

The Importance and Achievement of Work Values  
and Locus of Control as Factors in Work Motivation.

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## ABSTRACT

The present research study examined the relationships in a work motivation context among perceived importance and achievement of work values, locus of control and internal work motivation. The congruence of a work value was considered to be the discrepancy between the importance of a work value and the perceived achievement of that value. The theoretical framework utilized was based on a self-perpetuating cycle of motivation which included the perceived importance and achievement of work values and internal work motivation as separate and distinct, yet interrelated factors.

It was hypothesized that individuals who experienced high congruence of work values would experience higher levels of internal work motivation than individuals who had low congruence of work values. It was also hypothesized that individuals who had an internal locus of control would experience more internal work motivation and have higher congruence of work values than individuals who had an external locus of control. As well, the possibility of locus of control as a moderator between importance of work values and internal work motivation was explored.

Survey data were collected from 184 managerial level employees of the XYZ company during an ongoing training session. The following instruments were employed to measure the variables: Elizur's (1984) Importance of

Work Values, Hunt and Saul's (1985) Achievement of Work Values, Hatfield, Robinson and Huseman's (1975) Job Perception Scale, a modified version of Rotter's (1966) I-E Locus of Control Scale and the Internal Work Motivation Scale (Hackman & Oldham, 1980) which is a part of the Job Diagnostic Survey.

The findings indicated that locus of control was not a significant factor in determining congruence between work values or internal work motivation for this sample. Furthermore, locus of control was also found not to be a moderator between the importance of work values and internal work motivation.

All individuals in this study had relatively high levels of internal work motivation. However, individuals who had higher congruence of work values did have significantly higher internal work motivation than those who had low congruence of work values for a majority of the 21 values. This was particularly true for the intrinsic values which included responsibility, meaningfulness and use of abilities.

In addition, the data were analysed into a hierarchy of needs to indicate possible organizational development or human resource development needs for the XYZ corporation.

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## CHAPTER 1

### INTRODUCTION

The bottom line in any business or industry is making and increasing profits. Today, there is a shift in emphasis from a high production quota coupled with low-cost employees to a high quality product and the recognition of the employee as a most powerful resource. This belief in the employee is demonstrated by the attention to the human resource development in the organization.

To improve effectiveness in producing a quality product, management needs to go beyond the technical dimension of the job and consider the human dimension. Human behaviour at work is much more complex than simply providing economic security and good working conditions. Understanding, predicting and controlling human behaviour is an essential element in maximizing human resources.

Motivation is a basic psychological factor necessary for understanding human behaviour. In the workplace, one observable outcome of motivation is job performance.  $\text{Performance} = f(\text{Ability} \times \text{Motivation})$  is a basic management principle (Hellriegel, Slocum & Woodman, 1983). Based on the prevailing literature on work motivation this definition has been expanded to read  $\text{Performance} = f(\text{aptitude level} \times \text{skill level} \times \text{understanding of the task} \times \text{choice to expend effort} \times$

choice of degree of effort to expend x choice to persist x constraints of the environment (Campbell & Pritchard, 1976). By this definition motivation has to do with a set of dependent/independent variable relationships that "explain the direction, amplitude, and persistence of an individual's behaviour, holding constant the effects of aptitude, skill and understanding of the task, and the constraints operating under the environment" (p. 65).

Motivation is then a primary component of job performance. The complexities of motivation are most important for organizations to understand in order to maximize performance and hence productivity. The literature offers many theories which attempt to explain how a man is motivated and how that motivation is sustained or ended.

The theories could be divided into the two major categories of content theories and process theories. Content theories attempt to explain motivation through the specific factors that energize, sustain or stop certain behaviours. They focus on identifying the employee's needs and how they are satisfied. This study will examine Herzberg's (1973) Two-Factor Theory and Maslow's (1970) Hierarchy of Needs Theory for an understanding of this aspect of motivation.

Process theories are concerned with how behaviour is energized, sustained and stopped. These theories attempt to account for the element of human choice or why people choose certain behaviours over other alternatives.

This study will look at two versions of expectancy theory which are both process theories. It will also examine the Job Characteristics Theory and the Attribution Theory which were built on the foundations of expectancy theory. This examination will offer a more complete understanding of motivation in the workplace.

Both content and process theories assume that motivation is caused by a goal or need deficiency experienced by the individual (McAfee & Champagne, 1987). The deficiencies can be either physiological or psychological. The unsatisfied need or goal causes a state of tension in the individual that he seeks to restore to a state of equilibrium by behaving in ways that satisfy that need.

A key to understanding motivation in a specific organization must then be to know what specific goals or values are held by the employees. How much discrepancy is there between the importance and perceived achievement of these goals or values?

However, motivation is more complex than just understanding what goals or values people will work toward obtaining. Perhaps the design of the job itself contributes significantly to motivation levels. Perhaps a personality characteristic that the individual brings to the workplace predetermines how motivated an individual will be to give a high-level performance.

The purpose of this study is to explore work motivation in an industrial setting by examining the

interaction of values, motivation and personality specifically. This examination will involve an exploration of the relationships among perceived importance of work values, perceived achievement of work values, internal work motivation and the personality characteristic locus of control. A homogeneous sample of the managerial level from the XYZ corporation served as the respondent base for this study.

## CHAPTER II

### REVIEW OF THE LITERATURE

The focus of this study is to investigate work motivation at the managerial level. This chapter begins with definitions of the specific variables to be investigated. A general theory of motivation will be offered as a conceptual framework for this study. This general framework will encompass two content theories. This will be followed by an examination of four specific work motivation theories which are basically process theories. Relevant studies will be presented that have focused on the variables being explored. Based on the theories and research, four hypotheses and an associated research question shall be suggested for investigation.

#### Definition of the Variables

##### Work Values

England and Lee (1974) differentiate between values and attitudes when defining a personal value system as "a relatively permanent perceptual framework which shapes and influences the general nature of human behaviour. Values are similar to attitudes but are more ingrained, permanent and stable in nature" (p. 412). A definition of work values usually means general attitudes toward work rather than feelings about a specific job. Values do elicit an emotional reaction or value response such as satisfaction or dissatisfaction. This value

response sets the standard for what an individual considers to be good or beneficial. "Since values differ according to both content (what and how much is wanted), and intensity (how much that object or amount is wanted), value judgments reflect a dual estimate: the degree of value fulfillment (i.e., the amount of discrepancy between how much is wanted and how much is obtained); and the importance of the value in the individual's value hierarchy" (Locke, 1970, p. 485).

Work value systems can be defined and may be either intrinsic or extrinsic (Pennings, 1970). Intrinsic values are satisfying in themselves without an external reward. They are usually considered to be the higher order needs of esteem needs and self-actualization identified in Maslow's (1970) hierarchy of needs. Extrinsic values are rewards which are imposed by the organization and are roughly equivalent to the lower order needs of physiological needs, safety needs and love needs.

Elizur (1984) classifies work values into two basic facets: modality of outcome and the relation to task performance. The modality of outcome facet includes material, social or psychological outcomes. The second classification concerns the relationship of the task to outcome and is either a resource such as benefit plan which is unconditional or a reward that is provided as a reward for performance. "... a formal definition of work values by means of a mapping sentence was drafted whose domain includes two facets...the range of which expresses

the degree of importance of the outcome to the respondent" (Elizur, 1984, p .381). In other words the importance of work values must be evaluated by the person by allowing him a range of degrees from which to choose.

The individual will perceive work values differently. At the same time, within a group, individuals tend to have the same value system. The individual uses his peer group as a frame of reference for his own behaviour, attitudes and feelings (Pennings, 1970). This suggests that value systems can be determined for an organization by having individuals evaluate the importance of their work values and correlating the results.

The importance of each work value in this study is expressed by the degree of perceived importance of an outcome to the individual within a range of very important to very unimportant. These results are analysed to determine the importance of work values to all subjects involved in this study.

The achievement of work values in this study refers to the degree to which an individual perceives that he is currently experiencing each value in the workplace. Similar to the importance of work values, the achievement of these work values will be determined for the group as a whole.

The congruence of work values is expressed in this study as the discrepancy between the perceived importance and achievement of work values for the group. According

to Locke (1976) the results should be a measurement of the job satisfaction being experienced by the subjects in this study.

#### Locus of Control

Internal-external locus of control (Rotter, 1966) is based on social learning theory and refers to the degree to which one perceives success or failure as being contingent on his own actions. Individuals who generally perceive a contingency relationship between their behaviour and outcomes are said to possess an internal locus of control and in this study will be referred to as internals. Individuals who attribute events to factors beyond their control are said to possess an external locus of control and in this study are referred to as externals. This is a generalized expectancy that works across many situations.

The locus of control is a continuous personality dimension. People are not exclusively internal or external but can be found on a continuum of locus of control beliefs that has high internal at one end and high external at the other end. It is considered to be a fairly stable personality characteristic (Rotter, 1966).

#### Internal Work Motivation

Internal work motivation has been defined by Hackman and Oldham (1980) as the extent to which the employee's feelings are closely tied to how well he performs in the job. In a job with high internal work motivation, good performance leads to positive feelings of



internal rewards which results in a self-perpetuating cycle of positive work motivation. On the other hand poor performance leads to unhappy feelings, so the employee will try harder in order to avoid unpleasant outcomes.

Internal work motivation has been used interchangeably with the term intrinsic motivation in this review. Intrinsic motivation can be considered a motivational source that originates in the intrinsic needs - a force directed toward a behaviour that is its own incentive (Pinder, 1984).

#### A Conceptual Framework For the Motivational Cycle

Before proceeding to an examination of some of the contemporary theories of work motivation, a conceptual framework will be proposed. This framework will help to organize thoughts and analyse current theories. One assumption behind the framework is that motivation is a complex phenomenon that involves several important and distinct factors. A second assumption is that these factors are interrelated and integrated.

The variables defined may all be factors in work motivation. The importance and achievement of work values may be the fundamental building blocks of the motivational cycle. However, the design of the job itself or a personality characteristic such as the locus of control may be essential for the cycle to occur. This review of the literature will explore how these variables are interrelated in a work motivation context.

Motivation affects the way an employee behaves in

the workplace. Job productivity is affected by the particular motives of the employees to work at their jobs. The ability to perform a certain job effectively is essential for a high level of job performance, but this level of performance is also affected by the particular motives of the employees to work at their jobs (Hellriegel, Slocum & Woodman, 1983). Clearly organizations need to be concerned with the motivational level of their employees in order to fully maximize their potential and to increase productivity. An organization should understand what motivates its employees, how employee motivation can be effectively channelled towards organizational goals, and how this behaviour can be maintained.

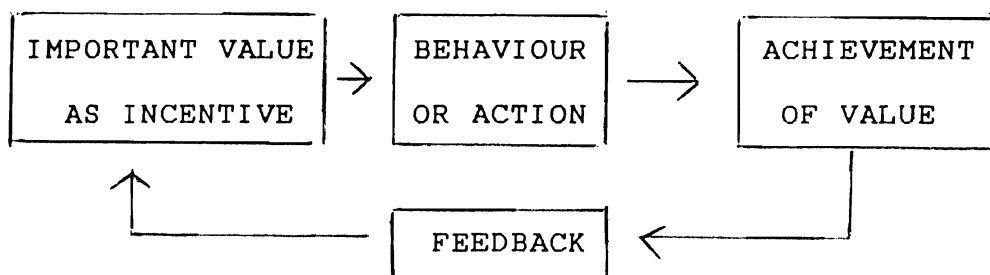
Steers and Porter (1979) propose a model for the motivational process which will be used as a general theoretical framework for this study. The four basic building blocks of this model are (1) Needs or expectations which set up an inner state of disequilibrium; (2) behaviour; (3) goals or incentives; and (4) some form of feedback. In theory the emergence of needs or expectations leads to a state of disequilibrium or tension in the individual which he will try to reduce by behaving in a way he believes will lead to the desired goals. The behaviour itself sets up either internal or external cues that feed back information to the person on the effectiveness of his behaviour. This feedback will cause the individual to modify, cease or continue present

behaviour.

There are several complexities in this seemingly simple explanation of human behaviour (Steers & Porter, 1979). First, motives can not be seen and it is difficult to infer motives from observed behaviour. Secondly, motives change and may even be in conflict with each other. Thirdly, people select motives differently and have different levels of drive.

In terms of this study the needs or expectations of an individual can be equated with the values that a person holds important in his job. If a value is considered to be important then it sets up not only a need or state of tension in the individual, but it also becomes a goal or incentive towards which the person directs his behaviour. The perception of the actual achievement or failure to achieve that goal is the feedback to the individual that completes the motivational cycle. A goal that is not considered important will not set the motivational cycle in motion because there is no need or goal. Using values as needs and goals the generalized model of the motivational process presented by Steers and Porter (1979) would appear as in Figure I.

Figure 1: Generalized Model of Motivational Process



Implicit in this motivational cycle is that when a value is perceived as important the individual will be highly motivated to act in ways he perceives will lead to the achievement of that value. It is fundamental to the motivational process that the values are considered important. Given that the goals are perceived as being attainable the highly-motivated person will perform at a high level to achieve the goal and also experience general job satisfaction in the process. For the organization the high-level performance is the primary objective, while presumably the individual's reason to perform at that level is to experience job satisfaction. Whether performance precedes satisfaction is a moot point and not relevant to the assumption of this study that both performance and satisfaction are integral to the motivational cycle.

Locke (1970) links the importance and achievement of work values to motivation, job satisfaction and performance. He states that satisfaction in a job aspect is a result of the congruence between the importance of a work value and the achievement of that value as a work outcome. Dissatisfaction with a job aspect arises when there is a perceived discrepancy between what is valued as important and what is obtained as a job outcome. He suggests that an individual will be motivated to a high effort job performance when he believes it is possible and to the extent that it will lead to the attainment of his important job values. This evaluation is congruent with

the basic motivational cycle used as the framework in this study.

Locke's (1970) premise has been supported by research. A cross-cultural study (Kanungo & Wright, 1983) led to the following conclusion: "Motivation and job satisfaction levels are determined largely by the interaction between the value orientation or expectations which managers have toward their jobs, and the perceptions which they hold with respect to job outcomes. When there is a match between the job outcomes and the job expectations, the levels of job motivation and satisfaction tend to be higher. When, however, job outcomes do not meet the job expectations of managers, their levels of motivation and satisfaction tend to decline" ( p. 115). This premise resulted from research done on managerial attitudes across Canada, France, Japan, and the U.K. Data were gathered by administering a questionnaire to lower and middle personnel attending management development courses in each of the four countries. Respondents were asked to rank order from most important to least important 15 job factors which included 8 organizationally controlled extrinsic job outcomes, 4 interpersonally mediated extrinsic job outcomes and 3 internally-mediated job outcomes. Then respondents were asked to rank-order on a 7 point scale their present job satisfaction or dissatisfaction with respect to each of the 15 job factors. This yielded data that allowed the comparison of the relative importance of job outcomes

within each country, regardless of the absolute values perceived.

There were significant cultural differences in what managers valued. The English and Canadian responses are similar to one another and different from French managers (the Japanese were closer to the English-Canadian response than the French). The British and French had the most striking differences in perceived importance of job outcomes. British managers placed much more value on internally mediated goals of interesting nature of the work, autonomy and achievement than the French who have stronger needs for security and comfortable working conditions. This difference points out the necessity of asking the employees involved what values are important to them and determining the group value system rather than making assumptions based on what upper management perceives is important. Organizational reward systems must attend to the perceived needs and values of a particular target group, if there is to be a high motivational level.

This exploratory research was conclusive enough to warrant a suggestion for additional research into the importance and achievement of work values of managers in an organization in order to further understanding of the basic motivational process. In conclusion, this section of the review of the literature has presented a very general model of human behaviour as a framework for this study. The discrepancy between the importance and

achievement of work values has been included within this framework as fundamental to work motivation. A relevant research study has been included to support the inclusion of work values in this model.

#### Intrinsic/Extrinsic Values as Motivators

This section of the review will examine intrinsic and extrinsic values and their role in the motivational cycle. Herzberg's (1973) Two-Factor theory of motivation is closely related to work values and sheds light on the difference between extrinsic and intrinsic values as motivators. In research studies he examined the relationship between job satisfaction and productivity through interviews with accountants and engineers. He asked them to describe times when a job made them feel exceptionally good or exceptionally bad. Responses were consistent enough that he divided job factors into two categories and this became known as the Two-Factor Theory. The motivators were intrinsic factors and included achievement, recognition, work itself and advancement. The second category was labelled the hygiene factors which were extrinsic and determined by the formal organization such as company policy and administration, salary, working conditions and interpersonal relations. The motivators led to a need for growth or self-actualization and were usually associated with positive feelings on the job. The hygiene factors were associated only with negative feelings and job dissatisfaction. "Since separate factors need to be considered depending on whether job

satisfaction or job dissatisfaction is involved, it followed that these two feelings were not the obverse of each other. Thus the opposite of job satisfaction would not be job dissatisfaction but rather no job satisfaction; similarly the opposite of job dissatisfaction is no job dissatisfaction, not satisfaction with one's job" (p. 95).

Herzberg (1973) found a U-shaped relationship between age, tenure and job satisfaction. That is, job satisfaction was high at the beginning of a career, declined until the people reached their early thirties when it increased and remained there for the rest of a person's work life. Although subsequent research did not duplicate Herzberg's findings, most researchers have offered a like explanation of the relationship between age, tenure and job satisfaction. That is, there is greater job satisfaction for workers with realistic expectations since their expectations are likely to be more satisfied on the job (Hunt & Saul, 1975). This implies that when the employee's important work values match the perceived achievement of these values the person will experience job satisfaction, particularly when these work values are intrinsic.

Herzberg's (1973) theory is closely related to Maslow's (1970) Hierarchy of Needs Theory which focuses on individual needs. The hygiene factors are roughly equivalent to the lower-level physiological, safety and love needs in Maslow's hierarchy of needs. The motivators are more abstract and correspond with the



esteem and self-actualization needs (Maslow, 1970). Self-actualization is the full development of man's potential or capabilities. A basic assumption of this theory is that the needs are arranged in hierarchal form and that people work their way up the hierarchy as their needs are satisfied. Once the lower-order needs are satisfied the higher-order needs can emerge as important motivators. However, if a lower need re-emerges it will take precedence over the higher-order need. An important aspect of a higher-level need is that once it is satisfied it continues to motivate by increasing the need. Once a lower-level need is satisfied the motivation decreases.

