'S MODEL

City University of New York PH.D. 1982

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THE IMPORTANCE OF PAY: AN EMPIRICAL TEST OF LAWLER'S MODEL

by

MATTHEW LENZ, JR.

A dissertation submitted to the Graduate Faculty in Business in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1982

This manuscript has been read and accepted for the Graduate Faculty in Business in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Supervisory Committee

The City University of New York

Abstract

THE IMPORTANCE OF PAY: AN EMPIRICAL TEST OF LAWLER'S MODEL

by

Matthew Lenz, Jr.

Adviser:Professor Harris J. Shapiro

An empirical test of Lawler's model of the importance of pay failed to confirm the validity of the model. Five hypotheses were tested, and all were rejected. There are enough unanswered questions to prevent outright rejection, but these results do not provide any support for the model.

The major measuring instrument used was the needs strength and importance questionnaire devised by Lyman W. Porter in 1961. While this questionnaire had been used by many researchers involving close to 6,000 subjects, it had never been validated, nor had any reliability data ever been reported.

Convergent and discriminant validity of need satisfaction, importance, and instrumentality were tested using the multitrait-multimethod matrix proposed by Donald T. Campbell and Donald W. Fiske. Correlation coefficients ranging from .567 to .868 were obtained with a probability of .01. The data met all the criteria suggested by Campbell and Fiske, thus implying both convergent and discriminant validity. A similar test of the validity of the Maslow need dimensions showed convergent and discriminant validity on all dimensions except self-actualization for the importance trait.

Validities for the instrumentality trait were mixed and weak.

Test-retest reliabilities for the three need characteristics measured by the instrument showed correlations of .711, .753, and .755 all at the .01 level.

Lawler's model of the importance of pay combines the element of instrumentality borrowed from expectancy theory, and the needs hierarchy of Maslow. The importance of pay is said to be the sum of the products of the importance of the Maslow needs and the perceived instrumentality of pay to satisfy each of those needs.

Two disparate samples were used. One consisted of 250 evening division students pursuing advanced professional studies at The College of Insurance in New York City. The other sample consisted of 130 employees of a small life insurance company in New York City. The two groups varied in average age, management level, salary, level of education, percentage of males and females, and satisfaction with pay. Despite these differences, the results of all the tests were unanimous in rejecting all the hypotheses.

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None of the above, of course, are responsible for any errors which may be found - for those I accept full responsibility.

Matthew Lenz, Jr.
January, 1982

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CHAPTER ONE

THEORETICAL BACKGROUND

One of the major concerns of managers in all areas of human activity has historically been the productivity of their subordinates. This concern has been felt in the military, the religious community, and the university, as well as in the profit-oriented business community.

Because of this concern there has been a great deal of study of the question of motivation, or what it is that inspires a person to work or indulge in other behavior over a prolonged period.

> It is almost a truism to observe that interest in the personal and environmental factors that influence the arousal, direction, and persistence of behavior did not begin in the twentieth century. Such interest can be traced back to the dawn of recorded history, and it is undoubtedly true that thought about those matters occurred even before then. Thus, one can point to the consideration of these questions by the Greek philosophers, by the writers of the medieval era such as Saint Augustine and Saint Thomas Aquinas, by the English associationists, and the English philosophers, just to cite a few who have concerned themselves with the kinds of questions dealt with in a book on the psychology of motivation.
> (Korman, 1974)

Another statement that can be considered to be virtually a truism is that pay is one of the reasons that many people work. This is not to suggest that it is the only reason as was thought to be the case in the early days of F. W. Taylor's scientific management era which was based on the

concept of economic man. Higher pay, in the form of incentive wages, was felt to be virtually the only motivator needed to stimulate employees to expend more effort on their jobs. The National Industrial Conference Board estimated that 75% of United States firms had some form of incentive wage plan in the early 1930's as the scientific management period was nearing its end (NICB, 1946). The philosophy which prompted the economic view of man totally ignored any non-economic reasons for working, and of course, ignored any possible psychological effects of pay itself.

The studies at the Hawthorne plant of the Western Electric Co. in the late 1930's are credited with starting the human relations movement in management and are frequently cited as proof that other factors are more important than pay (Roethlisberger and Dickson, 1939). The "economic man" model was replaced by a "social man" model and research in the work setting focused on aspects of work other than pay. What research there was on pay tended to downgrade its importance as it consistently ranked behind such other factors as security, advancement, job interest and appreciation from supervision in studies of worker attitudes.

A number of current studies continue to support the view that pay is not the most important element in job satisfaction. Weaver (1976a, 1976b) reports on a National

Opinion Research Center study in 1973 in which hour long interviews were held with over 1,500 people 18 years of age or over living in the continental United States. Of five job characteristics from which respondents were asked to select their first choice, "high income" ranked third (16%), behind "work important and gives a feeling of accomplishment" (54%) and "chances for advancement" (18%). However, as Weaver points out, if the figures can be extrapolated to the United States working population as a whole, it means that approximately 6 million workers rate "high income" as their first preference. Burton (1976) reported on a study in which salary was ranked from sixth to ninth in a list of 14 characteristics. A contrary finding was reported by Simonds and Orife (1975) who studied 71 voluntary intraplant job transfers by non-supervisory workers. "The study did indicate that for these workers as a whole differences in pay were more important than differences in job enrichment, and while some of the workers may have preferred more enriched jobs, it appeared that some may have been indifferent to enrichment, with a few perhaps preferring the less enriched jobs. (p.611.)

The research reporting these mixed findings is frequently subject to criticism which reduces the credibility of the findings. The National Opinion Research Center's study, for example, used the term "high income" rather than merely "salary" or "pay" and it is very possible that

the respondents interpreted that to mean an income far greater than they were presently receiving. Obviously, such an interpretation, if present, would bias the results. The data for Burton's study were collected from "the May, 1973 graduating seniors of the College of Business Administration at North Texas State University, their professors, and those employers who recruited these graduates during the 1973 Spring semester" (p.91), hardly a group representing the American labor force.

Because of the continued finding that pay was allegedly not considered by employees to be an important job factor, little research on pay was done during the period when the human relations movement dominated management thinking. Lawler (1971) comments on this situation as follows:

> The tendency of researchers to ignore pay during the human relations era provides an interesting example of the power of the Zeitgeist of the period. A great deal of evidence existed to suggest that pay was important to employees and that it could motivate them, yet it was systematically ignored or distorted. Most of the studies of piece rate plans, for example, showed that pay was ranked as the most important job factor by employees. But perhaps most ironic was the fact that the Western Electric studies, which are credited with having started the human relations movement, showed that pay can be an important motivator of performance (Roethlisberger and Dickson, 1939). Later Western Electric experiments established that about half of the productivity increase in the relay assembly test room was due to the change in the pay plan that took place when this room was created. The other half of the increase in productivity apparently was due to a combination of all the other factors that were changed. This was shown by the 15 percent increase in productivity in the second

> relay assembly test room, where only the system of pay was changed, as compared with the increase in the mica-splitting test room of about 15 percent, when all other factors were changed (Roethlisberger and Dickson, 1939). It is indeed strange that this study, which clearly seems to show the importance of pay as a motivator of performance, is so often cited as conclusive proof that other factors are more important than pay. Some recent commentators (e.g. Carey, 1967) have even argued that this study shows that pay is the key factor in motivating employees. But again, given, the philosophy of the period, the study was not interpreted that way. (p. 9.)

No theoretical base existed for the contention that pay was unimportant; the ranking provided in attitude surveys was accepted as prima facie evidence of its lack of importance, despite the contrary evidence presented by the success of incentive pay plans. Reasons for the alleged lack of importance, or for the success of the incentive plans were not sought. A possible explanation appeared when Maslow (1943) offered his theory of motivation, which arranged man's needs in a hierarchy. This hierarchy consisted of physiological and security needs at the bottom, social and esteem needs in the middle, and self-actualization needs at the top. The theory indicated that only unsatisfied needs were motivators; once a need became satisfied, it no longer served to motivate. The prevailing opinion was that pay satisfied only the lower order needs, and that those needs were generally satisfied in our society. Since Maslow's theory contended that only unsatisfied needs had motivating power, the unimportance of pay was self-evident.

Later studies, however, began to show that satisfac-

tion with pay correlated with status and promotion items (Morse, 1953; Locke, Smith, Kendall, Hulin, and Miller, 1964). Other studies have shown similar relationships between pay levels and satisfaction of security, esteem, and autonomy needs (D. C. Miller, 1941; Hall and Nougaim, 1968; Porter, 1961; Thompson, 1939).

Siegel (1969) suggested that the role of money as an incentive could be explained by some of the concepts from the expectancy theory of motivation, or by Maslow's need hierarchy:

> Although it is impossible to define the amount of money required by any person, considerable insight into the role of money as an incentive is available by drawing upon the two theories of motivation introduced in the previous chapter; needs hierarchies and valence expectancy.
>
> In terms of the needs-hierarchy concept, the degree to which financial incentives influence job satisfaction and/or performance depends upon the placement of the need for money in the employee's need hierarchy. The fact that some employees value money highly enough to change jobs primarily for this reason alone is evidence that for these employees at least the need for money stands in superordinate position to many other needs.
>
> In rare instances this high value placed upon money may result from its utility for satisfying basic needs like food and shelter. However, it is impossible to account for the importance attached to money by some persons solely in terms of such basic needs. These needs are satisfied, at least beyond the "survival level," for the majority of workers in contemporary society.
>
> The strength of the need for money, and hence its superordinate placement in the hierarchy for such employees, must be derived from its association with other, more basic, needs. Money, which originally is seen as instrumental for satisfying primary needs, may assume value for satisfying such secondary

> needs as the desire for security, status, recognition, power and so on. To the extent that an employee places such social needs near the top of his needs hierarchy and to the extent that he has learned to associate money with the realization of such secondary goals, the need for money itself becomes a powerful incentive.
>
> In terms of the valence-expectancy concept, the incentive value of money derives from its perceived instrumentality for attaining desired goals. Thus, if the goal is status and the employee perceives income as associated with attainment of this goal, he attaches a positive valence to income. The extent to which his job behavior is influenced by financial incentives will depend upon the strength of the valence attached to money that is, the strength of the expectation that money will contribute to need satisfaction. (pp. 364-365.)

Lawler (1971) expanded on Siegel's idea by constructing a model of the importance of pay which formally incorporates the expectancy theory concept of instrumentality and the need hierarchy theory of Maslow, including its concept of prepotency.

MASLOW'S NEED HIERARCHY THEORY

Maslow's theory (1943, 1954) proposes that man's needs are structured in a hierarchy of appearance as follows:

1. physiological (food, drink, sex)
2. safety (shelter, security)
3. belongingness or love (relatedness to others)
4. esteem (ego satisfaction)
5. self-actualization (total fulfillment).

The theory contends that an individual is motivated by the lowest unsatisfied need in the hierarchy. Once a need

has been satisfied, it is no longer a spur to action; the next higher need on the scale becomes prepotent and is the stimulus for activity. If a lower order need should again become unsatisfied, it would once more become prepotent and dominate the individual's personality.

The cycle of prepotency--domination--satisfaction continues through the hierarchy until the ultimate need of self-actualization is reached. Here, Maslow indicated (1965) that satisfaction of the self-actualization need increases, rather than decreases, its importance and prepotency. This phenomenon has also been reported by Alderfer (1969b) and Porter (1964).

As Lawler (1973) points out:

> Maslow stresses that not all people function on the self-actualization level. He then goes on to describe the characteristics of people who are motivated by self-actualization. According to him much of the self-actualizing person's behavior is motivated solely by the sheer enjoyment he obtains from using and developing his capabilities. He does not necessarily behave in accordance with extrinsic goals or rewards. For him the goal is simply to behave in a certain way or experience a certain feeling. (p. 24.)

Despite the intuitive appeal of the theory, a recent literature review (Wahba and Bridwell, 1976) "shows that Maslow's Need Hierarchy Theory has received little clear or consistent support from the available research findings." Part of the problem, as pointed out by Wahba and Bridwell, is that the theory is virtually non-testable. The concepts are not clearly defined, and therefore are difficult to operationalize. The needs are not independent, but overlap

(Maslow, 1965; Mitchell and Moudgill, 1976; Huizinga, 1970). Wahba and Bridwell conclude:

> Taken together, the results of the factor analytic studies and the ranking studies provide no consistent support for Maslow's need classification as a whole. There is not clear evidence that human needs are classified in five distinct categories, or that these categories are structured in a special hierarchy. There is some evidence for the existence of possibly two types of needs, higher and lower order needs, although this categorization is not always operative.

Barnes (1960) proposed a two-step hierarchy with the first step consisting of physiological needs and the second, self-esteem, esteem of others, and belongingness. Harrison (1966) also proposed a two-level hierarchy consisting of physiological-economic needs, and social or ego needs.

Alderfer (1969b) suggested a three step existence-relatedness-growth (E.R.G.) theory. Existence needs include the material and physiological needs; pay, fringe benefits and physical working conditions are looked upon as "other types of existence needs." (p. 145.) Relatedness needs involve relationships with significant other people and growth needs are those which require a person to "utilize his capabilities fully" and which cause him to experience "a greater sense of wholeness and fullness as a human being." (p. 147.) The theory does not require that lower level needs be satisfied before higher level needs manifest themselves.

In spite of the accumulated evidence which casts doubt on the validity of the need hierarchy of needs, the intuitive appeal of the theory has kept it alive and allowed it to be

used, in whole or in part, as the basis of other theories or explanations (e.g. McGregor, 1960; Lawler, 1971). Lawler's model of the importance of pay (see page 19) is based in great measure on Maslow's theory.

EXPECTANCY THEORY

The second element in Lawler's model is the concept of instrumentality, which is taken from the expectancy theory of motivation, which Locke (1975) says "has clearly become the most popular approach to motivation among industrial researchers." The theory postulates that an individual's motivation to perform is a function of his expectations that effort will lead to performance and that performance will lead to one or more valent outcomes (House, 1971). Korman (1974) described it as

"...the psychological theory of motivation most closely approximating traditional "economic man" models. Basically, the idea behind it has been that man will make those behavioral choices that will maximize his outcomes given the value of the outcomes he desires, and his rational expectancy of achieving those outcomes in that given situation."

