AN ANALYSIS OF THE RELATIONSHIP BETWEEN INDIVIDUAL LOCUS OF CONTROL, UNION ATTITUDES, AND THE DEMAND FOR UNIONISM

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PREFACE

This study is concerned with the analysis of various individual differences as they relate to the demand for unionism. Of special interest is the individual characteristic locus of control. It is the hypothesis of this study that an "internal"--someone who feels he is in control of his own destiny--will be more inclined to support unionism.

This research encompassed several significant areas of interest, and encountered several significant areas of conflict. Because of the vary nature of the project, it required extensive analytic and organizational expertise, as well as common sense. Throughout this project that was provided by my major adviser, Dr. Charles R. Greer. It has been a difficult process for both of us, and one I could not have completed successfully without his guidance and assistance. Additionally, I would like to express my appreciation to the other members of my committee, Dr. Ivan Chapman, Dr. H. Kirk Downey, Dr. R. Dennis Middlemist, Dr. John C. Shearer, and Dr. Clifford E. Young, III. Their comments and suggestions are reflected in this final manuscript.

I would like to extent my thanks to the staff and faculty of the College of Business at New Mexico State University. Throughout my tenure here all have been supportive of my efforts, and considerate of my obligations. Particular thanks go to Dr. John L. Loveland for his advice and counseling, and to Carolyn Fowler and Pam Speer for their administrative support.

I would like to say a word too to all those doctoral candidates who never reach this point. Perhaps they are in fact the wise ones, who found that other things are more important. And especially to a good friend, Ambrose Vaughn, who taught me what a good teacher is.

Lastly, I want to dedicate this work to my family. Returning to school at my age required a sacrifice and commitment on the part of all my family. My wife, Shirley, became the breadwinner for us all. Not once, during all this ordeal have I heard a single complaint. Not even about my prevarications. But most of all I want to recognize them for just being wonderful people. I recently heard about a study in which 80 percent of the people surveyed said they would not have children if they could do it over. My four children are what makes it all worthwhile. They are the outstanding achievement of my life. And any contribution I might make to society is but a small payment for their love and association. Thank you.

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CHAPTER I

INTRODUCTION

Since the inception of the labor union movement, scholars have searched for the reasons that prompt individuals to form or join unions. In recent history, other employee organizations have displayed union-like characteristics to achieve changes in the work environment. Teacher organizations and the Fraternal Order of Police are examples of these types of organizations. (For the purposes of this study the term union will be defined to include these types of organizations as well.) Through collective bargaining, at least in this country, these organizations seek to influence the working conditions of their members. As a result, unions constitute countervailing forces to the previously unilateral powers of management.

Unions have been influential as economic forces, political forces, and as social change agents. There is no consensus on the economic impact of unions, but it is safe to say the economic situation prevalent in the workplace is different from what it would have been in their absence (Lewis, 1963; Weiss, 1966; Kahn, 1978; Freeman and Medoff, 1979). As a political force, labor organizations have occupied several roles. They have pushed for broad social changes in society, for example, civil rights legislation, the Occupational Safety and Health Act, and the Employee Retirement Income Security Act. As pragmatic and realistic lobbying organizations, they have sought to protect their own interests

within the industrial relations system. As a major political interest group they have typically supported the Democratic party.

As a social agent, labor organizations have been instrumental in effecting change in the very nature of work. Job content, hours, benefits, retirement provisions, crew sizes, and many other work environment factors have been changed by unions. But any social change agent, be it church, political party, revolutionary group, or union, cannot effect this change without constituents. Thus, interest in attitudes toward unions, the membership of labor organizations, and the reasons individuals join these organizations, is not surprising. It is to these questions that this research is directed.

Previous research that has examined aggregate union growth in the United States provides several clues as to why individuals become union members. This literature will be reviewed in the next chapter. However, some research results will be reviewed at this time to provide background for introduction of the specific purposes of this study.

Trends in Research on Unionism

Why individuals wish to become union members or members of any organization has been a topic of interest to economists, psychologists, sociologists, and industrial relations researchers for some time. Early efforts were general inquiries into individual decision making processes (Bakke, 1945; Seidman, London, and Kars, 1951). Next, after early applications of econometric techniques (Kornhauser, 1961; Ashenfelter and Pencavel, 1969; Scoville, 1971), more sophisticated analyses were conducted of the economic and non-economic factors that influence the desire for collective bargaining and organized job action

(Blinder, 1972; Lee, 1978; Fiorito and Dauffenbach, 1982). This research has been facilitated by the availability of national and international micro-level data sources.

Patterns of Union Membership

Demographics

The literature reveals several patterns of union membership. One such pattern concerns race. Non-whites are more likely to be represented by a labor organization than whites, regardless of occupation (Bureau of Labor Statistics, 1977). In the white-collar area this relationship is almost two to one. Men are much more likely to be represented by labor organizations than women, especially in the blue-collar and service areas. In all regional areas, the patterns of higher collective bargaining coverage for non-whites persists (Bureau of Labor Statistics, 1977).

Right-to-Work Laws and Regional Influences

As might be expected, the traditionally non-union sectors of the country, those characterized by right-to-work (RTW) legislation, are the least organized. Whether these lower densities are due strictly to less industrialization or other factors, such as right-to-work laws, is not clear. The literature on RTW legislation is somewhat conflicting. Several authors (Lumsden and Peterson, 1975; Warren and Strauss, 1979) have found RTW laws to have a negative effect on state levels of unionization, that is, decreased unionism in these states. Others (Elliott, 1977; Bennett and Johnson, 1980; Wessels, 1981) have found that RTW laws do not have the impact often attributed to them. Hirsch

(1980), on the other hand, found that RTW had little impact on contract coverage, but significant impact on actual union membership due to the "free-rider" problem.