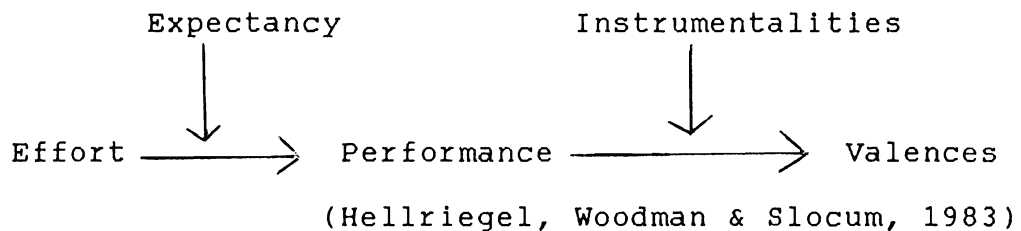
In summary, the distinction between extrinsic and intrinsic work values is relevant to this study because it suggests that all work values are not equal in their potential to motivate. Work values must be separated into the hygiene or extrinsic factors and the motivators or intrinsic factors in order to comprehend the complexities of motivation.

#### Expectancy Theories of Work Motivation

Two variations of expectancy theory will now be examined. Both Vroom's (1964) and Porter and Lawler's (1968) models go beyond describing the content of work motivation and are called process theories. They attempt to explain the complex processes involved by accounting for the cognitive antecedents that go into motivation. These theories offer explanations for why people make the choices they do when faced with different alternatives.

Vroom's (1964) VIE theory is a model built around the concepts of valence, instrumentality and expectancy. Figure 2 presents the basic expectancy model. Valence is the strength of an individual's preference for a particular outcome which could be positive or negative. A valence could be equated with the importance of a work value. Instrumentality is the relationship between performance and outcomes, that is, the perceived probability of receiving an outcome (positive valence) if there is a successful performance. Expectancy is the belief that a certain level of effort will be followed by a corresponding level of performance. The more people expect a level of performance will lead to a desired outcome, the more likely that they will be to try to perform at this level. The less people expect a level of performance to lead to a desired outcome, the lower the motivation. The implications of Vroom's theory are that motivation is a complex process and that individual characteristics must be taken into account.

Figure 2: Model of Expectancy Theory



Porter and Lawler (1968) extended the principles behind Vroom's model to tackle the problem of performance

and satisfaction. According to this integrated motivational model (Appendix 1) the value of a reward is similar to a valence and refers to how attractive or desirable a potential outcome is to the individual as a result of his behaviour. The effort-reward probability refers to a person's expectations that given amounts of reward depend upon given amounts of effort. This is the perceived probability that reward depends upon performance and that performance depends upon effort. Effort is the amount of energy a person expends in an activity (regardless of quality of performance). Abilities and traits refer to individual characteristics that affect the ability to perform a task. Role perception deals with the kinds of activities people believe are necessary to perform a job successfully. Performance is how much successful role achievement is accomplished. Rewards are the desired outcomes of the job that a person receives. The rewards must be positively valued by the individual and are considered to be either intrinsic or extrinsic. In order to predict future performance it is important to know the perceived size of the reward and the degree of their perceived connection to past performance. Perceived equitable rewards is the amount of rewards people feel they should receive as a result of a given level of performance. Satisfaction is defined as the extent to which rewards received meet or exceed the perceived equitable level of rewards. If a reward does not meet or exceed the perceived equitable rewards, there will be

dissatisfaction.

Porter and Lawler (1968) hypothesize relationships between variables. "The greater the value of a reward and the higher the perceived probability that effort will lead to this reward, the greater the effort" (p. 31). Increased effort generally leads to increased performance (given a ceiling of abilities, traits, role perceptions and environmental factors). "The greater the connection that the individual sees between his performance and his rewards, the more likely a person is to exert a high level of performance" (p. 33). The rewards may be either extrinsic or intrinsic. The intrinsic rewards involve the individual's feelings in relation to his task performance and this depends largely on how the job is structured. High performance leads to satisfaction rather than satisfaction leading to high performance.

In the Porter and Lawler (1968) motivational model it is only through a feedback loop (from satisfaction to reward) that satisfaction will affect performance. The need or value will be temporarily satisfied and should inhibit the drive towards a goal in the motivational cycle. However, it appears that the intrinsic rewards do not decrease the motivational cycle but rather increase it (Maslow, 1970). Esteem, recognition and autonomy become more valued the more a person is rewarded and feels satisfaction from these rewards. The other feedback loop is the relation of rewards to the perceived effort-reward probability. The person must perceive that the reward is

connected to effort and performance. Unless the reward is highly valued by the recipient it may not be perceived as connected to the performance.

It is clear in reviewing the expectancy theory that locus of control may be an important variable in this study. By definition, only a person with an internal locus of control will perceive the necessary connection between effort, performance and reward. Regardless of how highly a person with an external locus of control values a reward, he will not be motivated to put in increased effort and performance if he does not see the achievement of this value to be contingent on his action.

Hackman and Lawler (1971) suggested five propositions based on the expectancy theory. 1. An individual will engage in a behaviour that he believes will produce a desired outcome that is either extrinsic or intrinsic. The outcome must have an important value to the individual. 2. The outcome must lead to perceived satisfaction of physiological or psychological needs. 3. Employees will work towards organizational goals to the extent that they will satisfy their own needs. 4. Lower level needs will usually be satisfied. Higher order needs satisfaction can be experienced on a continuing basis without diminishing. This can lead to a continuing motivation cycle. 5. To bring about a long-term congruence between high job satisfaction and high performance the employees must value the higher order needs and the job must be able to satisfy these needs.

In summary, expectancy theory and the above propositions clearly fit into the basic motivational cycle proposed for this study (Figure 1). The important value acts as an incentive to give a certain level of performance to achieve that value as a goal. It is a prerequisite that the intrinsic values be valued for the cycle to continue. An internal is more likely to perceive a connection between his level of effort and performance and the achievement of the goal and therefore more likely to make the effort to perform at a given level than an external. This suggests the hypothesis that for those individuals who have an internal locus of control there will be more congruence between the importance and achievement of work values than for individuals holding an external locus of control.

#### Linking the Locus of Control to Expectancy Theory

This section of the review will examine two research studies that have linked the locus of control with expectancy theory. In a study done with 207 naval personnel comprising 52 groups of four people (Broedling, 1975) the personality characteristic was connected to the theory. Ratings were obtained from the groups' supervisors on overall quality of job performance and overall effort. Subjects answered a questionnaire which included measures of valence, instrumentality, self-expectancy, internal-external locus of control, ratings of job performance and ratings of job effort. The

following hypotheses were confirmed at or beyond a .05 significance level: internals are more likely to see rewards as being contingent upon job performance than externals, internals are more motivated to perform on the job than externals, internals are better performers on the job than externals, and self-expectancy and instrumentality are positively correlated. The difference between instrumentality and the internal-external concept is that the former pertains only to the job situation while the latter refers to a perception regarding the world in general. Broedling cautioned against generalizations made from this study suggesting that it should be repeated with other than a military sample and that consideration be given to environmental variables.

Other research (Valecha, 1972) although not specifically dealing with the expectancy model supports the notion that internals perform better in a work situation than externals. A five-year longitudinal study of 4330 black and white males was conducted at the Human Resource Center at Ohio State University. Internal whites had higher occupations, made better progress on the job, had more stable work histories, worked more hours, had higher incomes and received more training on the job than externals or internal/external blacks. This study is dealing with only a white population at XYZ company. The implications of these findings are that internals are more motivated on their jobs and are more likely to achieve the work values that are considered to be important.

In summary, expectancy theory of motivation not only includes the achievement of important values, but also the expectancy of a person to be able to achieve that value as an outcome if he gives a certain level of performance. Individuals' work value systems differ. Individuals also differ in their perception of expectancy and instrumentality and this difference may be related to the locus of control of the individual. This perception will impact on the performance level in the job. Based on these premises, it can be hypothesized that for those individuals who have an internal locus of control there will be more congruence between the importance of work values and achievement of work values than for individuals holding an external locus of control.

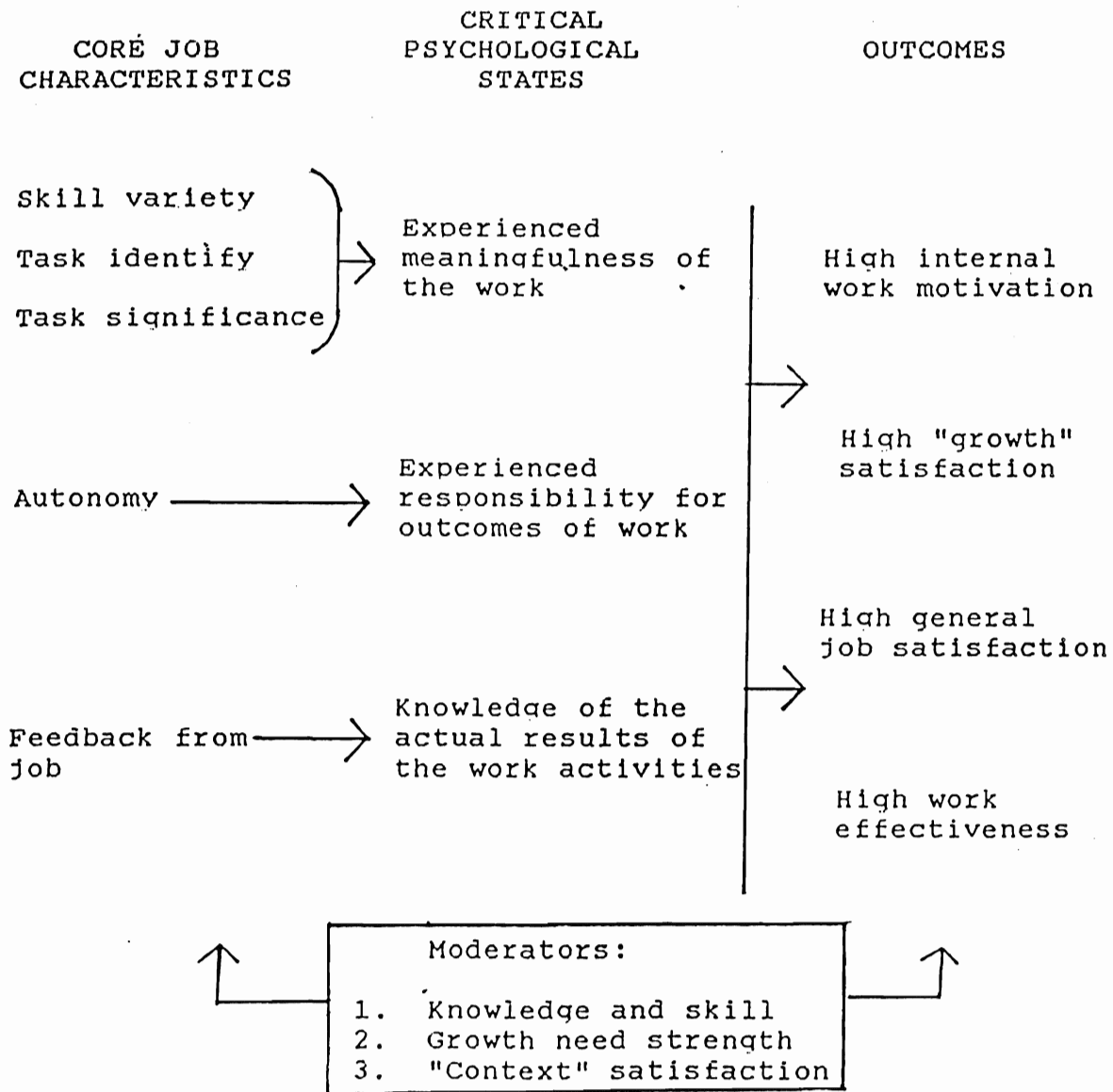
#### Job Characteristics Theory of Work Motivation

Hackman and Oldham (1980) present a model of work motivation based on the premise that motivation may have more to do with how tasks are designed on the job than the personal dispositions of the people who do them. This theory will be examined in relationship to the variables of this study and a relevant hypothesis suggested.

In the present study the relationships illustrated in Figure 3 of the theoretical Hackman-Oldham (1980) model have been accepted. The model suggests that certain characteristics of the job itself lead to critical psychological states. These three critical psychological states must be present to create the conditions for internal work motivation. Personality characteristics



Figure 3: The Complete Job Characteristics Model



(Hackman & Oldham, 1980)

also affect whether people respond positively to jobs that are designed with motivation potential. One example of such a characteristic is the growth need strength of an individual. An individual with strong needs for growth should respond positively to a job with high motivating potential.

The job characteristics that lead to the three critical states are variety of skill, identity of the task, significance of the task, autonomy and feedback. Skill variety, task identity and task significance lead to the psychological state of experienced meaningfulness of the job, autonomy leads to experienced responsibility and feedback on the job leads to knowledge of the results.

The three critical psychological states must all be present for strong internal work motivation to develop and persist. Experienced meaningfulness is the extent to which a person experiences work as being important, valuable and worthwhile. Experienced responsibility is the degree to which a person feels personally accountable for the results of the work. Knowledge of the results involves the degree to which a person understands on a regular basis how effectively he is performing on the job. The three critical psychological states are closely aligned with the intrinsic work values being examined in this study. At the same time the critical psychological state of experienced responsibility is, by definition, a property of a person holding an internal locus of control.

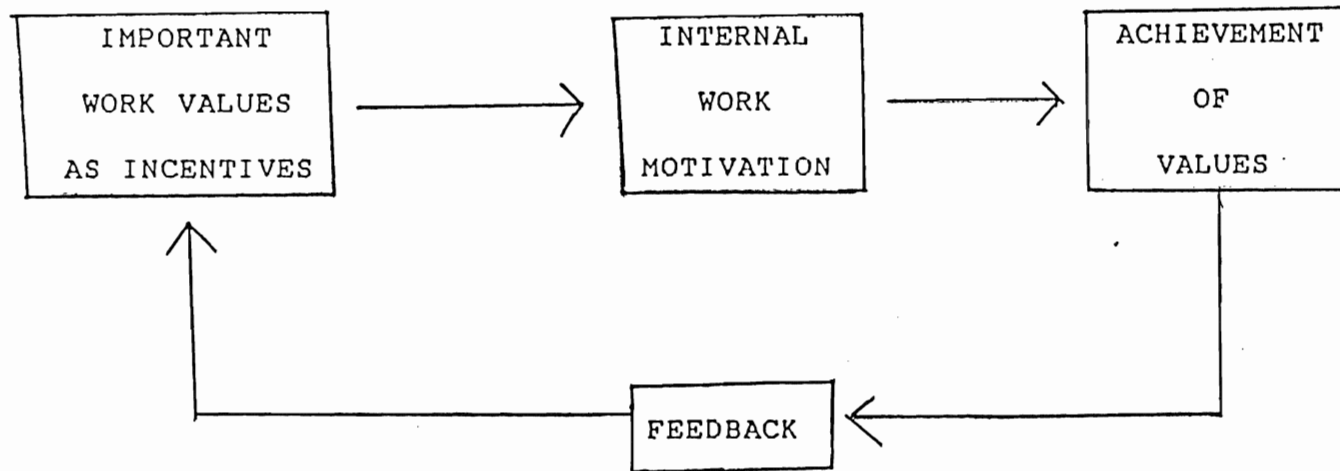
A person who feels good about himself when he

performs well will experience internal work motivation. The more the three critical psychological states are present, the more employees will feel good about themselves when they perform well. The internal rewards are reinforcing. If a person does not perform well, he can regain the internal rewards that a good performance may bring by increasing his effort and performing better next time. "The result is a self-perpetuating cycle of positive work motivation powered by self-generated (rather than external) rewards for good work" (p. 72).

This conceptualization of a self-perpetuating cycle of work motivation can be related to the general theoretical model of motivation being used in this study (Figure 1). Important values become important work values acting as an incentive and creating the conditions for internal work motivation. This internal work motivation is experienced as one is directing his behaviour or acting in a way to achieve the important work values. The achievement or non-achievement acts as a feedback to the individual that completes the motivational cycle. This conceptualization would appear as in Figure 4.

This view of internal work motivation hinges on three factors. First, an individual must perceive the higher order or intrinsic work values to be important. Secondly, by definition, experiencing the three critical psychological states corresponds closely with the perception of the achievement of the intrinsic work values. Thirdly, the feedback can be either positive or

Figure 4: Generalized Model of Cycle of Internal Work Motivation



negative and still lead to internal work motivation. If a person does not succeed he will try harder to perform better in order to feel better about himself. The assumption here is that the person has the ability and with enough effort will be able to succeed. This suggests that the more congruence between a person's perceived importance and achievement of work values, the greater that person's internal work motivation.

Research suggests that internal work motivation is closely connected with work values. Deci (1975) studied subjects involved in an intrinsically motivated activity to see that if rewards were made contingent on their performance there would be a decrease in intrinsic motivation. Intrinsically motivated activities are ones for which there is no apparent reward except the activity itself. Deci's definition for intrinsic motivation is parallel to internal work motivation when applied to a work setting. The subjects were asked to solve puzzles that had previously been demonstrated to be intrinsically motivating. The individuals who were being paid to do the puzzles stopped when they believed that they had filled the requirements for the external reward. Individuals who were not being paid continued to do the puzzle even after they believed they had finished the required task. Although Deci (1975) cautions that the many of the results of similar experiments are equivocal, he still maintains that when subjects are involved in an intrinsically motivated activity, if there are rewards made contingent

on their performance their intrinsic motivation for the activity will decrease. He offers the possible explanation that the external rewards caused the person to lose his feeling of personal causality which led to a decrease in intrinsic motivation. In terms of the variables of this study a decrease in the experienced responsibility of the individual was accompanied by a decrease in internal work motivation.