Vroom's work motivation model (1964) states that a person's force to perform an act (F) is a "monotonically increasing function of the algebraic sum of the products of the valence of all outcomes and the strength of his expectancies that the act will be followed by the attainment of these outcomes" (p. 18). He defines expectancy as the sub-

jective probability that a given act will be followed by a given outcome. The probabilities range from 0 (certainty that the outcome will not follow the act) to 1 (certainty that the outcome will follow the act).

The model may be shown symbolically as:

$$F = \sum_{j=1}^{n} (E_{ij}V_j)$$

where F = the force to perform an act

E_{ij} = the expectancy that act i will be followed by outcome j

V_j - the valence of outcome j

n = the number of possible outcomes

Valence is described as the satisfaction to be derived from, or the desirability of, an outcome.

Vroom's valence of outcome model states that the valence of an outcome is a "monotonically increasing function of the algebraic sum of the products of the valences of all other outcomes and his conceptions of the specific outcome's instrumentality for the attainment of these other outcomes." (p. 17.) He defined instrumentality as the degree to which a person sees the outcome in question as leading to the attainment of other outcomes. The range of instrumentality is from -1 (the first outcome cannot lead to the second), through 0 (the first outcome has no effect, positive or negative, on the attainment of the second) to +1 (achievment of the first outcome will definitely lead to the

second).

The model can be shown symbolically as:

$$V_j = \sum_{k=1}^{n} (I_{jk} V_k)$$

Where: V_j = value of the outcome

I_{jk} = instrumentality of the jth outcome for attaining the kth outcome

Vk = valence of outcome k

n = the number of possible outcomes

Vroom postulated performance to be determined by job effort multiplied by ability, or

$$P = f(FxA)$$

Porter and Lawler (1968) also included the factor of ability in their formulation, but added the element of role perception and contended that performance is a function of the interaction among effort (or motivation), ability, and role perception: P=f(ExAxR).

Lawler (1966) and Galbraith and Cummings (1967) found support for the hypothesis of ability playing a moderating role, while Gavin (1970) and Sheridan et al. (1975) did not.

Three modifications in the original Vroom model have been made over time by various researchers. As described by Reinharth and Wahba (1975), they are:

> 1. First-level and second-level outcomes have been distinguished. The first-level outcome refers to the level of performance resulting from a given amount of effort, whereas the second-level outcome is defined as the reward or penalty obtained as the

result of the level of performance or, as tested in some studies, as the result of the effort expended.

2. Intrinsic sources of valences have been identified. These include the degree of satisfaction or pleasure the individual receives from the activity or work behavior itself regardless of the outcome, as well as the degree of satisfaction or pleasure the individual derives from the accomplishment of the work goal regardless of extrinsic rewards.

3. Expectancy 1 and Expectancy 2 have been introduced as separate variables. Expectancy 1 is defined as the perceived belief that effort will lead to performance or to second-level outcomes. Expectancy 2 is the perceived belief that performance will lead to second-level outcomes. (p. 523.)

ASSUMPTIONS OF THE THEORY

There are five basic assumptions underlying the various expectancy theory models:

1. A worker can establish subjective measures of expectancy and valence.

2. Expectancies and valences are independent.

3. There is a multiplicative relationship between expectancies and valences.

4. A worker's choices are transitive.

5. A worker seeks to maximize his outcomes.

House, Shapiro and Wahba (1974) raised a number of questions about the theory and methodology of expectancy theory. Two of the problems they point out relate to the underlying assumptions:

1. As it stands, expectancy theory still implicitly makes rationality assumptions underlying choice behavior, in particular, the assumed preferences among alternatives; transitivity of preferences and differ-

> ences; the independence of relevant outcomes; and the independence of expectancy of outcomes.
>
> 2. The choice criterion embodied in the current formulation of the theory is based upon the concept of maximization. Alternative criteria such as "satisfying" and the "sure thing principal" should be considered. (p. 503.)

These problems do not really affect Lawler's model, since the only aspect of the theory which he uses is the concept of instrumentality - the ability of pay to satisfy a specific need.

SOME OTHER THEORETICAL PROBLEMS

Support for the theory, and its individual components, has been mixed. Studies have led to conclusions ranging from Reinharth's, "the findings showed no support for either the Vroom expectancy model or its components," to Sheridan, Slocum and Min's (1975), "Taken as a whole, the data support the basic expectancy model. Motivational force correlated significantly with performance."

In general, the inconsistency has been in the magnitude of the support for the theory rather than in total rejection of it.

Questions have been raised about the operationalization of some of the constructs, and the validity of some of the underlying assumptions (Behling and Starke, 1973; Wahba and House, 1974; Starke and Behling, 1975; Sheridan, Slocum and Min, 1975). The major questions which have been raised concern the independence of expectancy, instrumentality, and valence; the hypothesized multiplicativity of expectancy and

valence (or instrumentality and valence): and the transitivity of a worker's choices.

The questions of multiplicativity and independence are interrelated, for if the variables are dependent upon each other, or have some common element in their make-up, multiplication is redundant.

The lack of transitivity theoretically means that the decisions leading to the intransitivity are irrational, which would mean that the theory could not have any predictive power.

Other problems and inconsistencies have been reported in the literature. Pritchard and Sanders (1973), for example, reported multiplicative relationships ($E_1(E_2V)$ among the explanatory variables gave no better predictions than did an additive relationship ($E_1+(E_2V)$). On the other hand, Hackman and Porter (1968) found the multiplicative relationship gave higher correlations than the additive relationship.

A number of researchers, such as Georgopoulos, Mahoney, and Jones (1957), Galbraith and Cummings (1967), and Pritchard and DeLeo (1973) found E_2 alone to be a strong predictor of performance. Shapiro and Wahba (1973) and Reinharth and Wahba (1975) did not find E_2 to be related to performance.

Sheridan et al. (1975) said:

> Taken as a whole, the data support the basic expectancy model. Motivational force correlated significantly with performance. However, a number of questions can be raised.

> First, since there were no significant differences between the individual variables in the model and their relation to performance, the issue is raised of whether the components should be combined in a multiplicative function. (p. 121.)

A POSSIBLE EXPLANATION

A possible explanation of the lack of transitivity is the assumption of attempted maximization of outcomes. Wahba and House (1974) referred to the problem inherent in this criterion, and suggested, among other alternative criteria, the satisficing concept proposed by March and Simon (1958).

EFFECT OF INCENTIVE SYSTEM

Another variable which has been found to affect subordinates' expectancies is the nature of the organization's incentive system. Kopelman (1975) found that "control system responsiveness (CSR) - the degree to which rewards (e.g. salary, organization level) are contingent upon performance - positively affected expectancy theory predictions of performance. In seven cases out of eight the relative magnitude of performance predictions corresponded to the relative level of CSR." He also found, in six cases out of six, that organizational differences in control system responsiveness affected organization-wide levels of expectancy-value reports.

Reinharth (1974) found that "Employees on incentive pay had significantly higher coefficients than those on straight salary...this variable may be classed as a moderator variable." (p. 83).

EXPECTANCY MODEL

Evans (1970) pointed out the difficulty of making a conceptual distinction between first and second level outcomes and the instrumental relationship between them. He combined E_1 and E_2 into what he called path-goal instrumentality, and defined it as the individual's perception of how this action or behavior might be related to his goals.

While Lawler relies heavily on Vroom's writings in the development of his model, it would appear that consciously or not, his use of the term "instrumentality" would seem to reflect Evans' concept of "path-goal instrumentality."

Lawler (1973) makes a major issue of the concept of multiplicativity as indicated by Vroom's formula, F = (EXV).

> This is a key point in the theory, since it means that tying a valent reward, such as pay to a desired behavior, such as good performance, will not be enough to motivate the desired behavior. Pay can be highly valued and can be seen as closely related to performance, but if negative consequences, such as feeling tired or being rejected by a work group, are also perceived as related to good performance, there may be no motivation to perform. Finally, according to Vroom, a person will be motivated to perform well in a situation only if performing well has the highest EXV force in that particular situation. Performing well can have a strong force, but if performing poorly has a stronger force, the person will not be motivated to perform well. (p. 46.)

CHAPTER TWO

LAWLER'S MODEL

Lawler's model combines the instrumentality concept from expectancy theory in a multiplicative fashion with a modified version of Maslow's need hierarchy. The model may be shown symbolically as:

$$IP = \sum_{j=1}^{j=6} (I_j N_j)$$

where IP = the importance of pay

I_j = the instrumentality of pay to satisfy need j

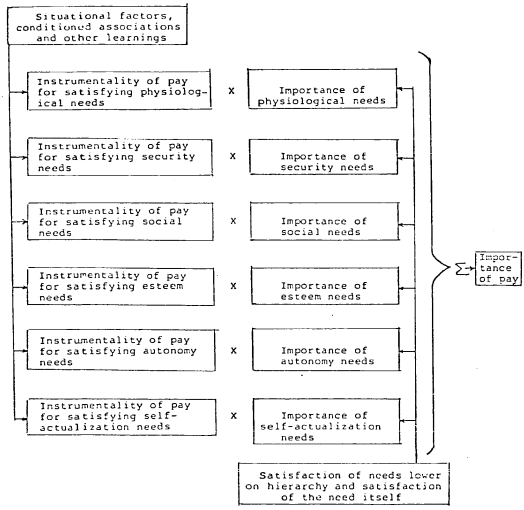
N_j = the importance of need j

It is illustrated in Figure 2-1.

Lawler does not indicate the range over which instrumentality is to be measured, though his comment that "multiplication is suggested, because, when either the instrumentality or the importance of a need is zero, then pay will derive no importance from that need" (p. 26) would imply a range of from 0 to +1. Vroom's theory, upon which the model is presumably based, has a range of -1 to +1 for instrumentality, and a range of 0 to +1 for expectancy. It is presumed too, that neither the importance of pay nor its instrumentality for satisfying needs will have negative values possible.

FIGURE 2-1

LAWLER's MODEL OF THE IMPORTANCE OF PAY



The model shows two sets of moderating variables (p.27): "situational factors, conditioned associations and other learnings" which influence the instrumentalities, and "satisfaction of needs lower on hierarchy and satisfaction of the need itself," which influence the importance of each need in the hierarchy. The effect of this latter moderator is inherent in the values assigned to the importance of each individual need. Unfortunately, Lawler does not indicate how the situational factors, et al. will influence the instrumentalities. Actually, he does not even define what he means by "situational factors, conditioned associations, and other learnings."

He does discuss studies on two groups of factors. One group includes the personal background characteristics of age, sex, intelligence, personality traits, family background and educational level. The other group is made up of job-related factors including pay level, type of organization, union membership, promotion, and how pay is determined. Lawler makes it clear that these two groups of variables are not what is meant by "situational factors, conditional associations and other learnings."

Since the factors are not defined, and the manner in which they influence instrumentalities is not explained, it will be assumed that their effect is inherent in the values assigned to the instrumentalities. From a practical standpoint then, both sets of "moderators" can be elimin-

inated from the model and can be looked upon simply as explanatory material rather than true moderator variables.

One questionable conclusion which Lawler draws is that "very high pay may reduce the importance of pay". (p. 28.) He explains this statement by saying:

> If the needs upon which pay depends for its importance are satiable then a person's desire for pay may decrease once he has attained a high income. This suggests that the value a person places on a given amount of pay is influenced by the amount considered, by the amount of pay he has received in the past, and by the amount of money he presently has. The larger the amount, the more highly it will probably be valued, but if the person has earned an even larger sum in the past, he is likely to place a lower value on it. Also the more money he has, the less likely he is to value a given amount of pay.

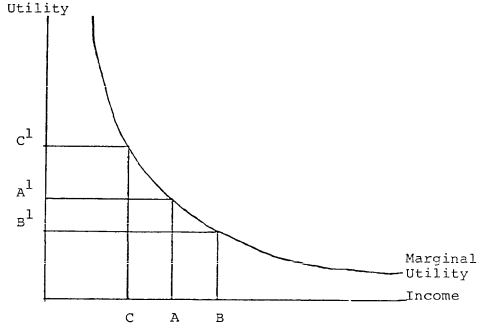
This statement regarding the satiability of needs seems to imply that once a need has been satisfied, it remains satisfied. When discussing needs which are satisfied by pay, that is true only so long as the pay continues. If the pay stops, then the physiological, security, and esteem needs which had been satisfied will become unsatisfied and, according to Maslow's theory, will again become prepotent. It is reasonable to infer that as a person's pay increases, it will become relatively less important; that is, it will drop in a ranking of the importance of job factors, especially as social and self-actualization needs become prepotent. This is not the same as saying that "a person's desire for pay may decrease." Rather, while pay is as important as it was before (to continue to satisfy lower

order needs), other factors have become more important.

The fact that "the more money he has, the less likely he is to value a given amount of pay" is easily explained by the concept of the diminishing marginal utility of money. "Simply stated, this concept (or "law") means that the more we have of something, the less we want more of it...that is, each additional unit gives us less satisfaction than did the previous unit." (Spencer, 1951, p. 92.)

This can be seen clearly in Figure 2.2.

FIGURE 2.2



DIMINISHING MARGINAL UTILITY OF MONEY

Income A produces a utility value of A^1. The additional utility provided by an increase in income to B is the difference between A^1 and B^1. This can be contrasted to the utility value C^1-A^1 which is derived from the decrement A-C, a reduction of income equal in value to A+B.

This concept will readily explain why an increase of $1,000 per year means less to the man earning $50,000 than it does to the man earning $20,000. This does not mean that the $1,000 is not important, or has no value, to the higher paid man; it simply means less to him.

As Roche (1975) said:

> Actually, the fact that money falls behind other considerations in this senior executive group substantiates Abraham Maslow's theory that the importance of certain needs or drives changes as one advances from a bare subsistence level, where survival weighs most heavily, to needs of higher and higher orders. The diminishing importance of money in the executive's advancing years is to be expected, not only because money becomes merely a "scorecard" to those who have already enjoyed substantial success in their careers but also because the senior executive is usually better paid and finds the utility of additional money minimal. (p. 56.)