Research done in a work setting supports Deci's (1975) work on the effects of extrinsic rewards on intrinsic motivation or internal work motivation. In a pilot study done with government employees in a center for the handicapped in North Carolina, internal work motivation decreased when employees perceived extrinsic rewards were being given for their performance (Jordan, 1986). Subjects were measured for intrinsic motivation by the Job Diagnostic Survey which measures the degree of internal work motivation a person is experiencing in his job. Satisfaction with pay was also measured. Subjects were then divided into two groups ( $n = 32$ ,  $n = 16$ ). One group was told that if they reduced yearly expenses up to 25% of the amount reduced would be divided equally among the employees at the end of the year. The other group was not offered the same reward but was also given the mandate to reduce the yearly expenditures. Expenditures were decreased. A posttest showed that the extrinsically rewarded group decreased in internal work motivation. Evidently when they were working towards an extrinsic goal

they did not experience as much of the three critical psychological states. They did not feel that they were achieving the intrinsic values necessary for internal work motivation. Presumably the characteristics of the job did not change. The perceptions of the individuals changed. In contrast, the group that received no monetary reward increased in internal work motivation. An explanation put forward was that since they were not rewarded extrinsically for doing the same job, and being aware of the other group's monetary reward, individuals attributed their own performance as being even more internally rewarding than before. This study lends weight to the position that when an individual perceives that he is achieving important work values in his job he will have high internal work motivation. If an individual does not perceive that he is achieving his important work values he will not have high internal work motivation. The assumption is that an individual places a high value on the intrinsic values. Problems with this study are the small population being studied and the possibility that there may have been different results if both groups had not been aware of the differences in treatment in the two groups.

In summary, Job Characteristic Theory of work motivation proposes that the structure of the job itself is the most important factor in motivation. Certain job characteristics lead to the three critical psychological states which create the conditions necessary for internal

work motivation. Individual differences such as growth need strength can affect the degree to which an employee experiences this motivation regardless of the design of the job. Research shows that when people perceived they were achieving intrinsic rewards they had increased intrinsic motivation. Examination of this theory suggests the hypothesis that the more congruence between a person's importance and achievement of work values, the greater that person's internal work motivation.

#### Attribution Theory

The Attribution Theory is a work motivation theory based on expectancy theory. This theory is concerned with the cognitive processes by which people interpret causes or reasons for behaviour. Unlike the other motivational theories being examined, this theory is more a theory of the relationship between personal perception and interpersonal behaviour than a theory of individual motivation (Luthans, 1985). "Attribution theory concerns the processes by which an individual interprets events as being caused by particular parts of a relatively stable environment" (Kelley, 1967, p.193). It is the study of the factors to which most individuals attribute their successes or failures. Basically people can choose between external attributions or internal (self) attributions. This theory is being examined because the attributions that people make in the workplace affect perceptions and perhaps the resulting behaviour or job performance.



People behave differently when they perceive internal attributes such as ability or effort than they do if they perceive external attributes such as task difficulty or luck. For example, a person who believes he has been successful at a task because of his ability will probably choose that same type of behaviour again. The person who does not connect his success to an internal cause will not be likely to choose that behaviour again. Individuals are considered to be more successful if behaviour is perceived to stem from internal factors such as ability or effort than if it stems from external factors. In contrast, when an individual fails his work is judged more favourably when external factors such as task difficulty or bad luck are seen to be the cause.

The process of attribution is the same whether it is self or other perceptions. The focus of this review will be on self perception. According to Kelley (1967), attributions become so internalized that one is not aware that he is making a judgement. He simply knows that he knows. Unfortunately a person's perceptions may be completely unrealistic at times. However a person will behave according to the reality he perceives.

Kelley and Michela (1980) propose a general model of the attribution field suggesting that there are both antecedents and consequences of attributions for behaviour. The antecedents-attributes link focuses on how an individual uses certain information about the behaviour and the circumstance of its occurrences to infer either an

internal or external cause. The attributes-consequences link focuses on the behaviour, feelings and expectancies as a result of the inferred cause. The antecedents and consequences of attributions for behaviour play a central role in human behaviour because they constitute a person's understanding of the causal structure of the world.

Attributions are typically measured by the concept of locus of control (Rotter, 1966). The locus of control of an employee may affect behaviour in the workplace. Internals believing they control reinforcements through their behavior should behave in ways to control their environment. Externals should be less likely to try and control their environment.

The Attribution Theory and locus of control is congruent with the basic motivational framework being used in this study. The person who attributes his success in achieving a goal to effort and ability will be motivated to continue that behaviour provided he values achievement. The same person who values achievement will attribute failure to a lack of effort. The person who does not have a high need for achievement will not value success and will attribute failure to lack of ability (Weiner, 1974). The internal individual who values achievement will attribute outcomes to his own ability and effort and the self-perpetuating cycle for internal work motivation will be set in motion as illustrated in Figure 4. The external individual whether he values achievement or not will not attribute outcomes to his actions and the motivational

cycle will not be triggered. This suggests the hypothesis that the internal individual will be more internally motivated than the external individual.

One condition that must be present for internal work motivation is that the individual experiences responsibility for the results of his work, believing that he is personally accountable for the outcome. The internal individual, by definition, will experience more internal work motivation because he sees a contingency between his actions and the outcome and will experience responsibility if it is a part of the job structure. This also suggests the hypothesis that individuals with an internal locus of control will be more internally motivated than individuals with an external locus of control.

Research has shown that internals do perceive their jobs to be more enriched (Knoop, 1981). An enriched job is one that is high on the five core job characteristics that Hackman and Oldham (1980) state are prerequisites to experiencing responsibility on the job and internal work motivation. A sample of 1812 teachers were measured for the locus of control on a modified version of Rotter's (1966) I-E Scale and the job characteristics on the Job Diagnostic Survey. The findings were statistically significant in support of the hypothesis that internal individuals perceive their jobs to be more enriched than externals. However, there was only qualified support given for the locus of control as a

moderator between the perception of the environment and work attitudes. Further research was recommended to analyse the combined effect of those moderators such as growth need strength, knowledge and skill, need for achievement and locus of control.

Other research looked at the relationship between locus of control and reactions of employees to work characteristics (Kimmons & Greenhaus, 1976). Job characteristics of autonomy and feedback were measured as well as job involvement, performance-reward contingency, overall job satisfaction and satisfaction with the work itself. Locus of control was measured by a modified version of Rotter's I-E Scale. Internals perceived more autonomy, feedback and performance-reward connections on the job than externals. In addition, the internals were more involved and satisfied with their job. In terms of this study it appears that internals perceive more of the job characteristics necessary for the three critical psychological conditions that create conditions for internal work motivation.

In summary the Attribution locus of control theory examines the impact of perception on work behaviour. Relevant studies point to the conclusion that internals perceive that they experience more of the three critical psychological states necessary for internal work motivation. This suggests the hypothesis that individuals with an internal locus of control will be more internally motivated than individuals with an external locus of

control.

#### The Relationship Between Variables

The question at this point is whether there is a meaningful relationship among the four variables in this study. Theoretically, the fact that a value is important is a necessary prerequisite for all content and process theories of work motivation (McAfee & Champagne, 1987). The expectancy theory based the explanation for choice of behavioural alternatives on how much a reward is valued (Vroom, 1964). The attribution theory attempts to explain why internals behave in consistently achievement-oriented ways by stating that they perceive a connection between what they want or value and how they behave. The Job Characteristics Theory depends upon a person valuing the intrinsic rewards of experienced responsibility, experienced meaningfulness and feedback on the use of their abilities.

It has previously been suggested that the importance of work values and achievement of work values can be viewed as a part of Hackman and Oldham's (1980) self-perpetuating cycle of work motivation (Figure 4). Work values must be considered important before the cycle can be set in motion. At the same time, if a work value or set of work values ceases to be important the cycle will stop. Important work values then precede internal work motivation and create the conditions for an individual to experience this state. Internal work motivation extends the original definition of work

motivation (Figure 1) by referring not only to a person's behaviour but also to the accompanying internal rewards of good feelings. Once a person has high internal work motivation he will either achieve his goals or work harder next time to perform better. The actual achievement or failure acts as feedback to perpetuate the cycle. This cycle suggests that the work values must be perceived as important before internal work motivation can be experienced which in turn leads to the achievement of the value as a goal.

Implicit in this view is the fact that the intrinsic values are important to the individual. As stated previously once these intrinsic values have been satisfied by the achievement of a goal there is an increase in the need level for the individual to continue achieving. In terms of the variables in this study, the intrinsic values will increase in value once they have been achieved.

Does locus of control moderate the relationship between importance of work values and internal work motivation? In reviewing the literature on locus of control and job performance Spector (1982) states that internals do perform better than externals. "One should keep in mind, however, that internals will only display better performance if they perceive the effort will lead to 'valued' rewards" (p. 489).

"We can ...view Rotter's concept of internal locus of control as being a necessary condition for intrinsic

motivation" (Deci, 1975, p. 91). The internally controlled person will be intrinsically motivated in many situations. The externally controlled will seldom be intrinsically motivated because he does not believe he can affect his environment. Based on the Hackman-Oldham (1980) model of work motivation and the Attribution locus of control theory it appears that the locus of control may have a moderating relationship with internal work motivation in the self-perpetuating cycle of work motivation. As previously stated the importance of work values leads to internal work motivation which in turn leads to the achievement of work values. This suggests the hypothesis that if work values are perceived as important, individuals with internal locus of control will have higher internal work motivation than individuals with external locus of control.

Research lends support to this hypothesis. Weiner (1974) consistently found that internals who succeeded at a task felt pride in their accomplishments and increased expectations of future success. The internal who was unsuccessful at a task felt frustrated and reduced his expectations for the future. Success or failure did not affect future expectations of externals who did not connect their performance on the task to their own performance. However, Weiner (1986) criticized Rotter's (1966) dichotomy of internal/external control. He suggests that this classification is deficient because there is no consideration of the added dimensions of

stability and controllability that also describe causal perceptions.

This view of the causal attributes that an individual makes after success or failure may be relevant to the last hypothesis suggested. Steers (1984) states that the internal who succeeds at a task attributes it to ability, feels pride and increases in performance and expectations on subsequent tasks. On the other hand, internals who fail on a task feel frustration and lack of confidence leading to a decrease in performance and expectations. This contradicts Hackman and Oldham's (1980) premise that a failure at a task will be followed by an increase in performance in order to regain internal rewards. If Steers is correct the motivational cycle will break down if an internal does not have the ability to do the job or cannot perform for some other reason. However, according to Weiner (1986) it is possible to change the attribution-affect-behaviour sequence from failure-lack of ability- feelings of shame- performance decrements to failure-lack of effort- feelings of guilt-performance increments through therapy or training. Perhaps, an individual who has high internal work motivation already attributes effort to both success and failure and the self-perpetuating cycle will continue as long as the job structure has motivation potential and the individual values intrinsic rewards.

This section was a synthesis of the work motivation theories in the light of interrelating the



variables of this study. Based on this synthesis, the hypothesis was suggested that if work values are perceived as important, individuals with an internal locus of control will have higher internal work motivation than individuals with an external locus of control. Some possible problems with this approach were explored.

#### The Development of a Needs Assessment Instrument

It seems apparent that the proposed hypotheses may be relevant to any organization. In this study the analysed data will yield results that are peculiar to the 6th and 7th level of the XYZ organization. It is important that the method of analysis be of practical value to the XYZ company. Once such a practical method is established, other organizations may be able to adapt the same format to increase their understanding of managerial motivation. This section will explore the needs assessment instrument as an effective way to organize the data for practical use.

The needs assessment instrument can be designed so that data can be analysed into a hierarchy of needs. This analysis will be determined by the congruence between the importance and achievement of work values. This hierarchy of needs can act as a practical indicator of the human resource needs in the organization.

Human resource needs are currently being addressed by training in business and industry. In terms of this study, the needs assessment instrument will be examined as

a possible tool to insure a successful, cost-efficient training program designed to address the unique needs identified by the organization. From an organizational standpoint this training program should maximize the motivation of the employee to increase productivity and the quality of work. A key to the training process is understanding work motivation. This offers a further rationale for developing a needs assessment tool that provides insight into the managerial motivation in any organization.

In a statistical study done from 1969 to 1981 in the United States there was an increase in training of 3.3% a year (Myerson, Zemsky, Tierney & Berg, 1983). This reflected a steady growth of the use of training mirroring the increase of the number of people in the job market. In Canada, the estimated cost of training in government and industry is somewhere between \$7 to \$8 billion a year (Werther, Davis, Schwind, Das & Miner, 1982). Clearly, training within the organization is being taken seriously.

Research literature describing training practices extolls such benefits of employee training programs as: leads to improved profitability and/or more positive attitudes to profit orientation, improves morale of the work force, helps the individual in making better decisions and effective problem solving, and internalizes and operationalizes the motivational variables of recognition, achievement, growth and responsibility (Tessin, 1978). It is little wonder then that business

and industry look to training to motivate their employees and increase productivity and the quality of work.

There is no magic formula to insure a successful and cost-efficient training program. Specific training programs should be designed to solve the problems that the organization has identified. No two firms, even those in the same industry, are identical in their training needs, for each program will reflect the unique culture of the firm (Zemsky, Myerson & Martin, 1985). A training needs assessment must precede the design of a training intervention to target the areas that need the most attention. This needs assessment will allow managers to consider different alternatives. Training and/or something else might better address the specific need or problem (Brinkerhoff, 1986).

The training program must begin with planning and knowing the needs of the specific organization. A conceptual framework should be used to insure a thorough and accurate assessment of needs. Lawrie (1986) offers a proactive, self-renewing system that includes the following four steps: 1. Gather data about needed skills and attitudes and analyse results to establish a hierarchy of needs, 2. Include trainees and their supervisors in developing training objectives that address the needs that trainees are most motivated to satisfy, 3. Assess the success of the actual program through the objective measurement of dollars and cents increase and the subjective measurement of attitude change, and 4. Use

the evaluation procedure as a lead-in to the next cycle of training.

Watson (1979) suggests that the very first step in the needs-identification process is to consider the factors external to the positions held by the persons being trained. What are the values that are characteristic of the training population? What is the culture surrounding the job? (Culture refers to orientations to external stimuli that are learned, shared and perpetuated.) When the training group is managers, it is expected that they will attach roughly the same importance to job values since the type of job outcome sought by managers differs significantly from one culture to another (Kanungo & Wright, 1983). At the same time, there is positive correlation between specific managerial values and success (England & Lee, 1974).

Using this rank-ordered information the supervisors and employees are in a good position to determine which deficiencies are most detrimental to the system and which areas will yield the most benefits if improved. They can assess what needs the target population is most motivated to satisfy. It is also possible that the design of the job itself and/or an individual personality characteristic such as the locus of control may be variables that moderate this needs identification process. To examine this possibility it is necessary to measure the internal work motivation and locus of control of the target population for training. Analysis of this

data will lead to setting training objectives and designing a curriculum that meets the needs of the organization.

In summary, this section has dealt with the development of a practical method of analysing the data in this study. Developing a hierarchy of needs by rank-ordering the perceived discrepancy between importance and achievement of work values is the first step in understanding motivation. Based on the analysed data, a training program may be developed that truly addresses the needs of the organization.

#### Summary of the Hypotheses

In conclusion, the review of the literature has explored a basic framework to explain the motivational cycle, examined four theories of work motivation citing relevant studies, and suggested an unexplored yet practical area for research. The following hypotheses were suggested for investigation:

1. For those individuals who have an internal locus of control there will be more congruence between a person's perceived importance and achievement of work values than for individuals holding an external locus of control.
2. The more congruence between a person's perceived importance and achievement of work values, the greater that person's internal work motivation.
3. Individuals with an internal locus of control will be more internally motivated than individuals with an external locus of control.

4. If work values are perceived as important, individuals with internal locus of control will have higher internal work motivation than individuals with external locus of control.

Associated Question

The survey was administered to the subjects in the context of an ongoing training program. A practical objective was to use the data in the development of a cost effective training program that would answer the unique needs of a specific organization. The research question then is: how to analyze the data most effectively so that the human resource needs of an organization can best be addressed?

## CHAPTER III

### METHODOLOGY

#### The Sample

The sample included all 6th and 7th managerial level employees of the XYZ organization. XYZ is a large manufacturing company which employs 2500 people. The 6th level numbers 158 men and three women. The seventh level has 41 men and one woman. Above the 6th and 7th level in the hierarchical structure of the company is the 8th level, assistant plant manager and plant manager of which there are 16 men in the upper management. The 6th level are first line supervisors and the 7th level are considered middle management.

#### The Procedure

All data were included in a Needs Assessment Survey that was being administered as a part of an ongoing training program for the 6th and 7th levels of the XYZ company. Each respondent answered the survey during a specified time that had been designated for training. The training was held in a classroom situation and a group of approximately 25 completed the survey at the same time. The subjects were asked to complete the survey honestly and told that the results would determine the direction of future training programs. Subjects were assured that all responses were anonymous and no individual could be identified.

The survey had 319 questions and included additional data on personal factors, organizational behaviours and work outcomes. Data were coded and processed through the Brock University SPSS computer program. Results were confidential.

#### The Instruments

All measuring instruments used in this study have been employed in prior research and have established validity and reliability. These instruments are found in the Appendices (2 to 6). The specific instruments are as follows:

##### (a) Importance of Work Values

This questionnaire was employed by Elizur (1984) in an Israeli study with two representative samples of an urban Jewish population. To develop the questionnaire, Elizur (1984) first administered an 11 item questionnaire that asked how important a value was in the work context. This importance was evaluated within a range ordered from very important to very unimportant. He classified work values into two basic facets: modality of outcome and the relation to task performance. Based on the results of this questionnaire he expanded it to 21 items to provide a wider sample representative of affective, cognitive and reward items. Modality of outcome includes material (security, hours of work, work conditions, benefits) affective (co-workers, supervisor, esteem) and cognitive (interest, independence, organization, achievement, meaningful work, responsibility, use of ability,



contribution to society) factors. The relation to task performance outcomes are rewards (pay, status, advancement, recognition and resources) provided after task performance.

The results of the questionnaire can be put on a SSA-1 computer program to produce a form of visual map where each value is put on a point and the distance between points is based on similarity coefficients between items. An empirical double-ordered conceptual system called a radex is obtained. This radex or two-dimensional structure is composed of a simplex and a circumplex and reflect the modality facets and relation to task performance facet. Elizur (1984) states that no tests of statistical significance have been devised yet to test conclusions, but the same structure obtained in independent studies lends strong support to the definitional framework.

For the purpose of this study a visual representation or map of the importance of work values is not necessary. Data obtained from the questionnaire determine whether an item belongs to the universe of work values by asking how important a value is in a work context and the range is ordered on a 6 point scale from very important to obtain to very unimportant to obtain. Appendix 2 includes the complete questionnaire.

#### (b) Achievement of Work Values

Hunt and Saul (1975) developed this questionnaire asking respondents (n = 5800) how much of 16 job factors

they were currently experiencing in their jobs. Responses were given on a 5 point scale. The average of these 16 goal attainment scores provided a criterion measurement of overall work satisfaction in a manner similar to Smith, Kendall and Hulin (1969) and other studies indicating that a linear combination of "IS NOW" scores on several job factors is highly congruent as a direct measurement of job satisfaction. For the purpose of this study this survey is used to determine congruence of importance of work values and the achievement of these values. The survey has the identical items as the Importance of Work Values questionnaire with the removal of interesting work, good salary, opportunities for promotion, pleasant coworkers and a fair and considerate supervisor. The complete scale is in Appendix 3.

#### (c) Job Perception Scale

The sixteen factors given in the Achievement of Work Values Scale did not include the five dimensions of job satisfaction: work, pay, promotions, supervisors and co-workers. This was measured by the Job Perception Scale (Hatfield, Robinson & Huseman, 1985). This scale is composed of 21 semantic differential points of work, pay, promotion, supervision and co-workers. It was developed from the highly reliable Job Descriptive Index (Smith, Kendall & Hulin, 1969) in an effort to produce an equally effective measurement tool that is less time consuming to administer.

The initial testing to 108 business students

included 75 scales that were ranked on a scale from 'best possible job' to 'worst possible job'. A stepwise differential analysis was employed to determine the 21 scales that discriminated well ( $p = .02$ ). Discriminant validity was 100% and convergent validity was significant for all values at  $p = .001$ . Split-half reliability ( $p = .001$ ) and test-retest reliability estimates (.64 to .80 over 3 weeks) received fairly strong support.

The following is an example of a question from the Job Perception Scale:

WORK	7	6	5	4	3	2	1		
Exciting	/	___	/	___	/	___	/	___	Dull
Unpleasant	/	___	/	___	/	___	/	___	Pleasant
Challenging	/	___	/	___	/	___	/	___	Unchallenging
Satisfying	/	___	/	___	/	___	/	___	Unsatisfying

The complete questionnaire is in Appendix 4.

#### (d) Internal-External Locus of Control

Rotter's (1966) internal-external locus of control scale was derived from social learning theory. The scale consists of 23 items and 6 filler items that reflect many different life situations where locus of control may affect behaviour. Each item is weighted equally. Test-retest reliability over one month is consistent and satisfactory with reliability coefficients of  $r = .72$  ( $n = 60$ ). Internal consistency is reasonable and results correlate satisfactorily at  $-.35$  to  $-.40$ . Item analysis and factor analysis show reasonably high internal consistency for an additive scale with all items loaded

significantly on the general factor accounting for 53% of the variance.

The present study employs an instrument which is a modified version of Rotter's original locus of control scale. It includes 12 questions on work-relevant variables. The selected items were #6, #7, #9, #10, #11, #13, #15, #16, #18 #20, #25, and #28. Items were selected on the basis of being more general, adult-oriented and work related. Respondents are asked to circle the one of two responses they agree with the most.

The following is an example of one of the pairs of questions. The complete instrument is in Appendix 5.

- A. Without the right breaks one cannot be an effective leader.
- B. Capable people who fail to become leaders have not taken advantage of their opportunities.

The possible range of scores is between 0 and 12.

As described in Chapter 2, the respondents are classified as internal if they score within the bottom half of the distribution or below the median, and external if they scored in the top half of the distribution.

#### (e) Internal Work Motivation

This instrument is a part of the Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975) as a part of a Yale university study of jobs and how people react to them. The questionnaire helps to determine how jobs can be better designed by asking respondents to give their perceptions of the job and their feelings about it.

The test was developed over a two-year period using over 1500 individuals. Major revisions were made based on analyses of these data. Internal consistency reliabilities ranged from .88 to .56. Discriminant validity was determined by correlation with the medians of other job dimensions and ranged from .12 to .28 and was satisfactory. A one-way analysis of variance was completed between job differences across 50 jobs with five or more respondents and was statistically significant.

The JDS measures the five core job dimensions, three critical psychological states and personal outcomes for affective reactions to the job. The affective reactions are general satisfaction with the job and internal work motivation.

In measuring internal work motivation respondents were asked to indicate their response to 12 statements (Appendix 6). The following is an example of the type of question:

Please indicate how you personally feel about your job.

Strongly	/	___	/	___	/	___	/	___	/	___	/	___	/	___	Agree
Disagree		1		2		3		4		5		6		7	Strongly

My opinion of myself goes up if I do the job well.

By 1980, the JDS had been subjected to numerous empirical tests. It is important to note that this survey can be easily faked. However, in the present study the fact that the instrument is being administered anonymously to 184 people increases the reliability of the measures

(Hackman & Oldham, 1980). The alpha reliability of this instrument is .64.

(f) Congruence of Work Values and Developing a Hierarchy of Needs

The needs assessment data can be effectively collected through an opinion survey of both the internal and external variables (Wernimont, 1972) which are included in Elizur's facet analysis. An operational way to measure facet satisfaction is to measure the discrepancy between the importance of a job facet and how much a person perceives it is being achieved now (Wanous & Lawler, 1972). For the purpose of this study the difference is the congruence between importance and achievement of work values. This measurement of congruence can be rank-ordered from the least congruent to most congruent. This rank-ordering of deficient areas should represent the important needs that an organization could address.

Statistical Analysis

An intercorrelational matrix for all variables was used to analyse data and provide a clear understanding of the relationships between variables. T-test analysis was used as a statistical method to compare two groups (internals, externals) within the same group. Kimmons and Greenhaus (1976) used the same techniques to analyse their data comparing internals and externals and their perception of job characteristics. A regression analysis was employed to eliminate problems that might surface when

many multiple T-tests are used. The significance level for all statistics was .05 or less.

A needs gap analysis was completed by subtraction of the perceived achievement from the importance of a value to indicate the perceived congruence between the two ( $NVW = IVW - AVW$ ). The scores for the achievement of work values were reversed to match the scoring for importance of work values and all scores were transformed into percentiles. The means of congruence of all values were rank-ordered from least congruent to most congruent. That is, the least congruent value would be considered to have the largest need gap.

## CHAPTER IV

### PRESENTATION OF RESULTS

Results are reported in six sections. The first section will present an overview of the data to give a feel for goodness of the results. The next four sections correspond to each of the four proposed hypotheses. The last section deals with constructing a hierarchy of needs for the XYZ company utilizing the data from this study

#### An Overview of the Data

Table 1 presents the means and standard deviations of all four variables being considered in this study. The means for the importance of work values are derived from a scale of 1 (very important) to 6 (very unimportant). All values are seen as relatively important with achievement being ranked most important with a mean of 1.44 (standard deviation .60). and contribution to society the least important with a mean of 2.54 (standard deviation 1.08). There is little dispersion in scores with the smallest standard deviation being .60 (achievement and interesting work) and the largest being 1.12 (convenient hours of work).

The means for the achievement of work values are derived from a scale of 5 (very much) to 1 (very little). The last five achievement of work values on Table 1 (satisfaction with work, salary, promotion, supervisor and pleasant co-workers) are on a scale of 7 being very



Table 1

## Means and Standard Deviations of Variables

Variable	Mean	Standard Deviation
Importance of:		
Responsibility	1.71	.68
Benefits	1.54	.74
Esteem	1.61	.75
Achievement	1.44	.60
Influence over Work	1.73	.75
Meaningful Work	1.51	.66
Job Status	2.36	1.09
Use of Abilities	1.66	.62
Interesting Work	1.52	.60
Promotion	1.46	.65
Work Conditions	1.86	.78
Salary	1.70	.90
Recognition	1.82	.82
Influence in Organization	2.19	.87
Opportunity for Promotion	2.14	.13
Pleasant Co-workers	2.13	.95
Considerate supervisor	1.78	.85
Pride in Organization	2.00	.87
Independence	2.08	.82
Convenient Hours of Work	2.33	1.12
Contribution to Society	2.54	1.08
Achievement of:		
Responsibility	3.74	.81
Benefits	3.46	.20
Esteem	3.37	.86
Achievement	3.37	.86
Influence over Work	3.51	.84
Meaningful Work	3.67	.90
Job Status	3.30	.94
Use of Abilities	3.59	.98
Work Conditions	3.32	.99
Security	3.57	1.03
Recognition	3.04	.89
Pride in Organization	3.42	1.01
Independence in Work	3.52	.91
Convenient Hours of Work	3.20	1.27
Contribution to Society	2.64	.96
Satisfaction with Work	4.89	1.06
Salary	4.33	1.35
Promotion	4.13	1.27
Supervisor	4.86	1.14
Pleasant Co-workers	4.85	1.03
Internal Work Motivation	5.71	.96
Locus of Control	3.30	2.40

Table 2

## Intercorrelations of Importance of Work Values and Achievement of Work Values

	IVR	IVB	IVE	IVA	IVI	IVM	IVJ	IVK	IVS	IVN	IVO	IVH	IVD	IVU	IVT	IVW	IVP	IVX	IVL	IVF	IVC
AVR	.12	.06	.05	-.2	.11	.09	.08	.14	.05	.11	.04	.19	.09	-.11	.07	.12	.09	.14	-.11	.08	.11
AVB	-.06	-.06	-.05	-.09	-.10	-.09	-.15	-.13	.08	.02	.11	.01	.02	.14	-.07	-.01	-.08	-.09	-.08	.0	-.03
AVE	.13	.02	.04	.09	.0	.05	-.07	-.04	.14	.03	.04	.14	.08	.03	.02	-.01	.02	.03	-.12	.02	-.03
AVA	.05	-.02	-.09	.08	-.04	-.04	-.00	-.04	.11	-.04	-.02	.14	.08	.03	-.02	-.01	.02	.03	-.12	-.02	-.03
AVI	.08	.0	-.08	.11	.15	.02	.01	-.00	.04	-.05	-.08	.04	.08	.00	-.00	.05	.01	.02	-.02	-.05	-.01
AVM	.00	.11	-.03	-.08	.04	.06	-.03	-.07	.17	.08	-.03	.03	-.02	.03	.03	.06	.07	-.14	-.11	.01	.07
AVJ	.10	.05	.13	.08	-.01	.01	-.20	.01	.11	.1	.08	.18	.05	.04	.14	-.01	.13	.11	-.05	-.04	.02
AVK	-.00	.11	-.09	.04	.05	.04	-.01	.04	.07	-.04	-.09	-.02	-.08	-.05	-.02	.08	.08	-.05	.01	.03	-.08
AVS	-.02	.03	-.04	.01	.04	.03	-.01	.03	.07	-.05	.17	.09	.07	.15	.05	-.02	.05	-.03	-.03	-.02	.07
AVN	.14	.02	-.02	.12	-.09	.03	.02	-.05	.09	-.07	.02	.10	-.04	-.05	-.02	-.08	.0	.02	.01	-.01	-.05
AVO	.01	.02	-.05	.09	-.04	.04	.05	-.08	.1	-.05	.06	.02	-.05	.03	.05	-.11	-.0	-.01	-.04	.03	.03
AVH	.05	.07	.11	.16	-.06	.08	.11	.02	.17	-.0	.06	.35	.11	.03	.15	.11	.11	.10	.11	-.11	.11
AVD	.12	.03	-.06	.06	.15	.05	.07	.07	-.08	-.04	-.04	.07	.18	.01	-.07	.09	-.08	.04	.06	-.03	-.01
AVU	-.05	.11	-.11	-.01	.11	-.01	.07	-.11	-.02	-.05	-.02	-.02	.02	.12	.01	.00	-.08	-.08	-.01	-.04	-.07
AVT	.04	.03	.08	.10	.12	.10	.10	.02	.03	.01	.14	.08	.05	.02	.34	.10	.09	.06	-.17	.06	-.08
AVC	-.02	.05	.00	-.02	-.04	-.001	-.04	-.23	.09	.04	-.01	-.03	-.02	.04	.01	-.05	.04	.00	.10	.01	.03
JSW	.11	.05	-.01	.14	.09	.18	-.07	.08	-.04	.04	.08	-.01	.09	.07	.08	.07	.08	.03	.06	.04	.02
JSS	.01	-.07	-.03	.11	.07	-.02	-.07	-.07	-.04	-.18	-.19	.13	-.10	.0	-.02	.00	-.17	-.08	-.02	-.07	-.10
JSP	-.05	-.06	-.02	.05	.07	-.10	-.05	-.13	-.10	-.12	-.07	.08	-.01	.0	-.02	.06	-.04	-.08	-.01	-.02	-.02
JSC	.08	-.01	-.02	.05	.07	.09	.02	.01	.02	-.04	-.01	.06	.01	-.02	-.00	.05	.00	-.04	.03	.04	-.00
JSS	-.00	.09	.02	.15	.15	.07	-.05	.01	.05	.02	-.11	.06	-.05	-.01	.07	.04	-.08	.04	.03	-.08	.03
LOC	.05	.11	.12	-.02	-.11	.01	.14	.0	.11	.2	.09	-.02	-.00	.09	-.05	-.10	.01	.15	.04	.08	.03
IWM	.19	-.02	.09	.20	.18	.28	.05	.25	-.00	-.11	-.11	.05	-.05	.05	.01	.12	.09	.18	-.01	.01	.02

Note: n = 184; If r = .12, p = .05; If r = .22, p = .001

satisfied to 1 being very unsatisfied. The range of scores indicates that all work values are perceived as being reasonably achieved in the workplace with mean scores ranging from 2.64 (standard deviation .96) for contribution to society to 3.74 (standard deviation .81) for responsibility to 4.89 (standard deviation 1.06) for satisfaction with work. The standard deviations range from .20 (benefits) to 1.35 (salary) indicating that there is not much dispersion in the scores.

The mean for locus of control is 3.3 (standard deviation 2.39) on an 11 point scale with the lower end of the scale representing an internal locus of control. The mean for internal work motivation is 5.71 (standard deviation .96) on a scale with a maximum of 7 points. This indicates that all the subjects in the study experienced high degrees of internal work motivation.

An intercorrelational matrix of the Importance of Work Values and the Achievement of Work Values is presented in Table 2. The code adopted for the data is in Appendix 7. The scoring for the Achievement of Work Values scale has been reversed to match the scoring of the Importance of Work Values scale. There are few significant relationships between variables. There are only two relationships at or beyond the .001 probability level for importance and achievement of pride in organization (.35); and importance and achievement of contribution to society (.34). There are very few relationships at or beyond the .05 probability level. Some examples are importance of

responsibility and achievement of responsibility (.12); importance of responsibility and achievement of esteem (.13); importance of responsibility and achievement of recognition (.14); and importance of responsibility and achievement of independence (.12).

The intercorrelational matrix of the Importance of Work Values shows significant relationships between variables (Appendix 8). Respondents consistently perceived relationships between the importance of one value and the importance of another. High correlations are found between importance of benefits and promotion (.58) benefits and job security (.54); achievement and meaningfulness (.55); meaningfulness and independence (.51). There are a few importance of work values that did not have a significant relationship with each other such as importance of responsibility and importance of benefits (.01); promotion (.03); security (-.05); and contribution to society (.00).

The intercorrelational matrix of the Achievement of Work Values also demonstrates consistently perceived relationships between the achievement of one value and the achievement of another (Appendix 8). There were high correlations between many variables such as achievement of use of abilities and achievement (.57); achievement and influence in organization (.59); achievement and meaningfulness (.68); achievement and job status (.54); achievement and satisfaction with work (.58).

The intercorrelational matrix for the Congruence

of Work Values shows the same pattern for consistently high significant relationships between values (Appendix 8). Some strong relationships are congruence of achievement and independence (.57); achievement and meaningfulness (.57); achievement and use of abilities (.55); achievement and influence in organization (.50). There are a few values that did not have a significant relationship with each other such as congruence of promotion and responsibility (.00); promotion and esteem (.07); promotion and achievement (.02); promotion and influence in organization (.02); promotion and use of abilities (.00). The high correlations indicate that most of the congruence of work values are perceived as being closely related to each other.

Hypothesis #1: Locus of Control and  
Congruence of Work Values

It was predicted that for those individuals who have an internal locus of control there will be more congruence between the importance and achievement of work values. The hypothesis was tested by utilizing T-tests of the congruence of each work value for individuals holding an internal locus of control and individuals holding an external locus of control. Internals were classified as those who had scores of less than 3 on the I-E Scale (n = 83). Externals were classified as those who scored 3 or more on the scale (n = 101). The median for the total group on the I-E Scale was 2.9. This method of classifying internals and externals is more conservative

than the traditional classification of the bottom one third into internals and the top one third into externals.

Table 3 presents the means and standard deviations of the internals and externals for each work value. Congruence was determined by transforming all scores into percentiles and subtracting importance from achievement (reversed scoring) for each variable. The result was a scale ranging from -100% showing opposite of need to 0% showing no need to 100% indicating high need. This accounts for the high means that appear in Table 3.

There are some difficulties with multiple T-tests that should be considered when reviewing the data. When 21 variables are being tested there is the statistical probability that one of those variables appears to be significant by chance alone at the .05 probability level. Dependence among variables as shown in the intercorrelational matrix for Congruence of Work Values also affects the meaningfulness of the statistical significance. A third difficulty is the loss of information that occurs when a continuum such as the congruence of work values or locus of control is divided into discrete data. A multiple regression analysis will be employed to address these difficulties.