CHAPTER 3

HYPOTHESES

Based on the foregoing discussion, the following hypotheses may be drawn from Lawler's model of the importance of pay and its theoretical underpinning:

1. Pay will be seen as most instrumental in satisfying esteem and physiological needs, secondarily instrumental in satisfying social and self actualization needs.
2. Pay will be less important to women than to men because it is seen as less instrumental in satisfying the needs women rank high (e.g. social) than the needs men rank high (e.g. esteem).
3. Since higher level managers are more likely to have a higher level of satisfaction of their esteem and security needs than will lower managers, pay should be less important to them. It is therefore hypothesized that there will be an inverse relationship between job level and the importance of pay.
4. Since lower paid employees will generally have a lower level of satisfaction of esteem and security needs, pay will have more importance to them. It is therefore hypothesized that there will be an inverse relationship between the level of pay and the importance of pay.
5. Pay will be less important to older workers than to younger workers because their social and self-actualiza-

tion needs will be less satisfied, and pay is seen as least instrumental in satisfying those needs.

SAMPLES

Data were collected from evening division students pursuing advanced professional studies at The College of Insurance in New York City. This group includes employees of many different organizations involved in different types of activities in some aspect of the insurance business. It includes employees of small, as well as very large, organizations, and includes a wide range of age, position, and salary. The heterogeneity of the group should make it relatively free of environmental contamination and organizational bias.

Questionnaires were distributed during regular class sessions by the researcher. The purpose of the study and introductory instructions were read to the class to assure uniformity. (See Appendix A.) The questionnaires were completed anonymously and returned immediately to the researcher. This sample is referred to as the "student" sample, but it must be remembered that all respondents are working full time, most are college graduates and half are at management level positions. (See Figure 3.1.)

Data were also collected from the employees of a small life insurance company in New York City. The company has 400 employees. Questionnaires were distributed to all employees with their pay checks with cover letters from the

president and the researcher. (See Appendix B1 and B2.) The responses were anonymous, with the questionnaires returned in sealed envelopes to a box in the company mailroom. One hundred thirty usable responses were received.

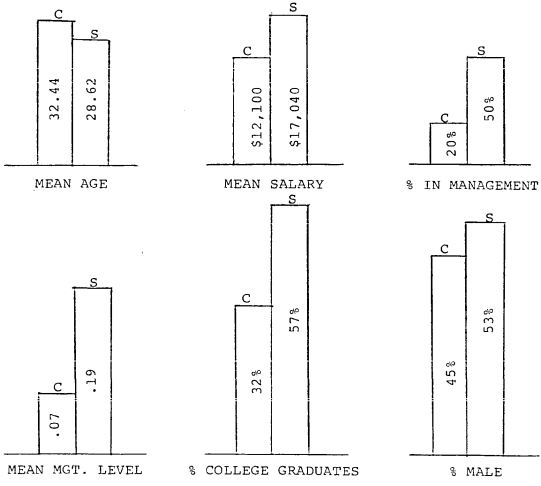
INSTRUMENTS

Demographic data were collected to determine such items as

- age
- sex
- marital status
- number of dependents
- education
- type of organization
- job title
- hierarchical level
- length of time in work force
- length of time with current employer
- length of time in current job
- salary
- percentage of total personal income represented by salary
- percentage of total family income represented by respondent's salary

Not all of the demographic data collected were used in this study. The significant factors are shown in Figure 3.1.

FIGURE 3.1
Demographic Characteristics of Samples



The data reveal that the average age of the company sample is 32.44 with a range of 18 to 66, 32% are college graduates and 20% are in management. The average salary is $12,100, with a range of $4,000 to $37,000. Fifty-five percent of the respondents are women and 45% men, which is probably typical of most insurance companies.

Since the response rate of the company employees was only one third, the demographic data of the sample were compared to approximations of similar data for the whole population. The sample mean age and salary are slightly lower for the company as a whole and the mean level of management is higher. Also, the sample has a higher percentage of males than does the company as a whole. This would imply that the sample is weighted toward the younger, slightly lower paid male employees, plus a high percentage of management personnel. It is interesting to note, however, that the results of this possibly biased sample are remarkably similar to the results of the student sample, even though the two groups vary widely in age, sex, salary, education and level of management as shown in Figure 3.1.

MEASURES

The strength of the various needs were measured by the scale devised by Lyman W. Porter. This questionnaire has been used in a number of studies involving close to 6,000 managers (Porter, 1961, 1962, 1964; Haire, Ghiselli, and

Porter, 1966; Eran, 1966; Miller, 1966; Porter and Mitchell, 1967; Payne, 1970; Roberts, Walter, and Miles, 1971; Wahba and Clemence, 1973). It consists of 13 items of the following form:

The feeling of security in my management position:

a) How much is there now? (Min.) 1 2 3 4 5 6 7 (Max.)

b) How much should there be? 1 2 3 4 5 6 7

c) How important is this to me? 1 2 3 4 5 6 7

The items are presented in random order, though they have been preclassified into one of five types of needs:

Security

Social

Esteem

Autonomy

Self-Actualization

In addition, the 1961 version included two "general" questions, one regarding pay and the other the feeling of being informed. The 1962 form retained the question about being informed, but dropped the question about pay and added one regarding pressure.

Neither form has a question on physiological needs, but since such needs are part of the model, one was added, e.g.:

The opportunity my position gives me to meet my basic needs for food, clothing and shelter.

The difference between the "should be" and "is now" answers "was taken as the operational measure of need sat-

isfaction. That is, the greater the amount by which 'should be' exceeded 'is now' in our findings, the greater is the dissatisfaction." (Porter and Lawler, 1968, p.131.)

For this study, the significant part of the measure is the "importance" scores of part c, which were taken directly from the scale.

To measure the instrumentality of pay to satisfy the needs, a fourth part was added to each question as follows:

d) to what extent is pay a means of obtaining it?

An 11 point scale ranging from 0 to 10 was used instead of a 7 point scale, as the raw score could then be immediately converted to the instrumentality range of 0 to 1 by dividing by 10.

It was recognized that the change from the Porter-Lawler seven point scale to an eleven point scale for instrumentality might create a problem for the respondents' cognitive sets. However, since instrumentality is measured on a continuum from 0 to 1, it was felt that the scores in tenths would be more valuable than scores in sevenths which would convert to decimal equivalents of .1429, .2857, .4286, .5714, .7143, .8571 and 1.000. Another problem with the Porter-Lawler scale is that it does not have a zero, which would be an important omission on an instrumentality scale. It was decided that the advantage of the certainty of better grading had a higher priority than the uncertainity of a possible cognitive

problem. Since the results in both groups were so similar, it would appear that either there was no problem, or the effects were the same for each sample.

To determine the range of responses, frequency distributions were constructed for each sample. The results are shown in the matrices displayed in Table 3.1. It is interesting to note that the most common response for the students, and the second most common response for the company employees, was zero, a response which would have been impossible with the Porter seven-point scale. It is also interesting to note that all cells of both matrices are occupied, with reasonably smooth distributions throughout, indicating that people made good use of the full scale.

TABLE 3.1

Frequency Distributions of Instrumentality Scores

3.1.1

Company Employees

Question	Score 0	1	2	3	4	5	6	7	8	9	10
1	12	7	7	6	4	13	10	13	14	14	30
2	27	12	5	5	9	9	8	17	15	5	18
3	16	10	5	9	10	11	10	15	15	9	20
4	17	10	11	3	7	10	16	15	13	14	14
5	21	9	7	14	5	16	8	11	8	14	17
6	18	7	6	12	12	7	5	21	12	6	24
7	19	5	8	7	6	11	14	11	11	14	24
8	23	10	6	10	8	9	5	8	19	6	26
9	19	9	6	6	7	4	11	14	14	10	30
10	24	14	5	7	10	9	6	17	9	10	19
11	29	6	10	6	11	8	9	9	12	5	25
12	28	10	8	7	11	9	7	10	11	9	20
13	15	4	7	9	4	4	5	5	8	8	61
14	51	13	7	7	9	11	6	6	3	6	11
Σ	319	126	98	108	113	131	120	172	164	130	339

3.1.2

Question	Students Score										
	0	1	2	3	4	5	6	7	8	9	10
1	8	6	13	27	21	33	36	27	50	11	18
2	35	16	18	27	20	25	32	18	32	13	14
3	22	15	14	18	13	37	28	19	38	23	23
4	25	14	16	20	33	33	22	28	28	10	21
5	40	13	17	30	18	28	31	22	23	10	18
6	25	15	11	29	15	41	27	28	23	18	18
7	23	15	15	21	21	38	27	18	30	18	24
8	28	16	14	20	20	27	21	23	30	23	28
9	24	16	16	16	15	40	25	24	26	23	25
10	57	23	22	32	18	34	17	16	12	9	10
11	51	14	18	23	26	28	19	18	20	18	15
12	48	20	20	23	29	32	10	23	13	14	18
13	10	4	2	9	4	8	4	15	11	33	150
14	102	28	30	21	13	16	11	11	7	3	8
Σ	498	215	226	316	266	420	310	290	343	226	390

Since not everybody in the samples was a manager, the phrase "my management position" found in the questions was changed to simply, "my position."

A copy of the questionnaire is in Appendix C.

Pay satisfaction was measured by the pay scale of the JDI developed at Cornell University.

VALIDITY AND RELIABILITY

Lawler does not provide any validity or reliability data for his questionnaire, though it has been used extensively (see p. 28). This widespread use by a number of researchers over more than a decade of studies implies at least tacit acceptance of face validity.

Convergent and discriminant validity of need satisfaction, importance of need, and instrumentality were tested by the multitrait-multimethod matrix proposed by Donald T. Campbell and Donald W. Fiske (1959). Pertinent parts of their article describing their method are:

> Aspects of the validational process receiving particular emphasis are these:
>
> Validation is typically convergent, a confirmation by independent measurement procedures.
>
> Independence of methods is a common denominator among the major types of validity (excepting content validity) insofar as they are to be distinguished from reliability.
>
> In order to examine discriminant validity, and in order to estimate the relative contributions of trait and method variance, more than one trait as well as more than one method must be employed in the validation process. In many instances it will be convenient to achieve this

> through a multitrait-multimethod matrix. Such a matrix presents all of the intercorrelations resulting when each of several traits is measured by each of several methods. (p. 81.)

The questionnaire was administered to evening division students of The College of Insurance, 50 of whom were subsequently interviewed. The interviews included questions on the importance of pay, satisfaction of needs of the Maslow hierarchy (as modified by Lawler), and the instrumentality of pay for satisfying specific needs.

The interviews were structured, (see Appendix E) using Likert-type questions as recommend by both Jahoda et.al. (1951) and Oppenheim (1966). Oppenheim specifies that the reliability of Likert scales in interviews tends to be good, with correlations of .85 often achieved.

For such questions, cards containing the responses were shown to the subject so that he or she did not have to remember all the choices available (Payne, 1951). This was to avoid the tendency to favor the last choice when the choices are merely read to the subject (Jahoda et. al., 1951).

The answers were precoded and printed on the interviewer's questionnaire to permit immediate scoring (Jahoda et. al., 1951).

Scoring for all Likert-type questions on instrumentality and importance of pay was as follows:

Item 1	Item 2	Item 3	Item 4	Item 5
10	9,8,7	6,5,4	3,2,1	0

If item 2, 3, or 4 were chosen, a follow-up question was asked, as follows:

> On a scale of 1 to 3, with 1 being low and 3 being high how would you rate the strength of your feeling about your answer?

If item 2 were chosen, and the follow-up answer was "2", the response would be scored as an 8. It item 3 were chosen, and the follow-up answer was "3", the response was scored as 6.

Following the Porter-Lawler format, the satisfaction score was determined by the difference between the perceived importance of a need and the perceived fulfillment of the need. The importance and instrumentality scores were taken directly from interview responses.

The scoring on the satisfaction and importance of need scales ranged from 1 to 7, with 1 being low, and 7 being high. Since Porter and Lawler score their data in such a way that a low score equals a high degree of satisfaction, the raw scores on the interview were converted as follows:

Raw score: 1 - 2 - 3 - 4 - 5 - 6 - 7

P - L Equivalent: 6 - 5 - 4 - 3 - 2 - 1 - 0

On the questionnaire, and in the interview, where a variable was measured by more than one question, the mean of the responses to the two, three or four questions was

used as the score of the variable. The number of questions per variable in the interview corresponded to the number of questions per variable on the Porter-Lawler scale.

Table 3.2 shows the correlation data.

TABLE 3.2

Campbell-Fiske Multitrait-Multimethod Validation Matrix

	Method:	Porter - Lawler			Interview		
	Traits:	Satis.	Import.	Instr.	Satis.	Import.	Instr.
Porter-Lawler	Satis.	(.753)*					
	Import.	.357	(.755)*				
	Instr.	.121	.541	(.711)*			
Interview	Satis.	.567*	.135	.056			
	Import.	.178	.568*	.444	.146		
	Instr.	.005	.585	.639*	-.181	.443	

* p = .01

Note: The validity diagonal is the set of italicized values. The reliability diagonal is the set of values in parentheses. Each heterotrait-monomethod triangle is enclosed by a solid line. Each heterotrait-heteromethod triangle is enclosed by a broken line.

Campbell and Fiske describe the matrix as follows:

> Adjacent to each reliability diagonal is the heterotrait-monomethod triangle. The reliability diagonal and the adjacent heterotrait-monomethod triangle make a monomethod block. A heteromethod block is made up of a validity diagonal (which could also be designated as monotrait-heteromethod values) and the two heterotrait-heteromethod triangles lying on each side of it. Note that these two heterotrait-heteromethod triangles are not identical.

> In terms of this diagram, four aspects bear upon the question of validity. In the first place, the entries in the validity diagonal should be significantly different from zero and sufficiently large to encourage further examination of validity. This requirement is evidence of convergent validity. Second, a validity diagonal value should be higher than the values lying in its column and row in the heterotrait-heteromethod triangles. That is, a validity value for a variable should be higher than the correlations obtained between that variable and any other variable having neither trait nor method in common...A third common sense desideratum is that a variable correlate higher with an independent effort to measure the same trait than with measures designed to get at different traits which happen to employ the same method. For a given variable, this involves comparing its values in the validity diagonals with its values in the heterotrait-monomethod triangles. ...A fourth desideratum is that the same pattern of trait interrelationship be shown in all of the heterotrait triangles of both the monomethod and heteromethod blocks...The last three criteria provide evidence for discriminant validity. (pp. 82-83.)

The data in the matrix meet all the suggested criteria which therefore implies both convergent and discriminant validity of the three constructs.

Imparto (1972) and Herman and Hulin (1973) raised some questions about the dimensionality of the Porter-Lawler satisfaction scale. It was decided to use the Porter dimensionality in spite of the criticism because of the fact that, as mentioned on page 28, it has been used on thousands of respondents in many studies reported in the literature. Use of the same questionnaire in the current study would permit it to take its place alongside the prior studies; to use a different set of measures would take the study out of the stream of research and thus

isolate its findings.

Also, as mentioned on page 30, the part of the questionnaire used in this study is part c, which measures the importance of a need rather than satisfaction of the need. As Herman and Hulin indicate, there have been no reported studies on the validity of the importance measure.

Factor analysis of the data and use of the new dimensions developed would make the instrument sample specific and thus of limited value.

Reliability of the Porter-Lawler questionnaire was examined by the test-retest method using the same sample as used in the Campbell-Fiske analysis. The time of the retest varied from as little as two weeks to almost a year. Despite the long lag in some cases, during which time pay raises and promotions were received (or missed), or jobs were changed, the reliability correlations were .711, .753, and .755, all at the level of $p = .01$.

Because of the long time lag between the initial questionnaire response and the retest for part of the sample, separate correlations were computed for each of the two groups. The results were somewhat different than the composite results, but all correlations were significant at the $p = .01$ level. The results are shown in Table 3.3.

TABLE 3.3

Test-Retest Correlations of Porter-Lawler Scale

	Entire Sample n = 50	Short Lag Sample[1] n = 28	Long Lag Sample[2] n = 22
Satisfaction	.753*	.802*	.579*
Importance	.755*	.542*	.844*
Instrumentality	.711*	.752*	.707*

* p = .01

1. Two weeks or less between tests.
2. Ten to twelve months between tests.

The JDI scale has shown consistent convergent and discriminant validity. Split-half reliability correlation coefficients corrected to full length with the Spearman-Brown formula were .80 (Price, 1972). Test-retest reliabilities with the present sample are shown in Table 3.4.

TABLE 3.4

Test-Retest Reliability Correlations of the J.D.I. Scale

Entire Sample, n = 50	.716*
Short Lag Sample, n = 28	.808*
Long Lag Sample, n = 22	.521**

* p = .01 ** p = .05

Data Analysis

There are two commonly used statistical methods for determining if there are consistent and satistically significant relationships between variables. One method is

to use a correlation coefficient. "The other is to divide the sample into high and low groups on the basis of one variable and then compare the scores of these high and low groups on a second variable. When this latter method of comparing high and low groups is used, the larger the difference between the groups on the second variable, the stronger is the relationship between the variables." (Porter and Lawler, 1968, p.52.)

Both methods were used in this study.

Pearson product-moment correlations were used to provide global comparisons of the data. The high versus low comparison with tests of the differences was used to determine the strength of the relationships and to permit easier graphic display of the data.

The hypotheses were tested as follows:

1. Hypothesis: Instrumentality of pay for satisfying needs.

   TEST: Analysis of variance among the four instrumentalities.

2. Hypothesis: Comparison of scores of men and women.

   TEST: Mean scores for men and women were compared. Significance of differences were measured by t tests.

3. Hypothesis: Job level and importance of pay.

   TEST: Pearson product-moment correlation between job level and importance of pay as measured

by the Lawler model.

Importance of pay scores of management personnel were compared with the scores of non-management personnel and the significance of the differences were determined by a t test.

4. Hypothesis: Level of pay and importance of pay.

   TEST: Pearson product-moment correlation between level of pay and importance of pay as measured by the Lawler model.

   Importance of pay scores of those in the top group of level of pay were compared with the scores of those in the lowest group and the significance of the differences were determined by a t test.

5. Hypothesis: Age and importance of pay.

   TEST: Pearson product-moment correlation between age and importance of pay as measured by the Lawler model.

   Importance of pay scores of the oldest group of respondents were compared with those of the youngest group and the significance of the differences were determined by t test.

It is recognized that a correlational analysis cannot prove the cause and effect relationships of a conceptual model. If close relationships are found as predicted, however, it indicates some support for the model, and if a

number of hypotheses deducible from the model are upheld, it indicates that it does have construct validity. Conversely, if no relationships are found where predicated, the correlational study would tend to disprove the model.

Scoring

Demographic Data

The only "scoring" necessary in the demographic data was to establish the level of management. The level was determined by subtracting the number of levels above the respondent from the total number of levels and dividing by the total number of levels. This placed the respondent on a continuum of from 0 to 1, where 0 means non-management level and 1 means the chief executive. On the questionnaire for company personnel, the number 5 was printed in answer to the question about total number of levels to assure consistency. The levels were enumerated in the cover letter.

Porter-Lawler

The difference between "a" (How much is there now) and "b" (How much should there be) measures a person's satisfaction with the amount of the characteristic present. The higher the score, the less satisfied a person is. A negative score is recorded as "0".

Part "c" is a straightforward measure of importance; the higher the score, the greater the importance of the

characteristic.

Part "d" measures the instrumentality of pay for achieving the characteristic. Dividing the raw score by 10 provides an instrumentality score ranging from 0 to 1.

The number of questions measuring specific needs range from one to four as follows:

Physiology	- Question 13
Security	- Question 6
Social	- Questions 10, 14
Esteem	- Questions 1, 4, 8
Autonomy	- Questions 2, 5, 11, 12
Self Actualization	- Questions 3, 7, 9

JOB DESCRIPTION INDEX

The job description index is scored in a positive direction by Smith, Kendall and Hulin, its developers. The "proper" responses are:

Y	Income adequate for normal expenses
Y	Satisfactory profit sharing
N	Barely live on income
N	Bad
Y	Income provides luxuries
N	Insecure
N	Less than I deserve
Y	Highly paid
N	Underpaid

If a respondent places a "Y" beside "Income adequate for normal expenses," then this item is scored in a positive direction. Conversely, if the respondent places an "N" beside "Income adequate for normal expenses," then this item would be scored in a negative direction. The scoring is: "Yes" to a positive item, 3; "No" to negative item 3; "?" to any item, 1; "Yes" to a negative item, 0; and "No" to a positive item, 0. The responses are summed to arrive at a total score.

CHAPTER 4

RESULTS

The first hypothesis was that pay will be seen as most instrumental in satisfying esteem and physiological needs, secondarily instrumental in satisfying social and self-actualization needs. This was based on Lawler's statement, "In summary, the data suggest that pay can be instrumental for the satisfaction of most needs but that it is most likely to be seen as instrumental for satisfying esteem and physiological needs, secondarily to be seen as instrumental for satisfying autonomy and security needs, and least likely to be seen as instrumental for satisfying social and self actualization needs." (p. 34.)

Both samples present pictures somewhat different from Lawler's prediction, as can be seen from Table 4.1

TABLE 4.1

Instrumentality of Pay to Satisfy Needs of the Maslow Hierarchy (as amended by Porter & Lawler)

4.1.1

Company Employees (n = 130)

Need	$\bar{X}$	S.D.
Physiology	.69	.37
Self-Actualization	.57	.31
Esteem	.57	.28
Security	.54	.35
Autonomy	.50	.30
Social	.42	.31

4.1.2

Students (n = 250)

Need	$\bar{X}$	S.D.
Physiology	.89	.21
Esteem	.55	.24
Self-Actualization	.55	.25
Security	.54	.30
Autonomy	.45	.27
Social	.30	.24

Both see pay as most instrumental in satisfying physiological needs. The company group, which had considerably lower minimum and mean salaries, perceived less instrumentality than did the student group, and its data had almost three times the variance of the student group. In gratuitous comments on the questionnaire, a number of the company respondents indicated that they really could not live on their salaries. This unhappiness with their salaries is clearly reflected in the scores of the Job Description Index (JDI) on which the company mean was 5.46 compared to the student mean of 13.73. Even when compensating for the fact that the insurance company does not have a profit sharing plan, which limits the JDI maximum score to 24 instead of 27, the company mean is only 22.75% of the maximum score, whereas the student mean is 50.85% of the maximum. Actually, the 50.85% figure is not a fair basis for comparison, since it may be reasonably assumed that not all of the student's employers have profit sharing plans either which would make the mean a higher percentage of the actual mean maximum.

A possible explanation for this disparity in instrumentality means for meeting physiological needs (significant at the $p = .01$ level) is that the company people were basing their responses on concrete reality rather than conceptual abstraction. If they have difficulty paying the rent, or buying the clothes they want, or eating as they

would like to, they would perceive pay as meeting their physiological needs inadequately and therefore not being very instrumental in satisfying that need.

Esteem and self-actualization were ranked second in both cases, significantly different ($p = .01$) from the ranking of physiology. Social, as predicted, was at the bottom of the instrumentality ranking.

Analyses of variance were computed between the rankings of the instrumentality of pay to satisfy physiological needs on one hand and social and self-actualization needs on the other, and between the rankings of the instrumentality of pay to satisfy esteem needs on the one hand and social and self-actualization on the other. Table 4.2 shows the matrices of F scores.

TABLE 4.2

Analysis of Variance Among Instrumentalities

4.2.1

Company Employees (n = 130)

F Scores

	Social	Self Actual.
Physiological	41.764	8.002
Esteem	18.070	.998

The significant values for F are: F.01, 1, 258 = 6.715; F.05, 1, 258 = 3.868.

4.2.2

Student (n = 250)

F Scores

	Social	Self Actual.
Physiological	760.304	246.011
Esteem	134.181	.033

The significant values for F are: F.01, 1, 498 = 6.68;
F.05, 1, 498 = 3.855.

It can readily be seen that all differences are highly significant, except for the differences between esteem and self-actualization which lack statistical significance.

The hypothesis is thus partially supported. Physiological was seen by both groups as the need pay is most instrumental in satisfying. Esteem and self-actualization were part of a second grouping, and social, as predicted, was at the low end of the instrumentality spectrum.

It is the high ranking of the instrumentality of pay to satisfy the need for self-actualization which is contrary to expectations. Self-actualization is the next to least satisfied need for the company personnel and the least satisfied for the students (Table 4.3) and yet pay is seen as highly instrumental in satisfying it. It is possible that the concepts of "self-fulfillment," "worthwhile accomplishment," and "personal growth" used to measure self-actualization include the perception of high pay, which would make

pay instrumental in reaching the concepts.

TABLE 4.3

Ranking of Satisfaction of Needs
(The lower the score, the higher the satisfaction)

4.3.1

Company Employees (n = 130)

Need	$\bar{X}$	S.D.
Social	.99	1.23
Security	1.62	1.83
Esteem	1.80	1.37
Autonomy	2.03	1.46
Self-Actualization	2.20	1.64
Physiological	2.69	1.92

4.3.2

Students (n = 250)

Need	$\bar{X}$	S.D.
Social	.70	.96
Security	.92	1.42
Esteem	1.20	1.04
Autonomy	1.28	1.07
Physiological	1.39	1.49
Self-Actualization	1.41	1.21

It is interesting to note that the company group perceived pay as less instrumental than the student group for satisfying physiological needs, and as of the same instrumentality for satisfying security needs, but as more instrumental for satisfying social, esteem, autonomy and self-actualization needs. This may be a rationalization for the continued willingness to accept a level of pay with which the respondents are not happy (as evidenced by the J.D.I. scores) and which they see as not meeting their needs in providing such basic elements as food, clothing, shelter and security. Social, esteem, autonomy and self-actualization needs are far more abstract, much less quantifiable, and subject to far more subjective definition and evaluation.

Hypothesis two was that pay will be less important to women than to men because it is seen as less instrumental in satisfying the needs women rank high (e.g. social) than the needs men rank high (e.g. esteem).

The importance of pay score for women is marginally higher than for men in the company sample, and marginally lower in the student sample. The differences are not statistically significant in either case, leading to the conclusion that pay is as important to women as it is to men, thus rejecting the hypothesis. The scores are shown in Table 4.4.

TABLE 4.4

Importance of Pay Scores by Sex

4.4.1

Company Employees

	n	$\bar{X}$	S.D.	t
Women	72	20.93	11.66	.035
Men	58	20.41	10.09	

4.4.2

Students

	n	$\bar{X}$	S.D.	t
Women	117	20.33	7.83	.105
Men	133	20.88	7.44	

The hypothesis was based on Lawler's contention that "Pay should be less important for women because it is not highly instrumental for the satisfaction of needs they rank high (e.g. social), while it is instrumental for the satisfaction of needs men rank high (e.g. esteem)." (p.47.)

It is true that pay is not seen as highly instrumental for satisfying the social need and is seen as highly instrumental for satisfying the esteem need. (See Table 4.2.) However, the assumption that women rank the social need high while men rank the esteem need high is not borne

out by the sample data.

Table 4.5 shows that the women of both samples rank esteem as more important than the men of either sample. As a matter of fact, esteem was the lowest ranking for both groups of men. The company women ranked social marginally higher than did the company men. The student men ranked social higher than did the student women, and both scores were below that of the company men. For the company women, social was ranked second lowest; for the student women it was the lowest by a substantial margin. (See Figure 4.1 and Table 4.6.)