The stepwise regression compares with T-tests in that each predictor variable is correlated with the criterion variable. However, a multiple regression equation uses all variables that individually predict the criterion to make a more accurate prediction. The R<sup>2</sup>

Table 3

Means and Standard Deviations for Congruence of Work Values  
and Locus of Control

Congruence	Internals		Externals		T-Value	p
	m	sd	m	sd		
Responsibility	16.2	23.2	20.3	24.4	1.17	.25
Benefits	25.1	27.9	29.9	28.5	1.15	.25
Esteem	24.9	21.1	31.9	27.8	1.92	.06
Achievement	28.0	21.6	35.3	24.9	2.13	.04
Influen/Work	21.6	24.8	23.8	23.2	.60	.55
Promotion	49.5	35.8	59.1	31.3	1.91	.06
Meaning/Work	21.7	24.4	24.1	26.4	.64	.53
Job Status	12.2	25.6	17.9	30.6	1.37	.17
Use/abilities	22.6	25.9	21.6	20.2	-.24	.81
Interes/Work	65.7	32.3	65.7	31.5	-.02	.99
Salary	66.7	31.8	69.8	33.4	.65	.52
Work/condit	22.4	27.5	26.8	31.2	1.01	.32
Job Security	13.5	23.9	30.9	33.6	3.90	.00
Recognition	25.7	25.6	37.7	29.5	3.64	.00
Influen/org	31.5	25.3	45.6	29.4	3.51	.00
Co-Workers	46.3	37.0	52.6	36.4	1.15	.25
Supervisors	51.0	37.7	67.0	30.8	3.09	.00
Pride/org	16.7	22.0	21.6	27.2	1.40	.17
Independence	11.9	19.6	17.9	29.2	1.67	.10
Con/Hrs/work	12.9	33.2	22.9	38.9	1.89	.06
Cont/society	23.7	23.1	32.2	27.9	2.25	.03

accounts for the proportion of variance remaining after the effects of the independent variables already in the equation have been partitioned out. The accompanying tables also report the  $t$  value of  $B$  (standard error of  $BETA$ ) and the two-tailed significance level of  $t$ .

The hypothesis received only very moderate support. For each of the congruence of work values the internals had a higher mean than the externals (except for Use of Abilities). However, only for 6 out of 21 variables was this considered significant at the .04 probability level or less. The six significant congruence of work values are influence in organization ( $t = 3.51$ ,  $p < .00$ ) recognition ( $t = 3.64$ ,  $p < .00$ ), achievement in work ( $t = 2.13$ ,  $p < .04$ ), considerate supervisor ( $t = 3.09$ ,  $p < .00$ ), contribution to society ( $t = 2.25$ ,  $p < .03$ ) and job security ( $t = 3.90$ ,  $p < .00$ ). This would indicate that individuals with an internal locus of control perceive more congruence than individuals with an external locus of control for slightly less than a third of the work values.

When a regression analysis was performed only interesting work ( $t = 3.08$ ,  $p < .00$ ), achievement ( $t = 3.14$ ,  $p < .00$ ) and job status ( $t = -2.30$ ,  $p < .02$ ) showed a significant relationship with locus of control (Table 4). Only achievement was statistically significant in both analyses.

In summary the hypothesis showed only very moderate support with congruence for slightly less than one third of the variables. This support was reduced to



Table 4

## Stepwise Regression on Locus of Control

Dependent Variable	B	t	p	R2
Congruence of:				
Interesting Work	.47	3.08	.002	.09
Achievement	.03	3.14	.002	.12
Job Status	-.02	-2.30	.02	.14

one seventh of the variables when a regression analysis was employed.

Hypothesis #2: Congruence and Internal Work Motivation

It was predicted that the more congruence between a person's perceived importance and achievement of work values, the greater that person's internal work motivation. The congruence of each work value was determined by the subtraction of the importance of the work value from the achievement of the work value (reversed scoring) to determine the congruence of the work value ( $NWV = IWV - AWV$ ). The congruence of work values was then further divided into high congruence and low congruence. High congruence was determined by responses of less than the median. Low congruence was determined by responses of greater than the median.

Table 5 presents the means and standard deviations for internal work motivation for the group who scored high congruence of a work value and the group who scored low congruence for the same value. A t-test analysis was employed to determine the statistical significance of differences between the groups.

The hypothesis tested received partial support. In 14 out of 21 cases, the group with high congruence of work values had higher internal work motivation than the group with low congruence of work values at a probability level of .05 or less. The 14 significant congruence of work values are responsibility ( $t = -.3.58, p < .00$ ), esteem ( $t = -2.17, p < .03$ ), achievement ( $t = -3.22, p < .00$ ),

Table 5

T-Test: Criterion Variable Internal Work Motivation by  
High Congruence of Work Values and  
Low Congruence of Work Values

Variable	High Congruence		Low Congruence		t	p
	m	sd	m	sd		
Responsibility	6.0	.75	5.6	1.02	-3.58	.00
Benefits	5.6	1.10	5.8	.88	1.31	.20
Esteem	6.0	.95	5.6	.96	-2.17	.03
Achievement	6.0	.77	5.6	1.01	-3.22	.00
Influen/work	6.0	.88	5.6	.98	-2.73	.01
Meaning/work	5.9	.83	5.6	1.01	-2.76	.00
Job Status	5.9	.98	5.6	.94	-1.95	.05
Use/abilities	6.2	.59	5.5	1.02	-5.70	.00
Interes/work	5.8	.89	5.5	1.03	-2.17	.03
Salary	5.9	.77	5.6	1.1	-1.97	.05
Work/condit.	5.9	.83	5.7	.99	-1.43	.16
Job Security	5.7	.90	5.7	1.00	-.11	.91
Recognition	5.9	1.04	5.6	.91	-1.97	.05
Influen/org	5.8	.96	5.6	.96	-1.52	.13
Promotion	5.9	.90	5.5	.99	-2.75	.01
Co-workers	5.7	1.07	5.7	.95	.35	.73
Supervisors	5.9	.97	5.6	.95	-2.10	.04
Pride/org	5.8	.92	5.7	.98	-1.00	.32
Independence	6.0	.93	5.6	.96	-1.96	.05
Con/Hrs/work	5.9	.83	5.6	1.02	-2.36	.02
Cont/society	5.7	.89	5.7	1.00	-.40	.68

influence over work ( $t = -2.73, p < .01$ ), meaningfulness of work ( $t = -2.76, p < .01$ ), job status ( $t = -1.95, p < .05$ ), use of abilities ( $t = -5.7, p < .00$ ), interesting work ( $t = -2.17, p < .03$ ), recognition ( $t = -1.97, p < .05$ ), independence ( $t = -1.96, p < .05$ ), salary ( $t = -1.97, p < .05$ ), promotion ( $t = -2.75, p < .01$ ), considerate supervisor ( $t = -2.10, p < .04$ ) and convenient work hours ( $t = -2.36, p < .02$ ). Although none of the other congruence of work values had any relationship with internal work motivation, there was either an increased or identical score in the internal work motivation levels for the group with the highest congruence (except for Congruence of Benefits).

The difficulties with multiple T-tests described above in the results for Hypothesis #1 are particularly significant here. A regression analysis on internal work motivation and congruence of work values shows only responsibility ( $t = 2.85, p < .00$ ) and interesting work ( $t = -2.51, p < .01$ ) to have significant relationships with internal work motivation (Table 6). This suggests that the significance found by T-tests with the remaining variables was the result of the dependence of the variables with each other.

In summary, for two thirds of the variables the group with a high congruence had significantly higher internal work motivation. A regression analysis cautions that there is less significance than this interpretation might indicate.

Table 6

## Stepwise Regression on Internal Work Motivation

Dependent Variables	B	t	p	R2
Congruence of:				
Responsibility	-.01	-.21	.00	.07
Interesting Work	-.14	-.19	.01	.11

Hypothesis #3: Internal Work Motivation  
and Locus of Control

It was hypothesized that individuals with an internal locus of control are more internally motivated than individuals with an external locus of control. A T-test was employed to analyse the data (Table 7). The hypothesis was not supported. Both groups had approximately the same level of internal work motivation and there was not a statistical difference between the two groups.

Hypothesis #4: Importance of Work Values, Internal  
Work Motivation and Locus of Control

The hypothesis proposed that if work values were perceived as important, individuals with an internal locus of control would have higher internal work motivation than individuals with external locus of control. This hypothesis was tested by creating four separate groups and comparing each group with all three other groups. The groups were as follows: Low Importance of Work Value, External Locus of Control (LE), Low Importance of Work Value, Internal Locus of Control (LI), High Importance of Work Value, External Locus of Control (HE), High Importance of Work Value, Internal Locus of Control (HI). The internal work motivation level of each group was compared to all other groups on all 21 work values and t-tests were employed to determine statistical significance. Table 8 presents the results of these analyses. The raw data are in Appendix 9.

Table 7

Means and Standard Deviations for Internal Work Motivation  
and Internal and External Locus of Control

	Internal Work Motivation			t	p
	n	m	sd		
Internal	83	5.79	.89	-1.05	.30
External	101	5.65	1.06		

Low and high importance of a work value was determined by dividing the two groups approximately at the mean. The point of division was 2 for all work values on a scale where 1 is very important. Those who rated a value at less than 2 were categorized into the High Importance group. Those who rated a value at 2 or above were categorized into Low Importance group. Internals (n =83) were classified as those who scored less than 3 on the I-E scale and externals (n =101) were those who scored 3 or above. This was the same method of classification as for the previous investigations in this study.

The hypothesis received minimal support. There was a significant difference between Low Importance of Work Value/External Locus (LE) of Control, and High Importance of Work Value/Internal Locus of Control (HI) for the following seven work values: use of abilities (t =-3.95, p =<.00), independence (t =-2.17, p <.04) , meaningfulness (t =-3.16, p <.02), interesting work (t =-2.04, p <.04), influence over work (t =-2.76, p <.01), achievement (t =-2.19, p <.03), and opportunity for promotion (t =-2.98, p <.00). That is, there was a significant difference in the extreme ends of the scale for one third of the work variables. Significant differences were also found between Low Importance of Work Value/External Locus of Control (LE) and High Importance of Work Value/External Locus of Control (HE) for use of abilities (t =-2.32, p <.02) , meaningfulness (t =-2.37, p <.02) and influence over work (t =-2.27, p <.03).



Significant differences were demonstrated between Low Importance of Work Value/Internal Locus of Control (LI) and High Importance of Work Value/Internal Locus of Control (HI) for use of abilities ( $t = -2.23, p < .03$ ), opportunities for promotion ( $t = -2.62, p < .01$ ) and meaningfulness ( $t = -2.33, p < .02$ ). Only recognition ( $t = -2.20, p < .03$ ) showed a significant difference for internal work motivation for Low Importance of Work Value/External Locus of Control (LE) and Low Importance of Work Value/Internal Locus of Control (LI). There was no significant difference in internal work motivation levels for High Importance of Work Value/External Locus of Control (HE) and High Importance of Work Value/Internal Locus of Control (HI). Use of abilities and meaningfulness were the only two variables that showed significant differences for three of the six possible comparisons (i.e., LE/HE, LE/HI, LI/HI).

A regression analysis on importance of work values and internal work motivation shows meaningfulness ( $t = -3.87, p < .00$ ) as the only statistically significant dependent variable (Table 9). At the same time, a regression analysis on importance of work values and locus of control shows significance for only recognition ( $t = -3.32, p < .00$ ) and interesting work ( $t = 2.81, p < .03$ ) (Table 10). In short, there was little significance found with either the T-tests or the regression analysis.

In summary, there was no real pattern in the data that supports the hypothesis.

Table 8

T-Tests for Importance of Work Values, Locus of Control and Internal Work Motivation

VARIABLE	LE/LI	t	LE/HE	t	LE/HI	t	LI/HE	t	LI/HE	t	HE/HI	t
Responsibility	5.5/5.2	-1.13	5.5/5.8	-1.22	5.5/5.9	-1.90	5.7/5.8	-.40	5.7/5.9	-.97	5.8/5.9	-.37
Benefits	5.7/5.7	-.37	5.7/5.8	.77	5.7/5.8	-.24	5.8/5.8	1.09	5.8/5.8	.06	5.8/5.8	-.88
Conv/Hrs/Work	5.6/5.7	-.98	5.6/5.7	.54	5.6/6.0	-1.57	5.7/5.7	.04	5.7/6.0	-.98	5.7/6.0	-.78
Achievement	5.4/5.6	-.74	5.5/5.8	1.33	5.5/5.9	-2.19*	5.6/5.8	-.60	5.6/5.9	-1.49	5.8/5.9	-.79
Esteem	5.5/5.7	-1.59	5.5/5.8	-1.59	5.5/5.9	-1.90	5.7/5.8	-.30	5.7/5.9	-.65	5.8/5.9	-.31
Influence	5.4/5.7	-1.25	5.4/5.9	-2.27*	5.4/6.0	-2.27**	5.7/5.9	-1.34	5.7/6.0	-1.75	5.9/6.0	.87
Meaningfulness	5.4/5.5	-.75	5.4/5.9	-2.37*	5.4/5.9	-3.16**	5.5/5.8	-1.60	5.5/6.0	-2.33*	5.9/6.0	-.60
Interesting Work	5.5/5.8	-.84	5.5/5.8	-1.52	5.5/5.9	-2.04	5.6/5.8	-.87	5.6/5.9	-1.42	5.6/5.9	.41
Job Status	5.7/5.8	-.69	5.7/5.8	.21	5.7/5.9	-.99	5.8/5.8	.50	5.8/5.9	-.62	5.8/5.9	-.82
Salary	5.5/5.7	-.89	5.5/5.7	-1.08	5.5/5.8	-1.90	5.7/5.7	-.14	5.7/5.8	-.83	5.7/5.8	-.72
Recognition	5.5/5.8*	-2.20	5.5/5.8	-1.88	5.5/5.8	-1.51	5.8/5.8	-.33	5.8/5.8	.17	5.8/5.8	.09
Job Security	5.5/5.8	-1.83	5.5/5.7	-1.10	5.5/5.8	-1.18	5.8/5.7	.53	5.8/5.8	.38	5.7/5.8	.11
Work Conditions	5.6/5.8	-1.25	5.6/5.7	-.62	5.6/5.8	-.98	5.8/5.7	.26	5.8/5.8	.07	5.7/5.8	-.18
Pride in Organ.	5.6/5.8	-.98	5.6/5.7	-.51	5.6/5.9	-1.22	5.8/5.7	.77	5.8/5.9	.05	5.7/5.9	-.44
Influence/Org	5.7/5.7	-.07	5.7/5.8	.50	5.7/6.1	-1.94	5.7/5.8	.53	5.7/6.1	-1.90	5.5/6.1	-1.60
Cont/to/Society	5.6/5.9	-1.05	5.6/5.7	-.11	5.6/5.8	-.68	5.8/5.7	.27	5.9/5.8	-.16	5.7/5.8	.33
Supervisor	5.6/5.8	-1.28	5.6/5.7	-.43	5.6/5.8	-.95	5.8/5.7	.25	5.8/5.7	.44	5.7/5.8	-.37
Use of Ability	5.5/5.5	-.18	5.4/6.0	-2.32*	5.5/6.1	-3.85**	5.5/6.0	-2.23*	5.5/6.1	-3.38**	6.0/6.1	-.81
Independence	5.6/5.7	-.81	5.6/5.8	-.68	5.6/6.1	-2.17*	5.7/5.8	-.20	5.7/6.1	-1.71	5.8/6.1	-1.12
Co-workers	5.5/5.8	-1.34	5.6/5.8	-.87	5.6/5.8	-1.12	5.8/5.8	.00	5.8/5.8	-.28	5.8/5.8	-.22
Promotion	5.8/5.8	-.43	5.8/5.7	-.74	5.8/6.1	-2.98**	5.6/5.7	-.43	5.6/6.1	-2.62**	5.7/6.1	-1.53

Notes \* =  $p < .05$ , \*\* =  $p < .01$ 

LE = LOW IMPORTANCE, EXTERNAL LOCUS OF CONTROL

LI = LOW IMPORTANCE, INTERNAL LOCUS OF CONTROL

HE = HIGH IMPORTANCE, EXTERNAL LOCUS OF CONTROL

HI = HIGH IMPORTANCE, INTERNAL LOCUS OF CONTROL

Table 9

## Stepwise Regression on Internal Work Motivation

Dependent Variable	B	t	p	R2
Importance of:				
Meaningfulness	-.40	-3.87	.000	.08

Table 10

## Stepwise Regression on Locus of Control

Dependent Variables	B	t	p	R2
Importance of:				
Recognition	-.25	-3.32	.00	.04
Interesting Work	.16	2.81	.03	.07

Associated Question: Developing a Needs Assessment Tool

Can a needs assessment instrument be developed to collect data which when analysed will test the four hypotheses and also yield a hierarchy of needs that will indicate the human resource needs in the organization?

A hierarchy of needs was developed by rank ordering the congruence of values scores from those with the most discrepancy or least congruence to those with the least discrepancy or most congruence. The congruence of each work value was determined by first reversing the direction of the scoring for importance of work values to match the scoring for achievement of these values. Secondly, both importance and achievement of work values were calculated into percentiles so that all scales were equated. Using these converted data the importance of a work value was subtracted from the achievement of the value to determine the congruence of the work value ( $NWV = IWV - AWV$ ). Means and standard deviations were determined and the means were used to rank order the values from least congruence to most congruence. The values with the least congruence are considered to indicate the needs the organization could address.

Table 11 presents the descriptive data. Salary (mean 68.8), interesting work (mean 65.7), considerate supervisor (mean 59.8), promotion (mean 54.8), pleasant co-workers (mean 49.8) were the five values that showed the least congruence or most discrepancy between perceived importance and achievement.

The congruence of work values is perhaps not a complete picture of the real needs of the organization. Congruence has been measured by the importance of a work value subtracted from the perceived achievement of that work value. If a value is not important and not achieved it can have roughly the same congruence score as a value that has high importance and high achievement. To give a more complete picture of the XYZ organization, the importance of each work value for the entire group (n = 184) was rank-ordered using the means in Table 1. This was compared with the data in Table 11. Table 12 presents the relationship between the importance of work values and the perceived congruence of those values.