TABLE 4.5

Importance of Needs Scores by Sex

4.5.1

Company Employees

		PHYSIOLOGICAL		SECURITY		SOCIAL		ESTEEM		AUTONOMY		SELF ACTUALIZATION	
SAMPLE	n	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Women	72	6.18	1.77	6.31	1.16	5.70	1.48	5.78	1.26	5.61	1.42	6.07	1.31
Men	58	6.38	1.34	6.00	1.63	5.67	1.16	5.27	1.57	5.81	1.18	6.15	1.27

4.5.2

Students

		PHYSIOLOGICAL		SECURITY		SOCIAL		ESTEEM		AUTONOMY		SELF ACTUALIZATION	
SAMPLE	n	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Women	117	6.76	.73	6.06	1.45	5.37	1.16	5.76	1.22	5.74	1.17	6.58	.65
Men	133	6.46	1.07	5.77	1.44	5.62	1.14	5.58	1.26	5.84	.91	6.53	.62

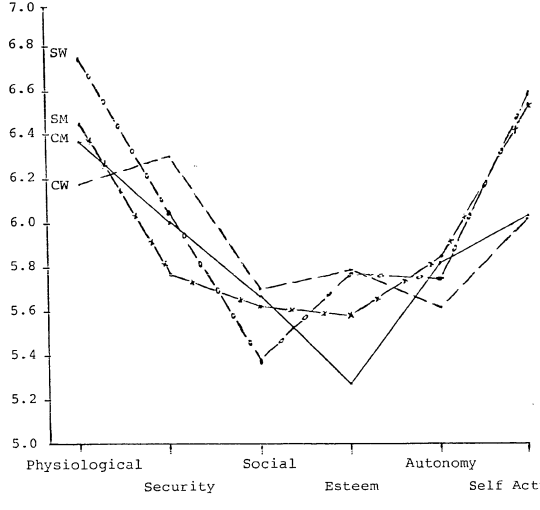
TABLE 4.6

Ranking of Importance of Needs by Sex

Need	WOMEN		MEN	
	COMPANY	STUDENTS	COMPANY	STUDENTS
Physiological	2	1	1	2
Security	1	3	3	4
Social	5	6	5	5
Esteem	4	4	6	6
Autonomy	6	5	4	3
Self Actualization	3	2	2	1

FIGURE 4.1

Importance of Needs By Sex



Lawler's predictions were based on a series of studies by himself and others made in the 1940's and 1950's. Those studies thus preceded the appearance of the women's movement which has fought discrimination in the workplace based on sex and has been instrumental in passing anti-discrimination and equal rights laws. There has been much activity in the last twenty years aimed at raising women's levels of expectation and improving their self-image. It is very possible that the cumulative effect of two decades of such political and social action has changed women's views of the work-place. Where before it was apparently looked upon primarily as a social environment, it is now seen in much the same light as men see it: a means of satisfying basic physiological needs, of obtaining economic security, and of achieving self-actualization.

The pattern of the perception of the instrumentality of pay for satisfying various needs is essentially the same for both men and women in both samples as shown in Table 4.7 and Figure 4.2. With the exception of physiological needs, the company group saw a higher level of instrumentality than did the student group. With that same exception, the company women consider pay more instrumental for satisfying needs than the men do, whereas the student women saw pay as more instrumental than the men did except for physiological and self-actualization where the scores were equal.

TABLE 4.7

Instrumentality of Pay to Satisfy Needs (By Sex)

4.7.1

Company Employees

		PHYSIOLOGICAL		SECURITY		SOCIAL		ESTEEM		AUTONOMY		SELF ACTUALIZATION	
SAMPLE	n	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D
Women	72	.67	.40	.58	.34	.43	.31	.59	.29	.52	.32	.57	.32
Men	58	.72	.34	.48	.35	.41	.31	.56	.27	.48	.28	.58	.29

4.7.2

Students

		PHYSIOLOGICAL		SECURITY		SOCIAL		ESTEEM		AUTONOMY		SELF ACTUALIZATION	
SAMPLE	n	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Women	117	.89	.23	.51	.32	.28	.24	.53	.25	.44	.28	.55	.26
Men	133	.89	.19	.57	.28	.32	.25	.58	.23	.46	.26	.55	.24

FIGURE 4.2

Instrumentality of Pay to Satisfy Needs (By Sex)

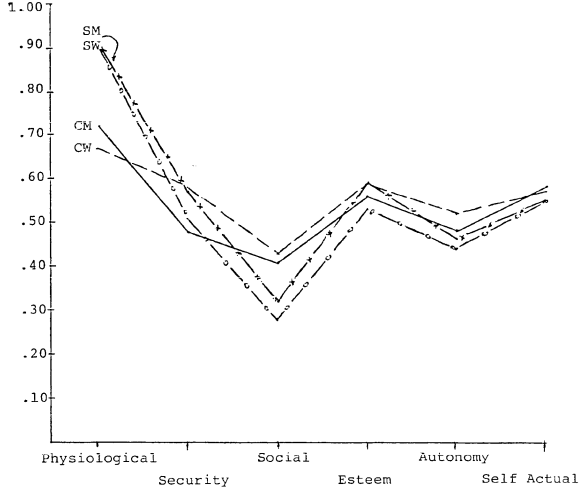


Table 4.8 shows the rankings of the instrumentality of pay to satisfy the various needs.

TABLE 4.8

Ranking of Instrumentality of Pay to Satisfy Needs

	COMPANY		STUDENTS	
Need	WOMEN	MEN	WOMEN	MEN
Physiological	1	1	1	1
Security	3	4/5	3	3
Social	6	6	6	6
Esteem	2	3	4	2
Autonomy	5	4/5	5	5
Self-Actualization	4	2	2	4

All groups rated physiological first and social last. The company women and student men had identical rankings. The company men and student women both ranked self-actualization second, but differed slightly in the rankings of security, esteem and autonomy. No clear pattern is evident in the data, but clearly sex is not a determinant.

The satisfaction with pay scores were compared by sex for each sample and no significant differences were found. See Table 4.9.

TABLE 4.9

Satisfaction with Pay Scores by Sex

4.9.1

Company Employees

		JOB DESCRIPTION INDEX		
Sample	n	$\bar{X}$	S.D.	t
Women	72	4.68	5.56	.309
Men	58	6.50	5.94	

4.9.2

Students

		JOB DESCRIPTION INDEX		
Sample	n	$\bar{X}$	S.D.	t
Women	117	12.99	6.45	.254
Men	133	14.32	6.40	

Hypothesis three was that there will be an inverse relationship between job level and the importance of pay.

It was based on Lawler's statement,

> Higher level managers generally report higher levels of need satisfaction, even when they are not higher paid (Porter & Lawler, 1965). Thus, since the importance of pay depends on the degree of satisfaction of such needs as esteem and security, it follows that pay should be less important to higher-level managers: their needs for security and esteem are likely to be better satisfied even when they do not make more money. (p.55.)

The conclusion regarding the relationship between importance of pay and job level is based upon the premise that pay is seen as instrumental in satisfying the security and esteem needs. Since the importance of pay is measured by the sum of the products of importance of a need and the instrumentality of pay to satisfy the need, if the need is unimportant because of satisfaction the product will be minimal.

Correlations were computed between the importance of pay scores and level of management for all company employees and all students. The results are displayed in Table 4.10.

TABLE 4.10

Correlations between Job Level and Importance of Pay

All company employees (n = 130)	.106
All students (n = 250)	.054

Both of these correlations are obviously very low and neither has statistical significance. On the basis of these results, the hypothesis is rejected.

The satisfaction with security and esteem scores of all management personnel were compared to the satisfaction with security and esteem scores of all non-management personnel. The importance of pay scores of both groups were also compared. The differences in need satisfaction were in the predicted direction, i.e. more satisfaction of the security and esteem needs by management personnel, but

they rated pay as more important than did non-management personnel. However, only the satisfaction with esteem difference was significant. The results are summarized in Table 4.11.1.

To maintain a symmetry of comparison, all students in management positions were compared to those students not in management positions for their satisfaction of security and esteem needs, and the importance of pay. In this comparison, the difference in satisfaction with security scores was in the opposite direction from that predicted, as was the importance of pay difference, and none of the differences were significant. The results are summarized in Table 4.11.2.

TABLE 4.11

Satisfaction of Security and Esteem Needs, and Importance of Pay Scores by Level of Management. (The lower the Satisfaction score, the greater the Satisfaction.)

4.11.1

Company Employees

		SATISFACTION WITH SECURITY			SATISFACTION WITH ESTEEM			IMPORTANCE OF PAY		
	n	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t
Management Personnel	27	1.19	1.59	1.297	1.22	.71	5.259*	22.61	9.75	.130
Non-Management Pers.	103	1.73	1.88		1.95	1.46		20.16	11.26	

* p = .01

4.11.2

Students

		SATISFACTION WITH SECURITY			SATISFACTION WITH ESTEEM			IMPORTANCE OF PAY		
	n	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t
Management Personnel	125	.92	1.43	.079	1.17	1.03	.360	20.96	7.62	.091
Non-Management Pers.	125	.90	1.38		1.22	1.06		20.29	7.64	

While the hypothesis did not predict any relationship between level of management and satisfaction with pay, correlations were computed, and comparisons made for and between the two samples. The correlation for the company sample was significant at the p = .01 level. The student correlation, while small, was significant at the p = .05 level. Table 4.12 shows the correlations, and Table 4.13 the comparisons of means.

TABLE 4.12

Correlations Between Levels of Management and Satisfaction With Pay

Company Employees (n = 130)	.443*
Students (n = 250)	.136**

* p. = .01 ** p. = .05

TABLE 4.13

Satisfaction With Pay by Level of Management

4.13.1

Company Employees

		JOB DESCRIPTION INDEX		
	n	$\bar{X}$	S.D.	t
Management Personnel	27	9.81	6.02	.736
Non-Management Personnel	103	4.32	5.19	

4.13.2

Students

		JOB DESCRIPTION INDEX		
	n	$\bar{X}$	S.D.	t
Management Personnel	125	13.86	6.05	.062
Non-Management Personnel	125	13.53	6.84	

These data indicate that level of management is correlated with satisfaction with pay, but that there is no statistically significant relationship between level of management and perceived importance of pay. Pay apparently neither increases nor diminishes in importance as people move to higher levels of management.

Hypothesis four related importance of pay to level of pay and stated that there will be an inverse relationship between the level of pay and the importance of pay.

This hypothesis came directly from Lawler's statement that

> One of the predictions that is directly suggested by our instrumental view of the importance of pay is that the less pay people receive, the more important it should be to them. Basically, the argument is that high pay should lead to the satisfaction of such needs as esteem and security, and they will thus become less important, as will pay, since its value depends on such needs. A number of studies have found evidence to support the first link in this argument, the contention that high pay leads to greater satisfaction in a number of areas. (p. 51.)

He does go on to say that, "There is much less evidence to support the expectation that satisfaction with pay and satisfaction of esteem and security needs cause pay to be of less importance.

However, he adds that "...despite the paucity of evidence, it seems reasonable to conclude that high pay satisfaction can lead to reduction in the importance of pay." (p. 52.)

The correlation for company employees was significant at the p = .01 level, but was in the wrong direction. The student correlation was in the right direction, but was not significant. The correlations are shown in Table 4.14.

TABLE 4.14

Correlations Between Level of Pay and Importance of Pay

Company employees (n = 130)	.231*
Students (n = 250)	-.016

*p = .01

Based on these data, the hypothesis is rejected.

The company employees were divided into high and low groups of approximately equal size and their scores for satisfaction of security and esteem needs and their scores for the importance of pay were compared. As seen in Table 4.15, the differences in the satisfaction of security and esteem needs were in the expected direction, but the difference in importance of pay means was not. Also, none of the differences were significant.

Similar comparisons and tests were made for the students. Here, all differences were in the expected direction, and the difference in the satisfaction of esteem need was significant. These results are also displayed in Table 4.15.

TABLE 4.15

Satisfaction of Security and Esteem Needs, and Importance of Pay Scores by Level of Pay. (The lower the satisfaction score, the greater the satisfaction.)

4.15.1

Company Employees

		SATISFACTION WITH SECURITY			SATISFACTION WITH ESTEEM			IMPORTANCE OF PAY		
	n	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t
Upper level group	49	1.57	1.87	.150	1.58	1.26	.778	24.08	9.77	.266
Lowest level group	52	1.67	1.78		1.81	1.83		17.89	11.65	

TABLE 4.15.2

Students

		SATISFACTION WITH SECURITY			SATISFACTION WITH ESTEEM			IMPORTANCE OF PAY		
	n	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t
Upper level group	86	.84	1.36	.790	1.00	.97	2.79*	20.15	7.99	.053
Lowest level group	79	1.10	1.52		1.49	1.13		20.64	7.35	

* p = .01

Correlations were computed between level of pay and satisfaction with pay and differences were compared for the same groups used in testing the hypothesis. Both correlations were significant at the p = .01 level. The results

are shown in Table 4.16.

TABLE 4.16

Correlations Between Levels of Pay and Satisfaction With Pay

Company employees (n = 130)	.479*
Students (n = 250)	.318*

* p = .01

The means of the upper and lower level groups in each sample were compared and while the comparisons indicated greater satisfaction on the part of the higher paid group in each case, there was no statistical significance to either of the differences. The results are shown in Table 4.17.

TABLE 4.17

Satisfaction with Pay by Level of Pay

4.17.1

Company Employees

		Job Description Index		
	n	$\bar{X}$	S.D.	t
Upper level group	49	7.08	5.85	5.94
Lowest level group	52	3.65	4.70	

4.17.2

Students

	Job Description Index			
	n	$\bar{X}$	S.D.	t
Upper level group	86	15.62	5.34	.688
Lowest level group	79	11.42	6.85	

These data would seem to indicate that while there is a relationship between level of pay and satisfaction with pay, there is only a modest difference between the lowest and highest paid groups and that there is no relationship between level of pay and its importance.

To test Lawler's premise that there is a negative relationship between satisfaction with pay and importance of pay, these scores were correlated separately for the company employees and students. The results are shown in Table 4.18 which indicate a small negative correlation for the students, and a small positive correlation for the company employees. Neither correlation is significant.

TABLE 4.18

Correlations of Importance of Pay and Satisfaction With Pay

Company Employees	(n = 130)	.117
Students	(n = 250)	-.027

These figures show no support for the premise, though

of course, it is not known whether the premise is wrong, or the measurement of importance of pay is inadequate.

The fifth hypothesis states that pay will be less important to older workers than to younger workers because their social and self-actualization needs will be less satisfied and pay is seen as least instrumental in satisfying those needs.

Lawler says:

> The fact that pay is differentially instrumental for the satisfaction of various needs has some interesting implications. Stated in the strongest terms, it suggests that unless esteem, security, and physiological needs are strong in an individual, he is not likely to value pay. In other words, people who are primarily concerned with satisfying social needs or self-actualization needs are not likely to value pay very highly, because it is not seen as instrumental for satisfying these needs. (p. 34.)

In describing studies of the relationship between age and pay, Lawler reported:

> Ganguli (1954) reported no significant relationship between age and the importance of pay. Jurgensen (1947, 1948) and Lahiri and Choudhuri (1966) reported a tendency for pay to become less important as people become older. Gruenfeld (1962) also found a negative relationship. Thus, we have three studies which reported a negative linear relationship between age and the importance of pay and one which found no relationship. Since Ganguli's study, which found no relationship, was done among factory workers in India, it is probably safe to assume that, at least in the United States, a negative relationship does exist. (p. 48.)

In commenting on the relationship between age and the importance of pay, Lawler says:

> We have said nothing about why pay might decrease in importance as people grow older, and indeed there is no definitive explanation. One possibility is that older employees usually are higher paid and perhaps are at higher levels in the organization and as a result some of the needs that can be satisfied by pay have been satisfied. This explanation is based on the point made earlier that the needs for which pay is instrumental are satiable; and when they are partially satisfied, they - along with pay itself - become less important. (p. 48.)

The correlation for company employees was significant at the .01 level, but was in the wrong direction. The correlation for the student sample was in the right direction, but was not significant. The figures are shown in Table 4.19.

TABLE 4.19

Correlations Between Age and Importance of Pay

Company employees (n = 130)	.322*
Students (n = 250)	-.075

* p = .01

Based on these figures, the hypothesis is rejected.

The company employees were divided into high and low groups of approximately equal size and their scores for satisfaction of social and self-actualization needs and their scores for the importance of pay were compared. The satisfaction differences were in the expected direction, but the difference in importance of pay scores was not.

None of the differences were significant.

Similar comparisons and tests were made with the student sample data. All of the differences were in the wrong direction and none were significant.

Both sets of data are shown in Table 4.20.

TABLE 4.20

Satisfaction of Social and Self-Actualization Needs, and Importance of Pay Scores, by Age. (The lower the satisfaction score, the greater the satisfaction.)

TABLE 4.20.1

Company Employees

		Satisfaction with Social			Satisfaction with Self-actualization			Importance of Pay		
	n	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t
Upper age group	48	1.15	1.46	.164	2.42	1.62	.071	26.13	10.54	.382
Lowest age group	51	1.08	1.45		2.38	1.73		17.17	11.06	

4 20.2

Students

		Satisfaction with Social			Satisfaction with Self-actualization			Importance of Pay		
	n	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t
Upper age group	87	.60	.85	1.432	1.36	1.33	.348	21.17	7.74	.056
Lowest age group	89	.81	1.08		1.44	1.11		20.68	7.52	

One possible partial explanation for the failure of the hypothesis is the flaw in the premise that pay is not seen as instrumental in satisfying self-actualization needs.

The data collected in testing hypothesis one showed that pay was seen as highly instrumental in meeting self-actualization needs by both the company employees and the students. Actually, the entire argument is specious when the results of the two samples are compared. In the company sample, the older group had lower satisfaction scores for the satisfaction of social and self-actualization needs as predicted, but a higher importance of pay score. In the student sample, the satisfaction scores of the older group were higher, but the importance of pay score was also higher. There would thus seem to be no relationship between the satisfaction of these needs and the importance of pay.

Correlations were computed between age and the satisfaction with pay and differences in mean scores were compared. The results are shown in Table 4.21 and show that neither correlation is significant.

TABLE 4.21

Correlations Between Age and Satisfaction with Pay

Company employees (n = 130)	.065
Students (n = 250)	.127

The means of the satisfaction with pay scores were compared for the oldest and youngest groups in each sample. In each case, the older group had slightly higher scores, but neither of the differences were significant. Table 4.22

displays the results.

TABLE 4.22

Satisfaction With Pay by Age

4.22.1

Company Employees

	JOB DESCRIPTION INDEX			
	n	$\bar{X}$	S.D.	t
Upper age group	48	6.23	6.17	.292
Lowest age group	51	4.20	5.51	

4.22.2

Students

	JOB DESCRIPTION INDEX			
	n	$\bar{X}$	S.D.	t
Upper age group	87	14.56	6.14	.367
Lowest age group	89	12.26	6.72	

Since company employees and students varied in so many respects (See Figure 3.1, Demographic Characteristics) the importance of pay and satisfaction with pay scores of the two groups were compared. The importance of pay scores

of these two disparate groups were almost identical and the difference had no statistical significance. On the other hand, there was a large difference in the satisfaction with pay scores which was significant at the p = .05 level. The comparisons are shown in Table 4.23.

TABLE 4.23

Comparison of Importance of Pay and Satisfaction With Pay Scores

		IMPORTANCE OF PAY			SATISFACTION WITH PAY		
	n	$\bar{X}$	S.D.	t	$\bar{X}$	S.D.	t
Company employees	130	20.67	10.97	.004	5.46	5.80	2.085*
Students	250	20.62	7.62		13.73	6.48	

* p = .05

This again indicates that pay can be perceived to be just as important to a group with relatively high satisfaction scores as to a group obviously unhappy with its pay. These two groups varied in average age, salary, management level, level of education, and percentage of males and females. They also differed in that the student group was heterogeneous representing many different firms of varying size, structure, and purpose, whereas the company employees came from a single firm and were therefore exposed to the same environmental conditions. Despite these many differ-

erences, the results of all the tests were remarkably similar.

Since four of the five hypotheses involved the interrelation of one or more of the demographic factors of sex, age, level of management or salary and the importance of pay, those four factors were regressed on the importance of pay scores for each sample. Analysis of the data reveals little statistical basis for assuming a regression of any of the demographic factors on the importance of pay. Table 4.24 shows the results of the computations.

TABLE 4.24

Regression of Demographic Factors on the Importance of Pay Score

4.24.1

Company Employees (n = 130)

Demographic Factor	t
Sex	-.792
Age	2.508*
Level of Management	-.384
Salary	1.056

The critical values of t are: t .01, 125=2.616; t .05, 125=1.979.

* p = .05

4.24.2

Students (n = 250)

Demographic Factor	t
Sex	.377
Age	-1.195
Level of Management	.701
Salary	.073

The critical values of t are: t .01, 245=2.599; t .05, 245=1.968.

DISCUSSION

One of the hallmarks of a good theory is its ability to predict. None of Lawler's predictions tested were confirmed by either group, which implies that there is no support for the theory.

There are a number of possible explanations for the universally negative results. Among them are:

1. The theory and its model are just not valid and the importance of pay has no relation to the importance of needs in Maslow's hierarchy and the perceived instrumentality of pay to satisfy those needs.

2. The underlying theory of the Maslow hierarchy of needs upon which the model is built has no substance. As mentioned in the discussion of Maslow's theory on pages 7 to 10, there have been serious questions raised and a rigorous test has not been possible because of the difficulty in operationalizing the concepts.

3. The studies which led to Lawler's predictions, which formed the bases for the hypotheses, were made in the 1940's and 1950's when people's expectations and attitudes towards work were vastly different than they are in the 1980's. As mentioned earlier, the position of women in the work force, indeed in society as a whole, is so different from what it was thirty or forty years ago as to constitute an entirely different environment requiring

entirely different predictions.

4. There may be a flaw in Lawler's logic when he contends that satisfaction of a need renders it unimportant. Maslow says that satisfaction of a need removes its motivating force, which is not the same as saying the need becomes unimportant. The desire for food is not prepotent right after a banquet, but eating is still recognized as an important part of life. Physiological needs may be well satisfied in most of Western society and they may no longer be motivators, but are still recognized as important. Lawler may have had a semantic problem and instead of "importance" should have said "amount of lack of satisfaction". Combining such a measure in multiplicative fashion with a perception of the instrumentality of pay to satisfy the need would make some of his allegations seem more logical.

5. The measuring instrument used may be inadequate. In an attempt to explore this latter possibility after the fact, a Campbell-Fiske correlation study was made of the six dimensions of the Porter-Lawler scale for the traits of importance and instrumentality. Data gathered during the intial Campbell-Fiske study were used. The results showed a high degree of convergent and discriminant validity for the importance measure. The test indicated convergent validity for the dimensions in the in-

strumentality measure, though the support for physiological was weak. The discriminant validity results were weak, with only partial support for social, esteem, and autonomy. The results are shown in Table 4.25.

TABLE 4.25

Campbell-Fiske Tests of Porter-Lawler Dimensions

4.25.1

Importance

Method:	Porter-Lawler					Interview				
Traits:	Physiological	Security	Social	Esteem	Autonomy	Self-Actual.	Physiological	Security	Social	Esteem	Autonomy	Self-Actual.
PORTER LAWLER												
Physiological												
Security	.390											
Social	-.034	.125										
Esteem	.262	.227	.101									
Autonomy	.045	.078	.072	.421								
Self-Actual.	.110	.064	.152	.204	.572							
INTERVIEW												
Physiological	.614**	.354	.100	.110	-.059	-.016						
Security	.519	.672**	.112	.172	-.022	-.026	.414					
Social	-.216	.011	.655**	.012	.336	.036	-.082	-.103				
Esteem	.333	.288	.019	.608**		.055	.225	.351	.147			
Autonomy	.231	-.004	-.059	.136	.602**	.370	.230	.065	-.045	.147		
Self-Actual.	.135	.106	.194	-.028	.258	.338**	.209	.171	.135	.160	.440	

* p = .01 ** p = .05

Convergent validity is indicated for all dimensions since the correlations on the validity diagonal are all "significantly different from zero and sufficiently large enough to encourage further examination of validity." (Campbell-Fiske, 1959, pp. 82-83.) Discriminant validity is indicated for all dimensions except self-actualization which shows some redundancy with autonomy, the Porter-Lawler addition to the hierarchy.

4.25.2

Instrumentality

Method:	Porter-Lawler						Interview					
Traits:	Physiological	Security	Social	Esteem	Autonomy	Self-Actual.	Physiological	Security	Social	Esteem	Autonomy	Self-Actual.
PORTER LAWLER Physiological												
PORTER LAWLER Security	.173											
PORTER LAWLER Social	.060	.636										
PORTER LAWLER Esteem	.313	.477	.583									
PORTER LAWLER Autonomy	.050	.579	.693	.703								
PORTER LAWLER Self-Actual.	.133	.635	.755	.787	.758							
INTERVIEW Physiological	.243	.111	.046	.128	.114	.099						
INTERVIEW Security	.158	.329	.011	.053	.056	.081	.245					
INTERVIEW Social	.080	.390	.446	.501	.450	.547	.029	.079				
INTERVIEW Esteem	.226	.169	.404	.563	.472	.396	.030	.017	.493			
INTERVIEW Autonomy	.043	.296	.439	.406	.679	.488	.041	.153	.396	.462		
INTERVIEW Self-Actual.	.219	.383	.427	.486	.352	.487	.062	.269	.381	.335	.293	

*p = .01 **p = .05 ***p = .05 (one tail)

The initial Campbell-Fiske matrix showed discriminant validity for the constructs of satisfaction, importance, and instrumentality. Since no discriminant validity is shown for instrumentality when it is allocated to the satisfaction of specific needs, it may be that pay is perceived as having a generalized instrumentality to satisfy needs and that that instrumentality cannot be broken into specific need components. It may also be that the change from a seven point scale to an eleven point scale (see discussion on page 30) did confuse respondents and contaminated the scores. It may be that the question, "How helpful is pay in obtaining it?", while simple and direct on its face, was not clear in its meaning to respondents.

There are enough unanswered questions to prevent repudiation of the theory and its model. There are also enough negative results to withhold support.

RECOMMENDATIONS FOR FURTHER RESEARCH

The answers to the questions, what makes pay important, and how can that importance be measured, are still elusive. The questions are important however, because as our economy becomes more predominently a service economy and therefore more labor intensive, pay will become an ever more significant component of the cost of goods and services. Further research, therefore, is necessary. Some of the issues to be resolved are:

. A confirmation or rejection of the Maslow hierarchy. Does the hierarchy of needs really exist, or is it purely a theoretical construct? If it exists, what are its time parameters? Does the entire hierarchy appear within the prime working years of a person, or an entire working period - or only over a full life-span? The answers to these questions perhaps have more direct application to motivation theory, but, since Lawler has incorporated the hierarchy into his importance of pay model, they also have significance to the question of pay and its importance.

. One of the possible problems with Lawler's model is his use of the word "importance" in reference to the Maslow needs. A need could be fully satisfied, and therefore not prepotent, having no motivating value in Maslow's scheme, and yet be recognized as very important. If Lawler really

meant to incorporate Maslow's theory, this could be a significant stumbling block. Research to determine the difference in effect when "unfulfilled need satisfaction" is substituted for "importance" could be significant.

. Before predictions can be made from the model based on the need strengths of different demographic groups, research is necessary to determine the relative satisfaction of different needs by age, sex, level of management and level of pay. The samples used in this study did not conform to the results of the studies cited by Lawler in making his predictions. Research is necessary to determine whether the current results are an aberration, or reflect a change in the perceptions and aspirations of the modern work-force.

. One of the implied constructs in Lawler's theory is the diminishing marginal utility of money, which has been widely accepted in economic circles for many years. There have been a few recent studies which have cast doubt on the construct. Further research should be performed to test its validity, as its rejection could have a significant bearing on understanding attitudes toward pay at high levels of pay.

. One of the disturbing factors in the current study was that the instrumentality of pay to satisfy needs showed convergent and discriminant validity when considered on a global basis, but did not show such validity when con-

sidered on a specific need basis. Further work is necessary to determine whether the instrumentality of pay to satisfy needs can be determined on a micro basis. It may be that all that is needed is a better measuring instrument, or it may be that micro-instrumentality does not exist.

. A factor which Lawler does not consider, and which was not considered in this study, is other income. There are many working people whose pay is almost irrelevant; women whose spouses make an adequate income and who work simply because their children are grown and gone and they get bored staying home; people who have always wanted to teach or work for a religious organization, but could not live on the salaries offered till they retired or developed some other source of income. Studies would be helpful comparing the perceived importance of pay to people for whom pay represents a minor part of their total income and people who depend on their pay to sustain themselves.

. Lawler's definition of pay includes fringe benefits and incentive pay and that definition was used in the instructions given to respondents in this study. It is recognized, however, that most people do not consider the value of fringe benefits and perquisites when thinking of their pay; in fact, most people do not know the cost of these items. A study would be helpful to determine people's perceptions of these benefits and whether or not they are considered as part of pay or as some other form

of entitlement. Such knowledge could be helpful in determining compensation packages and designing compensation communication programs.