The five most importantly ranked work values were achievement, salary, meaningfulness, interesting work, and benefits. The only values that were in the top five for both importance and lack of congruence are salary and interesting work.

Table 11

Congruence of Work Values Ranking from  
Least Congruent to Most Congruent

Value	Rank	Mean	sd
Salary	1	68.4	32.7
Interesting Work	2	65.7	31.7
Considerate Supervisor	3	59.8	34.9
Promotion	4	54.8	33.7
Pleasant Co-workers	5	49.8	36.7
Influence in organization	6	39.2	28.4
Recognition	7	33.4	28.6
Achievement	8	32.0	23.7
Esteem	9	28.7	25.2
Contribution to Society	10	28.4	26.1
Benefits	11	27.7	22.2
Better Work Conditions	12	24.8	29.6
Meaningful Work	13	23.0	25.5
Influence over work	14	22.8	23.9
Use of Abilities	15	22.1	27.1
Job Security	16	22.1	30.7
Pride in Organization	17	19.4	25.1
Responsibility	18	18.4	23.9
Convenient Hours of Work	19	18.4	28.5
Job Status	20	15.4	28.5
Independence	21	15.2	25.4

Note: 10 - low need  
 30 - marginal need  
 40 - fair need  
 50 - fairly high need  
 60 - quite high need  
 70 - high need

Table 12

Comparison of Importance of Work Values and  
Congruence of Work Values

Value	Rank-Order		Need Level
	Importance	Congruence	
Achievement	1	8	Marginal
Salary	2	1	Fairly high
Meaningfulness	3	13	Marginal
Interesting Work	4	2	Marginal
Benefits	5	11	Marginal
Esteem	6	9	Marginal
Use of Abilities	7	15	Very marginal
Job Security	8	16	Very marginal
Responsibility	9	18	Very marginal
Influence/work	10	14	Very marginal
Consider/supervisor	11	3	Quite high
Recognition	12	7	Marginal
Work Conditions	13	12	Marginal
Pride in Organization	14	17	Very marginal
Independence	15	21	Low
Pleasant co-workers	16	5	Fairly high
Promotion	17	4	Very marginal
Influence/org	18	6	Fair
Conven/hrs/work	19	19	Very marginal
Job Status	20	20	Low
Contrib/society	21	10	Low

## CHAPTER V

### DISCUSSION OF THE RESULTS

#### Locus of Control and Congruence of Work Values

The results of this investigation indicate that the locus of control is not a particularly significant factor in the perception of congruence of work values. Congruence is considered to be the difference between importance and achievement of work values. Internals perceived more congruence than externals for only 6 of 21 work values. Internals perceived more congruence for 4 intrinsic values: achievement, recognition, influence over work, contribution to society. They also perceived more congruence for 2 extrinsic values: job security, considerate supervisor.

The multiple regression analysis showed only congruence of achievement, interesting work and job status as having a significant relationship with locus of control. The congruence of achievement is correlated with both congruence of job status (.40) and congruence of interesting work (.21). Based on the results of both statistical analysis it appears that the congruence of achievement has the most significant relationship with locus of control.

At the same time the congruence of achievement is closely related to other congruence of work values such as congruence of esteem (.61), influence over work (.57), use



of abilities (.55), influence in organization (.53), pride in organization (.45), contribution to society (.48), and recognition (.42). The congruence of achievement is correlated to all work variables (except Promotion) at the .05 probability level or less. On reviewing these findings it becomes evident that the congruence of achievement is correlated with all the congruence of work variables and should be considered a very significant variable in this study.

Although the hypothesis itself received minimal support, the results showed some support for basic expectancy theory. Expectancy theory suggests that the greater a connection a person makes between performance and rewards, the greater an effort he will make to achieve those rewards through performance. These rewards may be either intrinsic or extrinsic as shown in the results of this study. The importance of a sense of achievement was valued as the highest priority and ranked number 1 by the subjects in this study with a mean of 1.4 (standard deviation of .60). According to the expectancy theory, employees will give a high effort to achieve if they believe that their performance is connected to this sense of achievement. By definition, the internals should and did perceive more congruence between importance and actual achievement because they have linked the effort, performance and achievement together.

The individual who holds an external locus of control does not make connections between his actions and

consequences. One would expect he would be less motivated and perceive less congruence of work values than the internal individual. However, in this study there was no significant difference for externals and internals for the congruence of the majority (15 of 21) of work values.

These results suggest that locus of control is not really an important factor in work motivation. However, there are some possible explanations for the findings of this study. These explanations revolve around the methodology and the actual composition of the sample of this study.

One possible explanation is that one cannot statistically differentiate between low congruence, low achievement (1-1), and high congruence, high achievement (6-6) of a work value. For example, 1-1 would appear as equally congruent as 6-6. One assumption of the expectancy theory is that an individual will engage in behaviour that will produce a desired outcome (Hackman & Lawler, 1971). This assumption should mean there would be congruence for a work value since it is measured by the value (importance) subtracted from the perceived achievement. However, if an external did not perceive either importance or achievement for a value it would appear statistically congruent. In this situation, the external could appear to be as congruent as the internal who presumably worked to achieve each value to the extent that it was important to him.

In the light of the high value placed on all work

values this explanation does not stand up. The least important work value of the 15 non-significant ones being reviewed was job status. Job status has a mean of 2.36 (standard deviation of 1.09) on a scale of 6 where 1 is very important. Even the least important variable was seen as relatively important and there was a lack of differentiation for all values on the part of the subjects of this study.

Another serious consideration concerns the methodology for determining locus of control. Most of the original studies done on Rotter's (1966) locus of control scale divided internal/external groups at the median. Yet distribution of scores tends to be normal. Rotter (1975) states "there is no justification for thinking in a typology" (p.62) and determined internality/externality by an arbitrary division point at approximately mid-point of the original scale. Other studies have classified externals as those with scores on the I-E scale falling in the top one-third of the distribution and internals with scores falling in the bottom one-third of the distribution (Kimmons & Greenhaus; 1976, Knoop, 1981).

For the purposes of this study internals were classified as those with scores below the median of 2.9 and externals as those with a score above the median. This was considered to be more conservative than the traditional method. Using this dividing point there were 83 internals and 101 externals. The actual breakdown in scores was as follows: 0 (n = 21), 1 (n = 29), 2 (n =

33), 3 (n = 22), 4 (n = 22), 5 (n = 16), 6 (n = 23), 7 (n = 8), 8 (n = 5), 9 (n = 5), 10 (n = 0), 11 (n=0), n (n = 0). However if the dividing point had been at mid-point in the modified I-E scale internals would have been classified as those with scores 6 and under on an 12 point scale. Internals would then have numbered 166 and externals would have numbered 18. Had groups been divided into one-third of bottom and top distribution (n = 60) internals would have still been those with scores 2 and under but externals would have been those with scores of 5 and over.

It seems highly probable that most of the individuals in this study really hold an internal locus of control if Rotter's (1975) suggestion that distribution tends to be normal is accepted. In this study many of the individuals who are relatively internal have been categorized as externals because of the arbitrary division at the median. This fact may have implications for the results of all the analyses involving the locus of control in this study. The regression analysis would also be affected by the lack of variance in locus of control for the group.

In the case of the six work values that did support the hypothesis there is a significant relationship between extreme internality and the congruence of that value. It is possible that in these cases that the more internal, the more congruence of the work value. For all values (except use of abilities) the relationships between

congruence and internality and externality were in the predicted direction but were not statistically significant. There is the possibility then that the more internal a locus of control a person holds, the more congruence will be perceived between work values. Further research is suggested in this area.

For this part of the study, the results of this investigation gave only very moderate support to the proposal that internals would experience more congruence in work values than externals. A possible explanation for this result could be an inaccuracy in methodology and/or a lack of variance in the subjects of the group. However, based on the results, it appears only the congruence between the importance and achievement of a sense of achievement has a significant relationship with locus of control. Finally, locus of control is not an important variable for determining who will experience more congruence of work values.

#### Congruence and Internal Work Motivation

It was predicted that those who perceived a high congruence of work values would be more internally motivated than those who perceived a low congruence of work values. This was supported for 14 of 21 variables. Although the hypothesis received only partial support a closer examination leads to some interesting observations. The T-tests showed significant relationships between high congruence and internal work motivation and the important intrinsic work values of responsibility, esteem,

achievement, influence over work, meaningful work, use of abilities, interesting work, recognition and independence. The regression analysis showed responsibility and interesting work as having a significant relationship with internal work motivation. Other significant relationships determined by T-tests were job status, salary, considerate supervisor, promotion and convenient hours of work. An assumption behind internal work motivation is that the individual places a high value on intrinsic values and perceives that he is achieving these values on the job. This assumption is clearly supported by the results.

Internal work motivation is a personal outcome of performing in a job that is structured, with certain job characteristics that create conditions for three critical psychological states (Hackman & Oldham, 1980). The three psychological states crucial in determining a person's motivation are experienced meaningfulness, experienced responsibility, and feedback or knowledge of results. In this study the three critical states correspond to the work values of meaningfulness, responsibility, and use of abilities (by definition a person must be receiving feedback of success in order to perceive achievement of use of abilities). A highly significant relationship was shown between the congruence of the following work values and internal work motivation: responsibility, meaningfulness, use of abilities. This significance supports the Hackman-Oldham model (1980) showing that all

three states must be present for internal work motivation to exist. It also suggests that the job structure at the managerial level of the XYZ company provides the potential for work motivation at the time of this study. One further consideration when discussing the results of this investigation is the fact that the internal work motivation level was relatively high for all subjects with a mean of 5.7 (standard deviation .96) on a scale with a maximum of 7 (high). Since there was not a lot of variance in internal work motivation it should be particularly significant that high congruence did establish a significant relationship with 14 of 21 work values.

In short, the hypothesis received partial support because there was only a significant difference between two thirds of the variables and high congruence and internal work motivation. However, the results strongly support the Hackman and Oldham model (1980) of work motivation. This leads to the conclusion that the structure of the jobs at the managerial level of XYZ provides the potential for internal work motivation.

#### Internal Work Motivation and Locus of Control

It was predicted that those with an internal locus of control would be more internally motivated than those with an external locus of control. There was no support for this hypothesis. There was almost an identical mean for both groups with internals at 5.8 and externals at 5.7 of a maximum 7 point high. According to Hackman-Oldham

(1980) the average mean of jobs at the managerial level is 5.8 (standard deviation = .64). Any scores that were one standard deviation below this mean are suggested to be cause for concern. Using this comparison it is clear that the structure of the job at the managerial level of XYZ is adequately providing the conditions necessary for internal motivation.

Hackman and Oldham (1980) suggest that not everyone will be motivated by a job that is high in motivating potential. They examined factors that could act as moderators between the characteristics of the job and internal work motivation. Growth need strength, job-relevant knowledge and skill, and the levels of satisfaction with the work context (security, pay, co-workers, supervision) did act as moderators. They did not investigate the locus of control. The results of this study show that locus of control does not influence the response to a motivating job.

The lack of significant difference in internal work motivation may be in part explained by the same methodological inaccuracy already outlined. A curious inconsistency surfaces when examining the data. There was no difference in the internal work motivation of internals and externals. As shown in Table 2 there was no significant difference for internals or externals in the perception of congruence of responsibility. Yet the group with a high congruence for responsibility had significantly higher internal work motivation than the group with low



congruence of responsibility. This suggests that both internal and externals perceived high congruence in responsibility.

Why is this important? Experienced responsibility is one of the three critical psychological states necessary for internal work motivation to occur. Responsibility is the feeling of personal accountability for the outcomes of a job. Yet, by definition, an external person does not perceive a contingency between his actions and the outcomes. The external should therefore not perceive a congruence of responsibility which is a condition for internal work motivation.

This paradox adds further strength to the proposition that the majority of the employees do hold an internal locus of control. It is then possible that inaccurate categorization could explain why there was no significant difference in congruence of responsibility for externals and internals in this study.

It seems likely that most managers are relatively internal at the XYZ company. Internals are more likely to be high-level performers and to be promoted than externals (Valecha, 1972). The vast majority of managers in this study have been promoted up through the ranks of this particular organization. To achieve this promotion they have presumably already proven to be high-level performers on the job.

Clearly more research would have to be done to establish if the locus of control really influences the

internal work motivation levels of employees. An interesting comparison might be the locus of control and growth need strength as moderators of internal work motivation and job characteristics.

In summary, locus of control is not a factor influencing internal work motivation for this sample. The structure of the job at the managerial level of XYZ provides the conditions for high work motivation. This structure can be influenced by environmental factors such as unions, quality of raw materials and climate.

Importance of Work Values, Internal Work Motivation  
and Locus of Control

It was proposed that if work values are perceived as important, individuals with an internal locus of control will have higher internal work motivation than individuals with an external locus of control. The analysis of the data will be examined in two parts. This examination will include first the importance of work values and their relationship with internal work motivation and second locus of control as a moderator of internal work motivation and the importance of work values.

In the review of the literature it was suggested that unless work values were considered to be important they would not trigger the basic motivational framework being used in this study. This cycle was extended to include internal work motivation (Figure 4). Adopting this framework one would predict that the Low Importance/

Externals should have the lowest internal work motivation because not only is the goal unimportant but they see no connection between their goals and their behaviour. Either the Low Importance/ Internals or High Importance/ Externals should have slightly more internal work motivation. The former would perform in ways that would allow him to achieve his goal to the degree it is important to him while the latter would be motivated because the goal is important but would not see any connection between his actions and his goals. Finally the High Importance/ Internals should be significantly higher in internal work motivation than all other groups since only they perceive importance and that they can achieve their goals through their actions.

The results were all in the predicted direction but there were few statistically significant relationships. This lack of statistical significance leads to the apparent conclusion that a work value does not have to be important and there can still be internal work motivation. In reviewing theories of motivation the finding makes little sense. All work motivation theories begin with the assumption that it is the perception of a need (importance of a value) that triggers the motivational cycle and a person will not act towards achieving an unimportant goal (McAfee & Champagne, 1987).

A closer look at the results reveals the same problems that have been present in the rest of this study. There is very little variance for all the variables. In

reality all 21 work values were perceived to be important by the employees of the XYZ company. Thirteen variables had a mean of under "2" on a scale of "6" where "1" was 'very important'. The remaining eight values had means ranging from 2.0 to 2.5. It appears safe to say that given the high importance ratings given for all work values, there should be little difference in the internal work motivation between the high importance group and the low importance group. At the same time there is little variance in the internal work motivation of all the subjects. That there were significant differences between the high and low importance groups for meaningfulness and use of abilities suggests that the perceived importance of these two values is particularly important in triggering the motivational cycle. At the same time meaningfulness and use of abilities are two of the psychological states necessary for internal work motivation.

The locus of control as a moderator between internal work motivation and importance of work values will now be examined. The High Importance/ Internal group did not have significantly higher internal work motivation than all the other groups as predicted. Significance was not established for any of the 21 work variables. The only semblance of a pattern that emerged was that there was significantly higher internal work motivation for High Importance/Internals than for Low Importance/Externals for seven of the work values. Again, there was little variance in the either locus of control

or importance of work values. That the extreme ends of the scale showed significant differences indicates that there is a possibility that had there been greater variance in the four groups there might have been more significant differences.

In summary, the hypothesis that if work values were perceived as important internals would be more internally motivated than externals was not supported. The analysis was weakened by the lack of variance for all variables being tested. A duplication of the study with a less homogeneous group may yield different results. At this time, neither the importance of work values nor the locus of control seems to affect the level of internal work motivation.

#### Developing a Needs Assessment Tool

A secondary objective of this investigation was to collect data to obtain an assessment of the needs or needs gap analysis of the XYZ organization. This needs assessment would establish a hierarchy of needs for the organization that would give some indication of possible areas for human resource training or organizational development. An understanding of the effects of the locus of control and the internal work motivation levels of the employees would allow a more profound understanding of motivation levels in the organization. This assessment is the first step in developing an effective training program designed to motivate employees to increase productivity.

The hierarchy of needs can be established by rank-ordering the work values from least congruent to most congruent. Presumably, the most congruent needs should become the top priorities to address either through training or organizational development.

Examination of the least congruent needs of the XYZ company shows that the top six needs are salary, interesting work, considerate supervisor, opportunities for promotion, pleasant co-workers, and influence in the organization. All other needs indicated some but minimal discrepancy between importance and perception of achievement and would not represent pressing concerns for the organization to address at this time.

A closer examination of the top five needs shows that they are needs that the organization itself must address. According to Smith, Kendall and Hulin (1969) these are the five factors that emerge most consistently when analysing job satisfaction. "Job satisfactions are feelings or affective responses to facets of the situation....these feelings are associated with a perceived difference between what is expected as fair and reasonable return...and what is experienced" (p. 6). The data clearly support this view that the most important factors determining satisfaction are salary, interesting work, considerate supervisor, promotion and pleasant co-workers. One implication of this definition is that the employees of XYZ not only perceive a difference between what is important and what is achieved as measured

by this study, but also what is important is synonymous with what is expected. That is, when an important work value is not being achieved as expected, there is the possibility of dissatisfaction with the job.

A comparison of the importance of work values and the congruence of work values presents a slightly different picture. The top five needs determined by rank-ordering the congruence of needs do not fall into the most important category while the intrinsic needs of achievement, meaningfulness and interesting work rank in the top five in importance. Salary is the only need that stands out as an immediate concern, being ranked first as least congruent and second as most important. Interesting work is also ranked near the top of both lists but is perceived as much more congruous than salary and therefore not as pressing a need.

The results of this analysis point to the conclusion that the most serious need that the XYZ company should address is salary. The employees at XYZ have a relatively high salary level in relation to other organizations in their community. Nevertheless, they are not satisfied with their level of salary. The obvious question is "why?".

The Porter-Lawler (1968) motivational model suggests that perceived equitable rewards affects the relationship between rewards and satisfaction (Appendix 1). In other words a person will feel happy with his salary to the extent that he feels it is fair pay for the

performance he is giving or to the degree that he believes implicitly that the salary matches the job itself. This would be congruent with the definition offered by Smith, Kendall and Hulin (1969) for job satisfaction. The current situation at the XYZ company points to the interpretation that the dissatisfaction with the salary is certainly the result of the perception of unfair compensation for the status of the job involved. This perception is the result of comparisons with other groups in the organization.