. Research would be helpful on the differing attitudes of union and non-union employees. Since in most union situations, pay is based on job classification and length of service rather than individual performance, the components of the importance of pay may be entirely different than for individuals compensated on a merit basis. Persons who work for non-profit organizations are thought to have different motivations than those working in the business world. Their perceptions of the importance of pay may differ from both groups mentioned above, and a comparative study would be helpful.

. Most studies which have purported to indicate the importance of pay have been relative studies in which pay is ranked with many other job characteristics. None of these studies indicate how important pay is in an absolute sense, nor what factors make it important. To say that pay is more or less important than having a considerate supervisor does not really say anything about how important pay per se is. Studies are needed measuring the absolute importance of pay.

. Finally, studies are needed on the importance of pay as a score card, status symbol or measure of recognition irrespective of its dollar value. This is perhaps related

to the Maslow hierarchy and its esteem and self-actualization needs. It is possible that at high levels of pay such considerations could account for an increasing marginal utility of money, with the significance of money having changed from an economic to a psychological base. Such a change would not necessarily occur in all people. Research should be conducted to determine if the phenomonen occurs at all, and if so with what type person it is most likely.

APPENDIX A

THE COLLEGE
OF INSURANCE

This questionnaire is part of a research study on pay and the way people in different positions look at their pay.

By the term "pay" is meant the total gross income you receive from your position, including both basic salary and whatever fringe benefits and special incentive income you may receive.

This is not a study of individual persons or organizations, but of managers and employees as a group. There are no "trick" questions. There are no "right" or "wrong" answers. All that is asked is that you try to answer as honestly and candidly as possible. Under no circumstances will your individual responses be made available to anyone in your organization. The only people who will see them will be myself and a clerical assistant.

Please accept my thanks in advance for your participation in this study. It is through the cooperation of management and employees in studies such as this that we all advance our understanding. Thanks again for your help.

Sincerely,

Matthew Lenz, Jr.
Assistant to the President

THE COLLEGE OF INSURANCE [illegible] NEW YORK, N.Y. [illegible]

LIFE INSURANCE COMPANY

New York, N.Y. Telephone No.: (212)

APPENDIX B1

August 7, 1980

To our employees

In order to learn more about employees' attitudes towards pay, we are cooperating with Professor Matthew Lenz, Jr. of The College of Insurance in a study he is conducting. To that end, we are permitting the distribution of the attached questionnaire to all employees on Friday, August 8.

Participation in the program is entirely voluntary and your responses will be given anonymously. Nobody in the company will see any of the completed questionnaires which will go directly to Professor Lenz in a sealed envelope.

Your participation is strongly encouraged, as the more questionnaires which are completed, the more reliable will be the conclusions drawn from the data. The questionnaire should take approximately 15 to 20 minutes to complete.

Your help is much appreciated.

Sincerely,

President

APPENDIX B2

THE COLLEGE
OF INSURANCE

This questionnaire is part of a research study on pay and the way people in different positions look at their pay.

By the term "pay" is meant the total gross income you receive from your position, including both basic salary and whatever fringe benefits and special incentive income you may receive.

This is not a study of individual persons or organizations, but of managers and employees as a group. There are no "trick" questions. There are no "right" or "wrong" answers. All that is asked is that you try to answer as honestly and candidly as possible. Under no circumstances will your individual responses be made available to anyone in your organization. Your completed questionnaire should be delivered to the Mailroom in the enclosed envelope by 4:15 P.M. today.

Please accept my thanks in advance for your participation in this study. It is through the cooperation of management and employees in studies such as this that we all advance our understanding. Thanks again for your help.

Sincerely,

Matthew Lenz, Jr.
Assistant to the President

P.S. The five "levels of management" shown in answer to question 7 are president, vice president, director, manager, supervisor.

THE COLLEGE OF INSURANCE/181 WILLIAM STREET/NEW YORK, N.Y. 10038/(212) 962-4111

APPENDIX C

To help in the statistical analysis of the data, we need the following information. Please answer all questions.

1. Sex: _____ male _____ female

2. Marital Status: _____ single _____ married

3. Age (as of your last birthday) _____

4. Number of dependents, not counting yourself. (Check one)

   _____ 0 _____ 3 - 4

   _____ 1 - 2 _____ 5 or more

5. Education (Check the highest level attained):

   _____ some high school _____ bachelor's degree

   _____ high school diploma _____ some graduate work

   _____ business school _____ graduate degree

   _____ some college _____ doctorate

6. What is your job or management title?

   _____

7. How many levels of management are there in your organization? 5

8. How many levels of management are there above your level in your organization? _____

9. Total time you have been working (Check one):

   _____ less than 1 yr. _____ 6 - 10 yrs.

   _____ 1 - 2 yrs. _____ 11 - 20 yrs.

   _____ 3 - 5 yrs. _____ over 20 yrs.

10. Total time with present organization (Check one):

    _____ less than 1 yr. _____ 6 - 10 yrs.

    _____ 1 - 2 yrs. _____ 11 - 2- yrs.

    _____ 3 - 5 yrs. _____ over 20 yrs.

11. Total time in present position (Check one):

_____ less than 1 yr. _____ 6 - 10 yrs.

_____ 1 - 2 yrs. _____ 11 - 20 yrs.

_____ 3 - 5 yrs. _____ over 20 yrs.

12. What is your current annual salary? $_____.

13. Approximately what percentage of your total individual income does your salary represent? _____%

14. Approximately what percentage of your total family income does your salary represent? _____%

15. For church staff managers and employees only (Check one):

_____ clergy _____ non-clergy

16. By which type organization are you employed? (Check one):

_____ bank _____ insurance rating office

_____ church headquarters _____ manufacturing

_____ insurance co. _____ stock brokerage

_____ insurance agency or broker _____ other (describe) _____

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

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

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

c) How important is this position characteristic to you?

d) To what extent is pay a means of obtaining this characteristic?

The ratings for the first three questions will be on a seven point scale, which will look like this:

(minimum) 1 2 3 4 5 6 7 (maximum)

You are to circle the number on the scale that represents the amount of the characteristic being rated. Low numbers represent low or minimum amounts, and high numbers represent high or maximum amounts. If you think there is "very little" or "none" of the characteristic presently associated with the position, you would circle numeral 1. If you think there is "just a little," you would circle numeral 2, and so on. If you think there is a "great deal but not a maximum amount," you would circle numeral 6.

The rating for the fourth question will be on an eleven point scale, which will look like this:

(minimum) 0 1 2 3 4 5 6 7 8 9 10 (maximum)

You are to circle the number on the scale that represents the extent to which pay is seen by you as a means of obtaining the characteristic. If you think that pay is of absolutely no value in obtaining the characteristic, you would circle the numeral 0. If you think it is of "just a little" value, you would circle numeral 1 or 2, and so on. If you think that pay is "very helpful but not an absolute guarantee" in obtaining it, you would circle numeral 8 or 9. If you think pay will absolutely provide the characteristic, you would circle numeral 10.

PLEASE DO NOT OMIT ANY SCALES

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

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

2. The authority connected with my position:

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

3. The opportunity for personal growth and development in my position:

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

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

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

5. The opportunity for independent thought and action in my position:

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

6. The feeling of security in my position:

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

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

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

8. The prestige of my position outside the company (that is, the regard received from others not in the company):

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

9) The feeling of worthwhile accomplishment in my position:

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

10. The opportunity, in my position, to give help to other people:

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

   b) How much should there be? 1 2 3 4 5 6 7

   c) How important is this to me? 1 2 3 4 5 6 7

   d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8. 9 10

11. The opportunity, in my position, for participating in the setting of goals:

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

    b) How much should there be? 1 2 3 4 5 6 7

    c) How important is this to me? 1 2 3 4 5 6 7

    d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

12. The opportunity, in my position, for participation in the determination of methods and procedures:

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

    b) How much should there be? 1 2 3 4 5 6 7

    c) How important is this to me? 1 2 3 4 5 6 7

    d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

13. The opportunity, in my position, to meet my basic needs for food, clothing and shelter:

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

    b) How much should there be? 1 2 3 4 5 6 7

    c) How important is this to me? 1 2 3 4 5 6 7

    d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

14. The opportunity to develop close friendships in my position?

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

    b) How much should there be? 1 2 3 4 5 6 7

    c) How important is this to me? 1 2 3 4 5 6 7

    d) How helpful is pay in obtaining it? 0 1 2 3 4 5 6 7 8 9 10

APPENDIX D

Think of your present job and your current pay. In the blank beside each word or phrase given below, write

__Y__ for "YES" if it describes your pay

__N__ for "NO" if does not describe it

__?__ if you cannot decide

_____ Income adequate for normal expenses

_____ Satisfactory profit sharing

_____ Barely live on income

_____ Bad

_____ Income provides luxuries

_____ Insecure

_____ Less than I deserve

_____ Highly paid

_____ Underpaid

APPENDIX E

INTERVIEW QUESTIONNAIRE

Instrumentality

1. Is pay a means or an end; that is do you look upon your pay as something which enables you to obtain something else you want or do you work for the sake of the pay itself?

   ☐ Means ☐ End

---

2. How well does pay help you obtain the basic necessities of life?
   10 9,8,7 6,5,4 3,2,1
   Completely, very well, moderately well, hardly at all, not at all.
   0 ____

3. How secure does your pay make you feel?
   10 9,8,7 6,5,4 3,2,1
   Totally secure, very secure, moderately secure, hardly at all, not at all.
   0 ____

---

4. How much does your pay help you to make friends at work?
   10 9,8,7 6,5,4 3,2,1
   A major factor, a great deal, somewhat, hardly at all, not at all.
   0 ____

5. How much of a factor is pay in making you feel part of the group at work?
   10 9,8,7 6,5,4 3,2,1
   A major factor, a great deal, somewhat, hardly at all, not at all.
   0 ____

---

6. To what extent does pay give you a feeling of achievement?
   10 9,8,7 6,5,4 3,2,1
   A very great extent, a great extent, somewhat, hardly at all, not at all.
   0 ____

7. To what extent does pay affect the esteem you receive from your co-workers?
   10 9,8,7 6,5,4 3,2,1
   A very great extent, a great extent, somewhat, hardly at all, not at all.
   0 ____

8. To what extent does pay affect the esteem you receive from friends and associates who are not co-workers?
   10 9,8,7 6,5,4 3,2,1 ____
   A very great extent, a great extent, somewhat, hardly at all, not at all.
   0 ____

INTERVIEW QUESTIONNAIRE

Instrumentality continued

9. To what extent does pay permit you to make your own decisions at work?

10 9,8,7 6,5,4 3,2,1
A very great extent, a great extent, somewhat, hardly at all, not at all.
0

10. How much of a factor is pay in enabling you to work independently?

10 9,8,7 6,5,4 3,2,1
A major factor, a great deal, somewhat, hardly at all, not at all.
0

11. How much of a factor is pay in allowing you to fulfill your desires for self-development?

10 9,8,7 6,5,4 3,2,1
A major factor, a great deal, somewhat, hardly at all, not at all.
0

12. To what extent is pay helpful in learning new skills?

10 9,8,7 6,5,4 3,2,1
A very great extent, a great extent, somewhat, hardly at all, not at all.
0

13. How helpful is pay in allowing you to become the full person you want to be?

10 9,8,7 6,5,4 3,2,1
A major factor, a great deal, somewhat, hardly at all, not at all.
0

INTERVIEW QUESTIONNAIRE

Importance

14. Let me ask a very direct question: How important to you is your pay?

10 9,8,7 6,5,4 3,2,1 0

Vital to existence, very important, moderately important, not very important, not at all important. _____

15. What would be the effect if you lost your job and had no pay coming in? (Let's assume there would be no unemployment benefits either.)

10 9,8,7 6,5,4 3,2,1 0

Disaster, serious problem, problem, mild inconvenience, no effect. _____

16. What effect does your pay have on your life style?

10 9,8,7 6,5,4 3,2,1 0

A major factor, very important, important, hardly any, none. _____

17. In comparing pay to other characteristics of your job, such as working conditions, opportunity for advancement, friendly co-workers, etc. would you say pay is:

10 9,8,7 6,5,4 3,2,1 0

Most important, somewhat important, about the same, only slightly important, not at all important. _____

18. How would you compare the value of a sum of money received from a pay raise with $1,000 won in a lottery?

10 9,8,7 6,5,4 3,2,1 0

Far more important, moderately more important, no difference, somewhat less important, considerably less important. _____

Responses to questions 19 - 32 will be on the following scales:

(a)		(b)	
Extremely Important	(7)	Extremely Satisfied	(7)
Very Important	(6)	Very Satisfied	(6)
Modestly Important	(5)	Modestly Satisfied	(5)
Makes No Difference	(4)	Really Can't Tell	(4)
Not Very Important	(3)	Not Very Satisfied	(3)
Hardly Any Importance	(2)	Hardly Satisfied At All	(2)
Absolutely No Importance	(1)	Not At All Satisfied	(1)

19. a) How important is it to you that your position provide a feeling of self-esteem? _____

    b) How satisfied are you with the feeling of self-esteem your position does provide? _____

20. a) How important to you is the authority connected with your position? _____

    b) How satisfied are you with the amount of authority your position does provide? _____

21. a) How important is it that your position have an opportunity for personal growth and development? _____

    b) How satisfied are you with the opportunity provided by your position for personal growth and development? _____

22. a) Do you consider it important that your position be regarded with prestige by others in the company? _____

    b) How satisfied are you with the prestige accorded to your position by others in the company? _____

23. a) How important is the opportunity in your position for independent thought and action? _____

    b) How satisfied are you with the opportunity your position does provide for independent thought and action? _____

24. a) Is it important that your position provide a feeling of security? _____

    b) How satisfied are you with the feeling of security your position does provide? _____

25. a) How important is it to you that your position provide a feeling of self-fulfillment? _____

    b) How satisfied are you with the feeling of self-fulfillment your position does provide? _____

26. a) Do you consider it important that your position be regarded with prestige by others not in the company? _____

    b) How satisfied are you with the amount of prestige accorded your position by others not in the company? _____

27. a) How important is the feeling of worthwhile accomplishment your position provides? _____

    b) How satisfied are you with the feeling of worthwhile accomplishment provided by your position? _____

28. a) Is it important that your position give you the opportunity to provide help to other people? _____

    b) How satisfied are you with the opportunity your position gives you to provide help to other people? _____

29. a) How important is it that your position provide the opportunity to participate in the setting of goals? _____

    b) How satisfied are you with the opportunity your position provides to participate in the setting of goals? _____

30. a) How important is it that your position provide the opportunity to participate in the determination of methods and procedures? _____

    b) How satisfied are you with the opportunity to participate in the determination of methods and procedures provided by your position? _____

31. a) How important is it that your position provide the opportunity to meet your basic needs for food, clothing and shelter? _____

    b) How satisfied are you with the opportunity your position provides to meet your basic needs for food, clothing and shelter? _____

32. a) What is the importance you attach to the opportunity your position provides to develop close friendships? _____

    b) How satisfied are you with the opportunity your position provides to develop close friendships? _____

REFERENCES

Alderfer, C. P., Job enlargement and the organizational context, Personnel Psychology, 1969a, 22, (4), 418-426.

Alderfer, C. P., An empirical test of a new theory of human needs, Organizational Behavior and Human Performance, 1969b 4, 142-175.

Anastasi, Anne, Psychological Testing, (2nd ed.), The Macmillan Company, New York, 1961.

Arkin, Herbert and Raymond R. Colton, Tables for Statisticians, Barnes & Noble, Inc., New York, 1950.

Barnes, L. B., Organizational Systems and Engineering Groups, Harvard Graduate School of Business, Boston, 1960.

Behling, O. and F. A. Starke, The postulates of expectancy theory, Academy of Management Journal, 1973, 16, 373-388.

Belcher, David W., Wage and Salary Administration, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1962.

Blalock, Hubert M. Jr. and Ann B. Blalock, Methodology in Social Research, McGraw-Hill Book Company, New York, 1968.

Burton, Gene E., Job values as perceived by college seniors, their employers, and their professors, Marquette Business Review, XX No. 2, Summer, 1976.

Campbell, D. and D. Fiske, Convergent and discriminant validation by the multitrait-multimethod matrix, Psychology Bulletin, LCI, (1959), pp. 81-105.

Cannell, Charles F. and Robert L. Kahn, Interviewing, in The Handbook of Social Psychology, Vol. 2 (2nd ed.), Gardner Lindzey and Elliot Aronson, eds., Addison-Wesley Publishing Company, Reading, Mass., 1968, pp. 526-595.

Carey, A., The Hawthorne studies: a radical criticism, American Sociological Review, 1967, 33, 403-416.

Crombach, Lee J., Essentials of Psychological Testing, (2nd ed.), Harper and Brothers, New York, 1960.

Evans, M. G., The effects of supervisory behavior on the path-goal relationship, Organizational Behavior and Human Performance, Vol. 5 (1970), 277-298.

Galbraith, J. and L. Cummings, An empirical investigation of the motivational determinants of task performance: interactive effects between instrumentality-valence and motivation-ability, Organizational Behavior and Human Performance, 1967, 2, 237-257.

Ganguli, H. C., An inquiry into incentives for workers in an engineering factory, Indian Journal of Social Work, 1954, 15, 30-40.

Gavin, J. F., Ability, effort and role perception as antecedents of job performance. (Experimental publication system, manuscript number 190A), Washington, D. C., American Psychological Association, 1970.

Georgopoulos, B. S., G. M. Mahoney and N. W. Jones, A path-goal approach to productivity, Journal of Applied Psychology, Vol. 41 (1957), 345-353.

Green, Paul R. and Yoram Wind, New way to measure consumers' judgments, Harvard Business Review, July-August, 1975.

Gruenfeld, L. W., A study of the motivation of industrial supervisors, Personnel Psychology, 1962, 15, 303-314.

Hackman, J. H. and L. W. Porter, Expectancy theory predictions of work effectiveness, Organizational Behavior and Human Performance, Vol. 3, 1968, 417-426.

Haire, Mason, Edwin E. Ghiselli and Lyman W. Porter, Managerial Thinking, John Wiley and Sons, Inc., New York, 1966.

Hall, D. T. and K. E. Nougaim, An examination of Maslow's hierarchy in an organizational setting, Organizational Behavior and Human Performance, 1961, 3, 12-35.

Harrison, R., A conceptual framework for laboratory training, Mimeo, 1966.

Hays, William L., Statistics for Psychologists, Hall, Rinehart and Winston, New York, 1963.

Herman, Jeanne B., Charles L. Hulin, Managerial satisfactions and organizational roles: an investigation of Porter's need deficiency scales, Journal of Applied Psychology, 1973, Vol. 57, No.2, 118-124.

Holsti, Ole R., Joanne K. Loomba and Robert C. North, Content analysis, in The Handbook of Social Psychology, Vol. 2 (2nd ed.), Gardner Lindzey and Elliot Aronson, eds., Addison-Wesley Publishing Company, Reading, Mass., 1968, pp. 596-692.

House, R. J., A path-goal theory of leader effectiveness, Administrative Science Quarterly, Vol. 16 (1971), 321-338.

House, R. J. and G. Dessler, The path-goal theory of leadership: some post hoc and a priori tests. In Hunt, J. G. (ed.), Contingency Approaches to Leadership, Southern Illinois University, Carbondale, Ill., 1974.

House, R. J., H. Jack Shapiro and Mahmoud A. Wahba, Expectancy theory as a predictor of work behavior and attitude, a re-evaluation of empirical evidence. Decision Sciences, Vol. 5, No. 3, July, 1974, 481-506.

Huizinga, G., Maslow's Need Hierarchy in the Work Situation, The Netherlands: Wolters-Noodhoff nv. Groingen, 1970.

Imparato, N., Relationship between Porter's need satisfaction questionnaire and the Job Description Index, Journal of Applied Psychology, 1972, Vol. 56, No. 5, 397-405.

Kopelman, E. E., Factors complicating expectancy theory predictions of work motivation and job performance. Working paper, Baruch College, City University of New York, 1975.

Jahoda, Marie, Mortan Deutsch and Stuart W. Cook, Research Methods in Social Relations Part Two: Selected Techniques, The Dryden Press, New York, 1951.

Jurgensen, C. E., Selected factors which influence job preferences, Journal of Applied Psychology, 1947, 31, 553-563.

Korman, Abraham D., Self esteem variable in vocational choice, Journal of Applied Psychology, 1966, 50, 479-486.

Korman, Abraham D., Industrial and Organizational Psychology, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1971.

Korman, Abraham D., The Psychology of Motivation, Prentice-Hall, Inc., Englewood Cliffs, N. J. 1974.

Lahiri, D. N. and Choudhuri, P. K., Perceived importance of job factors by technical and nontechnical employees. Personnel Psychology, 1966, 19, 287-296.

Lawler, E. E. III, Managers' job performance and their attitudes toward their pay. Unpublished doctoral dissertation, University of California, Berkeley, 1964.

Lawler, E. E. III, Ability as a moderator of the relationship between job attitudes and job performance. Personnel Psychology, 1966a, 19, 153-164.

Lawler, E. E. III, The mythology of management compensation, California Management Review, 1966b, 9, 11-22.

Lawler, E. E. III, Pay and Organizational Effectiveness: A Psychological View, McGraw-Hill Book Company, New York, 1971.

Lawler, E. E. III, Motivation in Work Organizations, Brooks/Cole Publishing Company, Monterey, Ca., 1973.

Levenstein, Aaron, Work incentives in the age of automation, American Journal of Orthopsychiatry, October, 1968, 38, 5, 893-899.

Locke, E. A., Personnel attitudes and motivation, Annual Review of Psychology, Rosenzweig, M. A. and L. W. Porter (eds.), Annual Reviews, Inc., Palo Alto, Ca., Vol. 26, 1975.

Locke, E. A., P. C. Smith, L. M. Kendall, C. L. Hulin and A. M. Miller, Convergent and discriminant validity for areas and methods of rating job satisfaction, Journal of Applied Psychology, 1964, 48, 313-319.

Maranell, Gary M., (ed.) Scaling - A Sourcebook for Behavioral Scientists, Aldine Publishing Co., Chicago, 1974.

March, J. G. and H. A. Simon, Organizations, John Wiley and Sons, New York, 1958.

Maslow, A. H., A theory of human motivation, Psychological Review, 1943, 50, 370-396.

Maslow, A. H., Motivation and Personality, Harper, New York, 1954.

Maslow, A. H., Eupsychian Management, Richard D. Irwin/ The Dorsey Press, Homewood, Ill., 1965.

McGregor, D., The Human Side of Enterprise, McGraw-Hill, New York, 1960.

Miller, D. C., Economic factors in the morale of college trained adults, American Journal of Sociology, 1941, 47, 139-156.

Miller, Delbert C., Handbook of Research Design and Social Measurement, (2nd ed.), David McKay Company, Inc., New York, 1970.

Mitchell, Vance A. and Pravin Moudgill, Measurement of Maslow's need hierarchy, Organizational Behavior and Human Performance, 16, 2, (Aug., 1976), 334-349.

Morse, N. C., Satisfactions in the White Collar Job, Ann Arbor: University of Michigan, Institute for Social Research, Survey Research Center, 1953.

Naiman, Arnold, Robert Rosenfeld and Gene Zirkel, Understanding Statistics, McGraw-Hill, Inc., New York, 1972.

NICB, Personnel Activities in American Business, National Industrial Conference Board, New York, No. 86, 1946.

Oppenheim, A. N., Questionnaire Design and Attitude Measurement, Basic Books, Inc., New York, 1966.

Patchen, Martin, The Choice of Wage Comparisons, Prentice-Hall, Englewood Cliffs, N. J., 1961.

Patchen, Martin, Questionnaires, Survey Research Center, Institute for Social Research, Ann Arbor, 1965.

Patchen, Martin, Participation, Achievement and Involvement on the Job, Prentice-Hall, Englewood Cliffs, N. J., 1970.

Payne, Stanley L., The Art of Asking Questions, Princeton University Press, Princeton, N.J., 1951.

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

Porter, L. W., Organizational Patterns of Managerial Job Attitudes, American Foundation for Management Research, New York, 1964.

Porter, L. W. and E. E. Lawler III, Managerial Attitudes and Performance, Irwin Dorsey, Homewood, Ill., 1968.

Porter, L. W. and E. E. Lawler III, Properties of organization structure in relation to job attitudes and job behavior, Psychological Bulletin, 1965, 64, 23-51.

Porter, Lyman W., Edward E. Lawler III and J. Richard Hackman, Behavior in Organizations, McGraw-Hill Book Company, New York, 1975.

Price, James L., Handbook of Organizational Measurement, D. C. Heath and Company, Lexington, Mass., 1972.

Pritchard, R. D. and P. J. De Leo, Experimental test of the valence-instrumentality relationship in job performance, Journal of Applied Psychology, Vol. 57, 1973, 264-270.

Pritchard, R. D. and M. S. Sanders, The influence of valence, instrumentality, and expectancy on effort and performance, Journal of Applied Psychology, Vol. 57, Jan., 1973, 55-60.

Reinharth, Leon, A study of the interpretation and operationality of expectancy-valence theory in a work situation, Unpublished Ph. D. dissertation, Baruch College, City University of New York, 1974.

Reinharth, L. and M. Wahba, Expectancy theory as a predictor of work motivation, effort expenditure and job performance, Academy of Management Journal, Vol. 18, No. 3, Sept., 1975, 520-537.

Roche, Gerald R., Compensation and the mobile executive, Harvard Business Review, Vol. 53, No. 6, (Nov. 1975), 53-62

Rock, Milton L. (ed.-in-chief), Handbook of Wage and Salary Administration, McGraw-Hill Book Company, New York, 1972.

Roethlisberger, F. J. and W. J. Dickson, Management and the Worker, Harvard, Cambridge, Mass., 1939.

Siegel, Laurance, Industrial Psychology, Richard D. Irwin, Inc., Homewood, Ill., 1969.

Shapiro, Harris J., An empiric test of the Lawler model of the determinants of pay satisfaction, Unpublished Ph. D. dissertation, Baruch College, City University of New York, 1973.

Shapiro, H. J. and M. A. Wahba, Age and the job satisfaction of men and women: a test of an instrumentality model, Proceedings of the Eastern Academy of Management, 1973.

Sheridan, J. E., J. W. Slocum, Jr., and B. Min, Motivational determinants of job performance, Journal of Applied Psychology, Vol. 60, No. 1, Feb., 1975, 119-121.

Simonds, Rollin H. and John N. Orife, Worker behavior versus enrichment theory, Administrative Sciences Quarterly, Vol. 20, No. 4 (Dec., 1975), 606-612.

Spencer, Milton H., Demand analysis: indifference curves, Basic Economics: A Book of Readings, edited by Arthur D. Gayer, C. Lowell Harriss, and Milton H. Spencer, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1951, pp. 91-104.

Starke, F. A. and O. Behling, A test of two postulates underlying expectancy theory, Academy of Management Journal, Vol. 18, No. 4, Dec., 1975.

Thompson, W. A., Eleven years after graduation, Occupations, 1939, 17, 709-714.

Vroom, V. H., Work and Motivation, Wiley, New York, 1964.

Wahba, M. A. and L. G. Bridwell, Maslow reconsidered: a review of research on the need hierarchy theory, Organizational Behavior and Human Performance, Vol. 15, No. 2, (April, 1976), 212-240.

Wahba, M. A. and R. J. House, Expectancy theory in work and motivation: some logical and methodological issues, Human Relations, Vol. 26 (1974).

Wahba, Susanne P. and Mahmoud A. Wahba, Differences between career pay of women and men - a longitudinal study of pay, Working paper, Baruch College, New York.

Weaver, C. N., What workers want from their jobs, Personnel, 53, No. 3 (May, 1976), 48-54 (1976a).

Weaver, C. N. Worker preferences among five job characteristics, Marquette Business Review, XX, No. 2, Summer, 1976b.

Webb, Eugene J., Donald T. Campbell, Richard D. Schwartz and Lee Sechrest, Unobtrusive Measures, Rand McNally and Company, Chicago, 1970.

Whyte, W. F., Money and Motivation: An Analysis of Incentives in Industry, Harper and Row, New York, 1955.