The XYZ company must consider the possible results of employee dissatisfaction with salary. The motivational cycle is always in operation. People continually act in ways to fulfill their perceived needs. In this case people will act in ways to reduce the perceived inequity in pay. Two consequences of perceived inequity are that people may alter their inputs or their outcomes to a level they perceive to be equitable (Adams, 1965). In other words, they will give less effort or decrease actual outcomes on the job. The motivational cycle suggested by Porter and Lawler (1968) then breaks down. However, people are still being motivated but they are motivated not to perform at a high level.

Another question is what will be the effect of perceived inequitable rewards on current internal motivation levels? Hackman and Oldham (1980) consider satisfaction with pay to be a moderator of the level of internal work motivation. They argue that people doing



work that is designed to be internally motivating expect greater compensation and if their energy is directed toward reducing perceived inequities their motivational levels will go down.

Clearly, the XYZ company must carefully consider the perception of the managerial level of inequitable compensation. To fail to address this concern is to risk jeopardizing the high level of internal work motivation that is being experienced at the time of this study.

Another important aspect is to insure that the current levels of motivation persist. According to Herzberg (1966) not to address the dissatisfaction with salary will have negative effects on employee attitudes for a long time. At the same time, not to insure feelings of achievement, recognition, responsibility, and satisfaction with work itself is to risk the elimination of job satisfaction. The absence of responsibility, meaningfulness or use of abilities insures the absence of internal work motivation. Clearly the intrinsic values are most important in terms of motivation. Currently, XYZ has a good record for the perception of the achievement of the intrinsic values.

One particular area for improvement suggested by the results of the hierarchy of needs is interesting work. The XYZ company could begin to address this need through participatory decision-making. This tactic would also address the perceived lack of influence in the organization which was ranked as the sixth need on the

congruence scale. This suggests that a profitable area for a training program to focus on is team building through participatory decision-making. This approach would help insure that the intrinsic needs would continue to be met in the workplace. Employees would have some influence over the design of their jobs.

In summary, the analysis of data into a hierarchy of needs indicated that salary, co-workers, supervisors, promotion and interesting work were the greatest needs in the organization being studied. Closer examination indicated that salary is the greatest problem. It appears that the organization would be wise to address this concern because if the reward system continues to be seen as inequitable the motivational level of employees will likely be reduced.

In conclusion, an organization may be able to use the design of this study to obtain an initial assessment or needs gap analysis of their own unique organization. This assessment can point to possible organizational or human resource development needs. The results of this study suggest that locus of control is not an important factor to be considered in the overview. Further research on other organizational groups is needed to verify that conclusion.

#### Limitations of the Study

This study involved all employees at the 6th and 7th managerial level in an organization. The results are only applicable to this group at the time when data were

collected. Since any organization is always in flux the results may even be different for the same group at a different time. After this study there was an extensive organizational change at XYZ. This suggests that the results of this study would probably be different at this time.

Although caution should be advised in generalizing the results of this study, the design could be used with any organization provided there was a large enough sample to establish correlational relationships. All the instruments had previously established reliability and validity. Each organization would have to use the same design to arrive at conclusions valid for the sample to whom it was administered at the time it was administered.

## CHAPTER VI

### SUMMARY AND CONCLUSIONS

The purpose of the present study was to increase understanding of work motivation by examining the importance and achievement of work values, locus of control and internal work motivation. This examination utilized the generalized model of the cycle of internal work motivation as a conceptual framework (Figure 4). The findings of the study of XYZ organization will be summarized in the light of this framework.

The findings indicated that all work values were perceived as important. These values act then as incentives or goals which create the conditions for internal work motivation. Internal work motivation levels were high at the time of the study. Thus, there was only marginal discrepancy between the importance and achievement of values (for most of the 21 work values). This marginal discrepancy was found for the intrinsic values. According to Maslow (1970) these intrinsic values will increase in value the more that they are perceived as being achieved and they will act as feedback to continue the self-perpetuating cycle of motivation. A larger discrepancy was found for salary, interesting work, considerate supervisor, promotion, and pleasant co-workers but only salary indicated a large enough gap between importance and achievement to warrant concern. The

perceived inequity in salary may cause the employee to turn his energy toward this lower level need and the self-perpetuating cycle of internal work motivation would cease.

The findings did not show the personality characteristic locus of control as a factor in determining internal work motivation. There was partial support for the internal individual perceiving greater congruence between the importance and achievement of work values, particularly for the sense of achievement itself. Locus of control did not moderate the importance of work values and internal work motivation. A problem particular to the study was the little variance in all variables.

The findings did show that all subjects were experiencing internal work motivation. This supports the Job Characteristics Theory (Hackman & Oldham, 1980) which proposes that it is the structure of the job itself that sets up the motivational cycle.

The findings also showed that there was some relationship between high congruence of work values and internal work motivation levels. This was true for the intrinsic values particularly. Subjects perceiving high congruence between the importance and achievement of meaningfulness, responsibility and use of abilities had statistically higher internal work motivation. These are the three critical psychological states necessary for internal work motivation.

In conclusion, the difference between the perception and achievement of work values is a key to understanding work motivation. People will behave in ways they believe will allow them to achieve what they value as important. The organization must consider how best to allow employees to fulfill their specific needs in order to insure maximum performance and optimum productivity in the workplace.

The structure of the job itself is important in creating the conditions for motivating potential. If an employee values responsibility, meaningfulness and feedback of results or use of his abilities and the job is designed so that these values can be experienced, the conditions have been created for internal work motivation. These conditions are subject to the influence of environmental factors such as unions or the quality of raw materials.

The personality characteristic locus of control was not shown to be a significant factor in the motivational cycle. This finding may be peculiar to the subjects involved in this study who were a relatively internal group.

The findings of this study indicate that it is the structure of the job itself rather than a personality characteristic such as locus of control that insures high levels of work motivation.

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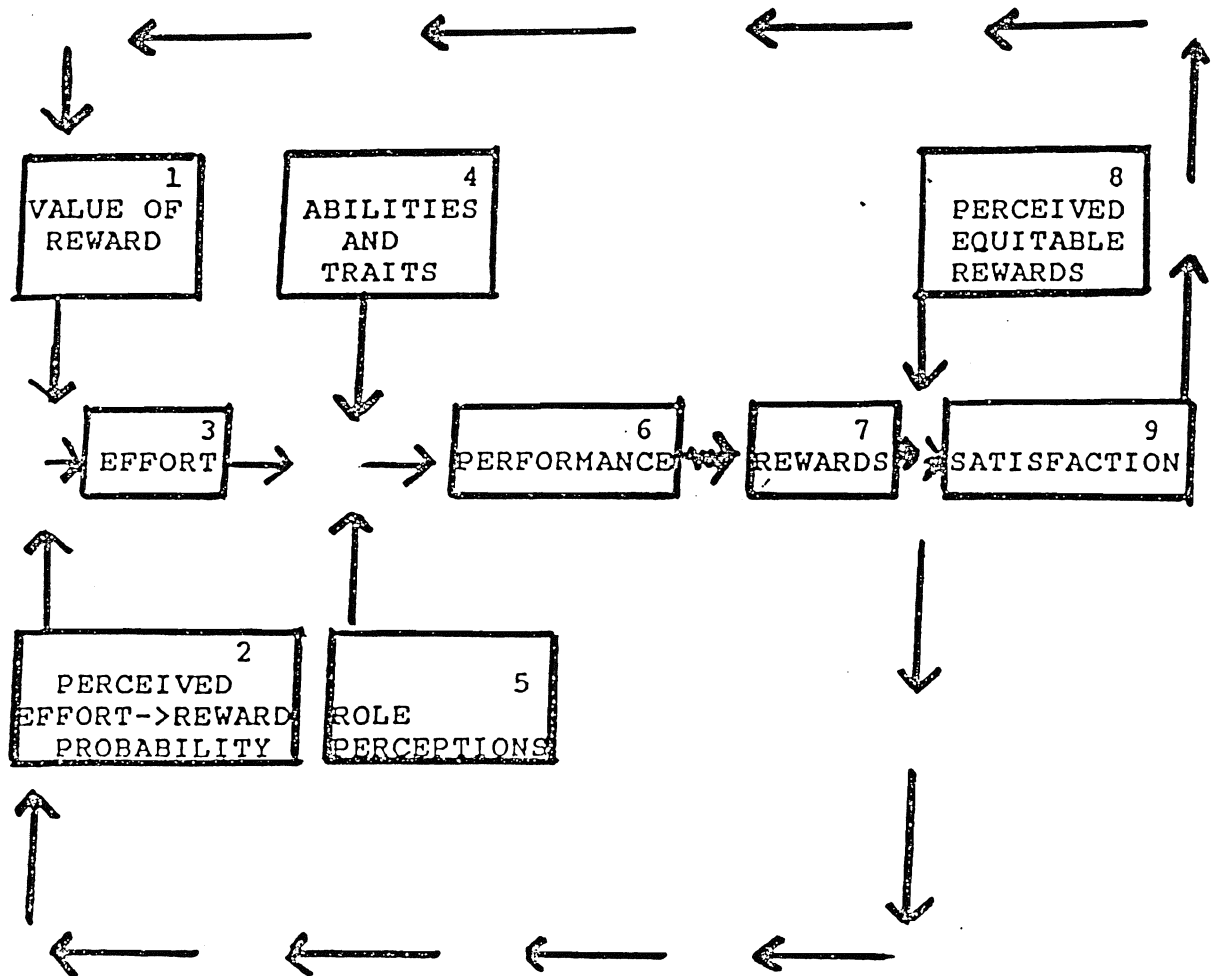
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Appendix 1  
The Theoretical Model



Porter and Lawler, 1968

## Appendix 2

## IMPORTANCE OF WORK VALUES

Below are listed 21 work values. How important are they to you?

Very Important	Important	Somewhat Important	Somewhat Unimportant	Unimportant	Very Unimportant
-------------------	-----------	-----------------------	-------------------------	-------------	---------------------

1	2	3	4	5	6
---	---	---	---	---	---

\_Having responsibility

\_Having job security

\_Benefits (vacation, pension..)

\_Recognition for work well done

\_Esteem (you are valued as a person)

\_Influence in the organization

\_A sense of achievement in your work

\_Opportunities for promotion

\_Influence over your work

\_Pleasant co-workers

\_To do meaningful work

\_A fair and considerate  
supervisor

\_Job status

\_The organization (you are  
proud to work here)

\_Use of your ability & knowledge

\_Interesting work (that you enjoy)

\_Independence in work

\_Good salary

\_Convenient hours of work

\_Working conditions

\_Contribution to society

## Appendix 3

## ACHIEVEMENT OF WORK VALUES

Below are listed 16 job factors. How much of each do you CURRENTLY EXPERIENCE in your job?

Very Much	Much	Some	Little	Very Little
5	4	3	2	1
<input type="checkbox"/> Exercising responsibility				<input type="checkbox"/> Job security
<input type="checkbox"/> Benefits (vacation, pension..)				<input type="checkbox"/> Recognition for work well done
<input type="checkbox"/> Esteem (being valued as a person)				<input type="checkbox"/> Influence in the organization
<input type="checkbox"/> Achievement through work				<input type="checkbox"/> Pride in working for this organization
<input type="checkbox"/> Influence over your work				<input type="checkbox"/> Independence in work
<input type="checkbox"/> Doing meaningful work				<input type="checkbox"/> Convenient hours of work
<input type="checkbox"/> Job status				<input type="checkbox"/> Contribution to society
<input type="checkbox"/> Use of your abilities and knowledge				<input type="checkbox"/> Working conditions

## Appendix 4

## JOB SATISFACTION

This measure differentiates between various types of satisfaction: with the work itself, with pay, with promotions, with the supervisor, and with co-workers.

	7	6	5	4	3	2	1		
WORK:	Exciting	/	-	/	-	/	-	/	Dull
	Unpleasant	/	-	/	-	/	-	/	Pleasant
	Challenging	/	-	/	-	/	-	/	Unchallenging
	Satisfying	/	-	/	-	/	-	/	Unsatisfying
PAY:	Rewarding	/	-	/	-	/	-	/	Unrewarding
	Large	/	-	/	-	/	-	/	Small
	Wrong	/	-	/	-	/	-	/	Right
	Positive	/	-	/	-	/	-	/	Negative
PROMOTIONS:	Unjust	/	-	/	-	/	-	/	Just
	Reliable	/	-	/	-	/	-	/	Unreliable
	Positive	/	-	/	-	/	-	/	Negative
	Reasonable	/	-	/	-	/	-	/	Unreasonable
SUPERVISOR:	Near	/	-	/	-	/	-	/	Distant
	Sincere	/	-	/	-	/	-	/	Insincere
	Unfriendly	/	-	/	-	/	-	/	Friendly
	Qualified	/	-	/	-	/	-	/	Unqualified
CO-WORKERS:	Careful	/	-	/	-	/	-	/	Careless
	Loyal	/	-	/	-	/	-	/	Disloyal
	Pleasant	/	-	/	-	/	-	/	Unpleasant
	Boring	/	-	/	-	/	-	/	Interesting

## Appendix 5

## LOCUS OF CONTROL

Of given pairs of statements, please check off the one that comes closer to your opinion.

- (a) Without the right breaks one cannot be an effective leader.
- (b) Capable people who fail to become leaders have not taken advantage of their opportunities.
- (a) No matter how hard you try some people just don't like you.
- (b) People who can't get others to like them don't understand how to get along with others.
- (a) I have often found that what is going to happen will happen.
- (b) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
- (a) In the case of a well-prepared student there is rarely if ever such a thing as an unfair test.
- (b) Many times examination questions tend to be so unrelated to course work that studying is really useless.
- (a) Becoming a success is a matter of hard work, luck has little or nothing to do with it.
- (b) Getting a good job depends mainly on being in the right place at the right time.
- (a) When I make plans, I am almost certain that I can make them work.
- (b) It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
- (a) In my case getting what I want has little or nothing to do with it.
- (b) Many times we might just as well decide what to do by flipping a coin.
- (a) Who gets to be the boss often depends on who is lucky enough to be in the right place first.
- (b) Getting people to do the right thing depends upon ability, luck has nothing to do with it.
- (a) Most people don't realize the extent to which their lives are controlled by accidental happenings.
- (b) There really is no such thing as "luck".
- (a) It is hard to know whether or not a person really likes you.
- (b) How many friends you have depends on how nice a person

you are.

- \_(a) Many times I feel that I have little influence over the things that happen to me.
- \_(b) It is impossible for me to believe that chance or luck plays an important role in my life.
  
- \_(a) What happens to me is my own doing.
- \_(b) Sometimes I feel that I don't have enough control over the direction my life is taking.



## Appendix 6

## FEELINGS ABOUT THE JOB

Now please indicate how YOU PERSONALLY FEEL about your job. Use the scale below to show how much you agree with each statement.

1	2	3	4	5	6	7
/_____	/_____	/_____	/_____	/_____	/_____	/_____
Strongly Disagree	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

\_\_\_It's hard for me to care very much about whether or not the work gets done right.

\_\_\_My opinion of myself goes up when I do this job well.

\_\_\_Most of the things I have to do on this job seem useless or trivial.

\_\_\_I usually know whether or not my work is satisfactory on this job.

\_\_\_I feel a great sense of personal satisfaction when I do this job well.

\_\_\_The work I do on this job is very meaningful to me.

\_\_\_I feel a very high degree of personal responsibility for the work I do.

\_\_\_I feel bad and unhappy when I discover that I performed poorly.

\_\_\_I often have trouble figuring out whether I am doing well or poorly.

\_\_\_I feel I should personally take the credit or blame for the results of my work.

\_\_\_My own feelings are generally not affected much one way or the other by how well I do on this job.

\_\_\_Whether or not this job gets done right is clearly my responsibility.

## Appendix 7

## Code for Variables

Variable	Importance	Achievement	Congruence
Having responsibility	IVR	AVR	NVR
Benefits (vacation etc.)	IVB	AVB	NVB
Esteem	IVE	AVE	NVE
Sense of achievement	IVA	AVA	NVA
Influence over work	IVI	AVI	NVI
To do meaningful work	IVM	AVM	NVM
Job status	IVJ	AVJ	NVJ
Use of abilities	IVK	AVK	NVK
Interesting work	IVW	JSW	NVW
Good salary	IVP	JSS	NVP
Working conditions	IVC	AVC	NVC
Job security	IVS	AVS	NVS
Recognition	IVN	AVN	NVN
Influence in organization	IVO	AVO	NVO
Opportunities for promotion	IVX	JSP	NVX
Pleasant co-workers	IVL	JSC	NVL
Considerate supervisor	IVF	JSS	NVF
Pride in organization	IVH	AVH	NVH
Independence in work	IVD	AVD	NVD
Convenient hours of work	IVU	AVU	NVU
Contribution to society	IVT	AVT	NVT

Appendix 8

INTERCORRELATIONS OF IMPORTANCE OF WORK VALUES

	IVR	IVB	IVE	IVA	IVI	IVM	IVJ	IVK	IVW	IVP	IVC	IVS	IVN	IVO	IVX*	IVL	IVF	IVH	IVD	IVU	IVT
IVR	*																				
IVB	+0.01	*																			
IVE	+0.33	.20	*																		
IVA	+0.47	.02	+0.39	*																	
IVI	+0.24	+0.09	+0.25	+0.38	*																
IVM	+0.50	+0.08	+0.39	+0.55	+0.48	*															
IVJ	+0.39	+0.13	+0.40	+0.24	+0.16	+0.37	*														
IVK	+0.40	+0.09	+0.26	+0.37	+0.32	+0.53	+0.34	*													
IVW	+0.22	+0.13	+0.19	+0.32	+0.31	+0.39	+0.18	+0.43	*												
IVP	+0.03	+0.58	+0.22	+0.04	+0.08	+0.08	+0.22	+0.11	+0.11	*											
IVC	+0.10	+0.46	+0.21	+0.12	+0.19	+0.28	+0.32	+0.26	+0.31	+0.45	*										
IVS	-0.05	+0.54	+0.05	+0.03	-0.05	+0.05	+0.13	+0.07	+0.01	+0.44	+0.47	*									
IVN	+0.18	+0.23	+0.35	+0.24	+0.11	+0.28	+0.34	+0.21	+0.27	+0.27	+0.43	+0.30	*								
IVO	+0.39	+0.04	+0.33	+0.40	+0.39	+0.51	+0.49	+0.38	+0.32	+0.18	+0.22	+0.04	+0.44	*							
IVX	+0.49	-0.05	+0.29	+0.37	+0.26	+0.38	+0.57	+0.35	+0.16	+0.18	+0.18	-0.04	+0.25	+0.59	*						
IVL	+0.12	+0.42	+0.30	+0.17	+0.23	+0.29	+0.23	+0.23	+0.27	+0.30	+0.52	+0.30	+0.34	+0.37	+0.13	*					
IVF	+0.20	+0.25	+0.29	+0.23	+0.33	+0.36	+0.21	+0.34	+0.29	+0.15	+0.27	+0.14	+0.29	+0.38	+0.19	+0.63	*				
IVH	+0.18	+0.16	+0.28	+0.29	+0.22	+0.29	+0.32	+0.23	+0.27	+0.07	+0.31	+0.22	+0.20	+0.20	+0.11	+0.28	+0.24	*			
IVD	+0.36	+0.26	+0.24	+0.31	+0.39	+0.40	+0.27	+0.34	+0.37	+0.22	+0.36	+0.08	+0.27	+0.41	+0.34	+0.42	+0.33	+0.30	*		
IVU	+0.00	+0.40	+0.14	+0.05	+0.20	+0.18	+0.15	+0.16	+0.23	+0.29	+0.33	+0.19	+0.19	+0.27	+0.11	+0.45	+0.34	+0.13	+0.39	*	
IVT	+0.26	+0.09	+0.36	+0.36	+0.41	+0.37	+0.31	+0.30	+0.33	+0.15	+0.27	+0.02	+0.27	+0.48	+0.32	+0.38	+0.34	+0.40	+0.40	.29	*
LOC	-0.05	-0.11	-0.12	-0.01	+0.12	-0.00	-0.14	-0.10	-0.02	-0.03	-0.09	-0.11	-0.20	-0.09	-0.15	-0.04	-0.08	-0.02	-0.00	-0.09	-0.05
IWM	-0.19	+0.02	-0.09	-0.20	-0.18	-0.28	-0.05	-0.25	-0.12	-0.09	-0.04	.00	-0.11	-0.11	-0.16	+0.01	-0.01	-0.05	-0.05	-0.05	-0.01

Note: n = 184; If r = .12, p = .05; If r = .22, p = .001

INTERCORRELATIONS OF ACHIEVEMENT OF WORK VALUES

	AVR	AVD	AVE	AVA	AVI	AVH	AVJ	AVK	AVS	AVN	AVO	AVH	AVD	AVU	AVT	AVC	J5W	J5\$	J5P	J5S	J5C
AVR	*																				
AVB	.06	*																			
AVE	.29	.47	*																		
AVA	.40	.29	.63	*																	
AVI	.48	.25	.48	.59	*																
AVH	.38	.32	.53	.60	.59	*															
AVJ	.37	.28	.52	.50	.45	.50	*														
AVK	.45	.18	.43	.57	.59	.66	.53	*													
AVS	.14	.48	.43	.29	.32	.36	.40	.29	*												
AVN	.30	.28	.53	.57	.34	.50	.40	.40	.44	*											
AVO	.29	.24	.37	.51	.38	.46	.45	.42	.40	.60	*										
AVH	.41	.27	.42	.50	.33	.42	.47	.39	.32	.43	.48	*									
AVD	.39	.28	.31	.44	.52	.37	.38	.49	.28	.37	.48	.39	*								
AVU	.07	.32	.26	.37	.32	.33	.28	.31	.23	.32	.42	.28	.52	*							
AVT	.19	.14	.43	.42	.22	.41	.33	.29	.30	.33	.43	.45	.23	.34	*						
AVC	.14	.35	.40	.39	.31	.40	.35	.34	.32	.41	.45	.48	.34	.44	.42	*					
J5W	.38	.27	.46	.65	.48	.58	.43	.58	.38	.39	.42	.44	.38	.35	.40	.41	*				
J5\$	.22	.38	.28	.24	.28	.14	.28	.20	.17	.20	.23	.27	.28	.28	.15	.29	.41	*			
J5P	.31	.13	.26	.34	.27	.22	.32	.28	.18	.25	.28	.41	.39	.25	.22	.27	.39	.54	*		
J5S	.32	.17	.31	.29	.28	.33	.32	.41	.11	.34	.25	.24	.27	.20	.21	.27	.39	.45	.37	*	
J5C	.24	.15	.35	.32	.32	.33	.38	.32	.22	.23	.23	.38	.28	.28	.48	.24	.37	.38	.37	.38	*
LOC	-.19	.01	-.13	-.27	-.19	-.19	-.05	-.17	-.10	-.15	-.22	-.19	-.19	-.15	-.19	-.19	-.29	-.14	-.32	-.18	-.24
IWM	.34	-.07	.13	.25	.18	.18	.22	.26	.11	.13	.10	.07	.24	.11	.02	.06	.24	.18	.06	.25	.09

Note: n = 104; If r = .12, p = .05; If r = .22, p = .001

INTERCORRELATIONS OF CONGRUENCE OF WORK VALUES

	NVR	NVB	NVE	NVA	NVI	NVX	NVM	NVJ	NVK	NVW	NVP	NVC	NVS	NVN	NVO	NVL	NVF	NVH	NVD	NVU	NVT
NVR	*																				
NVB	.08	*																			
NVE	.19	.44	*																		
NVA	.34	.28	.61	*																	
NVI	.35	.28	.48	.57	*																
NVX	.14	.08	.11	.19	.09	*															
NVM	.35	.28	.51	.57	.58	.17	*														
NVJ	.39	.32	.44	.40	.40	.24	.53	*													
NVK	.37	.18	.43	.55	.54	.15	.68	.52	*												
NVW	.18	.18	.16	.21	.10	.12	.17	.25	.18	*											
NVP	.00	.23	.07	.02	.02	.13	-.04	.06	.00	.12	*										
NVC	.11	.38	.36	.34	.31	.14	.34	.33	.44	.26	.10	*									
NVS	.07	.46	.23	.14	.16	.00	.18	.28	.14	.18	.08	.30	*								
NVN	.15	.24	.43	.41	.32	.15	.35	.39	.36	.17	.06	.40	.38	*							
NVO	.39	.24	.44	.53	.50	.36	.50	.47	.52	.24	.04	.39	.23	.57	*						
NVL	.09	.28	.21	.17	.12	.15	.12	.17	.14	.04	.06	.18	.16	.15	.22	*					
NVF	.00	.25	.17	.12	.13	.25	.16	.19	.09	.06	.11	.07	.19	.21	.26	.23	*				
NVH	.27	.26	.33	.45	.33	.08	.40	.38	.44	.23	-.09	.48	.17	.32	.45	.12	.08	*			
NVD	.33	.31	.31	.42	.43	.20	.40	.43	.51	.13	.10	.38	.21	.38	.55	.19	.10	.37	*		
NVU	.18	.34	.28	.32	.26	.18	.29	.29	.36	.18	.05	.44	.18	.33	.41	.17	.09	.29	.54	*	
NVT	.20	.22	.45	.48	.32	.22	.42	.27	.36	.16	.00	.39	.16	.33	.49	.20	.19	.46	.43	.40	*
IWM	-.17	.05	-.06	-.13	-.05	.15	-.01	-.15	-.12	.01	-.01	-.04	-.08	-.03	.00	.05	.05	-.04	-.18	-.08	-.01
LOC	.16	.05	.19	.24	.09	.18	.17	.15	.16	.00	.03	.12	.18	.27	.27	.03	.16	.17	.17	.18	.13

Note: n = 184; If r = .12; p = .05; If r = .24, p = .001

## Appendix 9

T-Tests for Importance of Work Values, Internal Work  
Motivation and Locus of Control

Responsibility					Convenient Hours of Work				
	m	sd	t	p		m	sd	t	p
LE	5.5	.92			LE	5.6	.93		
			-1.13	.26				-.96	.34
LI	5.7	.81			LI	5.7	.82		
LE	5.5	.92			LE	5.6	.93		
			-1.22	.25				.54	.59
HE	5.8	1.2			HE	5.7	1.3		
LE	5.5	.92			LE	5.6	.9		
			-1.90	.06				-1.57	.13
HI	5.9	.85			HI	6.0	.85		
LI	5.7	.81			LI	5.7	.82		
			-.40	.69				.04	.96
HE	5.8	1.2			HE	5.7	1.3		
LI	5.7	.81			LI	5.7	.82		
			-.97	.34				-.98	.34
HI	5.9	.85			HI	6.0	.85		
HE	5.8	1.2			HE	5.7	1.3		
			-.37	.71				-.78	.44
HI	5.9	.85			HI	6.0	.85		
Benefits					Achievement				
	m	sd	t	p		m	sd	t	p
LE	5.7	.61			LE	5.4	.96		
			-.37	.71				-.74	.46
LI	5.7	.67			LI	5.6	.80		
LE	5.7	.61			LE	5.5	.96		
			.77	.44				1.33	.19
HE	5.6	1.2			HE	5.8	1.1		
LE	5.7	.61			LE	5.5	.96		
			-.24	.81				-2.19	.03
HI	5.8	.97			HI	5.9	.83		
LI	5.8	.67			LI	5.6	.80		
			1.09	.28				-.63	.53
HE	5.6	1.2			HE	5.8	1.1		
LI	5.8	.67			LI	5.6	.80		
			.06	.95				-1.49	.14
HI	5.8	.97			HI	5.9	.83		
HE	5.6	1.2			HE	5.8	1.1		
			-.88	.38				-.79	.43
HI	5.8	.97			HI	5.9	.8		

Note: LE = Low Congruence, External  
 LI = Low Congruence, Internal  
 HE = High Congruence, External  
 HI = High Congruence, Internal

Esteem					Meaningfulness				
	m	sd	t	p		m	sd	t	p
LE	5.5	.91			LE	5.4	1.1		
			-1.59	.12				-.75	.45
LI	5.7	.73			LI	5.5	.89		
LE	5.5	.91			LE	5.4	1.05		
			-1.59	.11				-2.37	.02
HE	5.8	1.2			HE	5.9	1.03		
LE	5.5	.91			LE	5.4	1.05		
			-1.90	.06				-3.16	.00
HI	5.9	.94			HI	5.9	.74		
LI	5.7	.73			LI	5.5	.89		
			-.30	.77				-1.60	.11
HE	5.8	1.2			HE	5.9	1.03		
LI	5.7	.73			LI	5.5	.89		
			-.65	.52				-2.33	.02
HI	5.9	.95			HI	6.0	.74		
HE	5.8	1.2			HE	5.9	1.03		
			-.31	.76				-.60	.55
HI	5.9	.95			HI	6.0	.74		
Influence					Interesting Work				
	m	sd	t	p		m	sd	t	p
LE	5.4	.99			LE	5.5	1.1		
			-1.25	.21				-.84	.40
LI	5.7	.78			LI	5.6	.66		
LE	5.4	.97			LE	5.5	1.1		
			-2.27	.03				-1.52	.13
HE	5.9	1.1			HE	5.8	1.1		
LE	5.4	.97			LE	5.5	.15		
			-2.76	.007				-2.04	.04
HI	6.0	.87			HI	5.9	.13		
LI	5.7	.78			LI	5.6	.66		
			-1.34	.18				-.87	.39
HE	5.9	1.1			HE	5.8	1.1		
LI	5.7	.78			LI	5.6	.66		
			-1.75	.09				-1.42	.16
HI	6.0	.87			HI	5.9	.13		
HE	5.9	1.1			HE	5.5	1.1		
			-.17	.87				.41	.68
HI	6.0	.87			HI	5.9	.13		

Job Status					Job Security				
	m	sd	t	p		m	sd	t	p
LE	5.7	.84			LE	5.5	.82		
			-.69	.49				-1.83	.07
LI	5.8	.77			LI	5.8	.75		
LE	5.7	.84			LE	5.5	.82		
			.21	.84				-1.10	.27
HE	5.6	1.6			HE	5.7	1.2		
LE	5.7	.84			LE	5.5	.82		
			-.99	.34				-1.18	.24
HI	5.9	1.1			HI	5.8	.93		
LI	5.8	.77			LI	5.8	.75		
			.50	.62				.53	.60
HE	5.6	1.6			HE	5.7	.15		
LI	5.8	.77			LI	5.8	.75		
			-.62	.54				.38	.70
HI	5.9	1.1			HI	5.8	.93		
HE	5.6	1.6			HE	5.7	1.2		
			-.82	.42				.11	.91
HI	5.9	1.1			HI	5.8	.93		
Salary					Recognition				
	m	sd	t	p		m	sd	t	p
LE	5.5	.93			LE	5.5	.84		
			-.89	.37				-2.20	.03
LI	5.7	.89			LI	5.8	.71		
LE	5.5	.93			LE	5.5	.84		
			-1.08	.28				-1.88	.06
HE	5.7	.89			HE	5.8	1.2		
LE	5.5	.93			LE	5.5	.84		
			-1.90	.07				-1.51	.14
HI	5.8	.78			HI	5.8	.21		
LI	5.7	.89			LI	5.8	.71		
			-.14	.89				-.33	.74
HE	5.7	.89			HE	5.8	1.2		
LI	5.7	.89			LI	5.8	.71		
			-.83	.41				-.17	.87
HI	5.8	.78			HI	5.8	.21		
HE	5.7	.89			HE	5.8	1.2		
			-.72	.42				.09	.93
HI	5.8	.78			HI	5.8	.21		



Working Conditions					Influence in Organization				
	m	sd	t	p		m	sd	t	p
LE	5.6	.96			LE	5.7	.87		
			-1.25	.21				-.07	.84
LI	5.8	.82			LI	5.7	.79		
LE	5.6	.96			LE	5.7	.87		
			-.62	.54				.50	.62
HE	5.7	1.2			HE	5.5	1.5		
LE	5.6	.96			LE	5.7	.79		
			-.98	.33				-1.94	.06
HI	5.8	.85			HI	6.1	.87		
LI	5.8	.82			LI	5.7	.79		
			.26	.79				.53	.60
HE	5.7	1.2			HE	5.5	1.5		
LI	5.8	.82			LI	5.7	.79		
			.07	.94				-1.90	.07
HI	5.8	.85			HI	6.1	.87		
HE	5.7	1.2			HE	5.5	1.5		
			-.18	.86				-1.60	.12
HI	5.8	.85			HI	6.1	.87		
Pride in Organization					Contribution to Society				
	m	sd	t	p		m	sd	t	p
LE	5.6	.97			LE	5.6	.92		
			-.96	.34				-1.05	.30
LI	5.8	7.7			LI	5.9	.81		
LE	5.6	.97			LE	5.6	.92		
			-.51	.62				-.11	.92
HE	5.7	1.3			HE	5.7	1.6		
LE	5.6	.97			LE	5.6	.92		
			-1.22	.23				-.66	.52
HI	5.9	.97			HI	5.8	.91		
LI	5.8	7.7			LI	5.9	.81		
			.05	.96				.27	.79
HE	5.7	1.3			HE	5.7	1.6		
LI	5.8	7.7			LI	5.9	.81		
			.05	.96				-.16	.87
HI	5.9	.97			HI	5.8	.91		
HE	5.7	1.3			HE	5.7	1.6		
			-.44	.67				-.33	.75
HI	5.9	.97			HI	5.8	.91		

Considerate Supervisors					Use of Abilities				
	m	sd	t	p		m	sd	t	p
LE	5.6	.78			LE	5.5	1.02		
			-1.28	.20				-.16	.88
LI	5.8	.77			LI	5.5	.81		
LE	5.6	.78			LE	5.4	1.02		
			-.43	.20				-2.32	.02
HE	5.7	1.3			HE	6.0	1.07		
LE	5.6	.78			LE	5.5	1.02		
			-.95	.35				-3.95	.00
HI	5.8	.93			HI	6.1	.70		
LI	5.8	.77			LI	5.5	.81		
			.25	.79				-2.23	.03
HE	5.7	1.3			HE	6.0	1.07		
LI	5.8	.77			LI	5.5	.81		
			.44	.66				-3.38	.00
HI	5.8	.93			HI	6.1	.70		
HE	5.7	1.3			HE	6.0	1.70		
			-.37	.72				-.81	.42
HI	5.8	.93			HI	6.1	.70		
Independence in Work					Pleasant Co-workers				
	m	sd	t	p		m	sd	t	p
LE	5.6	.97			LE	5.6	.94		
			-.81	.42				-1.34	.18
LI	5.7	.81			LI	5.8	.80		
LE	5.6	.97			LE	5.6	.94		
			-.68	.50				-.87	.39
HE	5.8	1.3			HE	5.8	1.3		
LE	5.6	.97			LE	5.6	.94		
			-2.17	.04				-1.12	.27
HI	6.1	.83			HI	5.8	.93		
LI	5.7	.81			LI	5.8	.80		
			-.20	.84				.00	.99
HE	5.8	1.3			HE	5.8	1.3		
LI	5.7	.81			LI	5.8	.80		
			-1.71	.10				-.28	.79
HI	6.1	.83			HI	5.8	.93		
HE	5.8	1.3			HE	5.8	1.3		
			-1.12	.27				-.22	.83
HI	6.1	.83			HI	5.8	.93		

Opportunity for Promotion				
	m	sd	t	p
LE	5.8	.92		
			-.43	.67
LI	5.6	.87		
LE	5.8	.92		
			-.74	.46
HE	5.7	1.2		
LE	5.8	.92		
			-2.98	.00
HI	6.1	.65		
LI	5.6	.87		
			-.43	.67
HE	5.7	1.2		
LI	5.6	.87		
			-2.62	.01
HI	6.1	.65		
HE	5.7	1.2		
			-1.53	.13
HI	6.1	.65		