The question most often raised over RTW laws concerns causality. Does a state have RTW laws because of its non-union attitudes, or are its non-union attitudes a result of its RTW laws? Sandver (1982) examined the outcomes of National Labor Relations Board (NLRB) supervised representation elections and found that the lower rate of union success in the South was due to the size and types of elections conducted, rather than the so-called "Southern effect." Hunt and White (1983) found, in accordance with the saturationist hypothesis, that a higher level of union organizational activity occurs in RTW states because of the larger concentrations of unorganized workers. They in fact found different levels of expenditures programmed for the RTW states, and different organizational strategies employed by the national unions.

Much has been said too about greater employee resistance to unionization in the South due to differing cultural values. In an analysis of the large southern textile manufacturer, J. P. Stevens, Mullins and Luebke (1982) found that much of the success of unionism is determined by the type of industry involved, capital-intensive or labor-intensive. Much of the recruiting in southern states has been of capital-intensive industries; but the Middle-Atlantic, East-North-Central, and Pacific regions remain the most heavily unionized (Bureau of Labor Statistics, 1977).

Industry

There are substantial differences across industries in the

proportion of employees who are represented by unions. Of particular interest is the public sector which has become more heavily unionized in recent years, changing from a virtually non-union sector in 1960 to one of the more heavily organized today. The reasons for these disparities in labor organization membership are elusive.

Occupations and Job Conditions

Likewise there are differences in unionism across occupations. Explanations of the phenomenon of occupational differences in collective bargaining coverage have ranged from ascribing a manualist mentality to blue collar workers (Lyon, 1965), to stating that the inclination toward unionism is inversely related to the amount of individual bargaining power possessed by the individual (Perlman, 1928). In more recent research, Hirsch (1980) found that such occupational characteristics as mobility, skill differentiation, identification with management, and probability of self-employment all affect the demand for unionism. Fiorito and Dauffenbach (1982), using a cross-sectional analysis technique, and occupation as the unit of analysis, supported several hypotheses which have long been in the literature. They found the alienating influence of machinery and assembly work, and job-consciousness among skilled workers as factors affecting the demand for unionism. Specifically, some of the job characteristics they found that enhanced the likelihood of unionization were low use of mental processes, assembly work, machine operations, and unpleasant and manualist job content. On the other hand, Angel (1982, p. 100) concluded that "today's professionals have joined the rank and file" in their inability to control their work. Through anti-trust legislation and first

amendment decisions they are losing the protection of their professional trade associations, and hence are turning to organized labor for support.

Union Instrumentality

DeCotiis and LeLouarn (1981) examined union voting behavior using union instrumentality and work perceptions as variables. They found that people join unions in order to increase the likelihood that their interests will be served, and that the individual behaves in ways that he or she perceives to be instrumental to the attainment of personally relevant outcomes such as pay, benefits, working conditions, fair play, and so fourth. They found that as felt influence decreases, the perception of union instrumentality as a source to serve employee needs and interests increases. They found that these perceptions of union instrumentality were by far the most important determinant of union voting. They did not find individual characteristics as the primary impetus to unionization, but did conclude the following:

> The poor results obtained for personal characteristics either supports our initial conclusion (i.e., that there is no 'union type' of person) or the sense that the right personal characteristics simply have not been included in prior or the present research. The search for such characteristics constitutes a legitimate research interest within the larger context of understanding why individuals join organizations in general and the uniquely interesting question of why they join unions in particular (DeCotiis and LeLouarn, 1981, p. 117).

Of equal interest, and of particular concern to the present study, are explanations of attitudes toward unions and union membership. The examination of union membership has captured the interest of researchers for some time. Continued efforts in the area of union organizational research have been encouraged, specifically of the attitudes of workers toward unions and the causes of their propensity

to join unions (U. S. Department of Labor, 1979). Alienation is one such individual characteristic that has received attention.

Alienation

Alienation has been found to be related to militant organizational membership. After extensive research on the concepts of alienation and powerlessness, Seeman (1975, p. 97) made the point that, "The thrust of all this is that the combination of high sensed powerlessness relative to the system and low personal powerlessness is most likely to breed activism." In the context of this research then, the person who feels powerless to fight the system, but who personally feels in control of himself (that is an internal), is more likely to take overt action, that is, join a union. Lefcourt (1976, p. 32) too felt "belief in personal control and low expectancy of social system control could prove to be decisive interactive predictors of the likelihood that a person will join militant movements."

It is the intent of this research to examine yet another individual characteristic, locus of control, as a possible predictor of union membership behavior.

Locus of Control

In this research the specific psychological construct locus of control is the independent variable of primary interest. Rotter (1960) has suggested that there are individual differences in the way a person perceives a particular reward, and consequently in how he responds to it. Therefore, in its function as a reinforcing agent, reward may be conceived as following from or being contingent upon a behavior being

demonstrated. This is a reiteration of social learning theory that says reinforcement, reward, and gratification are crucial to performance. It follows then that the effectiveness of the reinforcer depends in large part upon whether or not the person exhibiting the behavior perceives the existence of a causal relationship between behavior and the reinforcer.

According to Rotter (1960), if a person perceives that a reinforcer is either contingent or dependent upon his own relatively permanent characteristics, that person is said to believe in the internal control of reinforcement (an internal). If a person perceives that a particular reward, although it may follow some action of his own, is not entirely contingent upon his action, he is thought to have a belief in an external control of reinforcement and is considered an external. The latter is likely to perceive the reward as the result of luck, change, fate, or politics. The central notion in Rotter's generalized theory of the control of reinforcement lies in whether or not the individual perceives, and furthermore believes, that his own behavior, skills or dispositions actually determine what reinforcements he receives. He defines this concept as locus of control.

Extensive empirical research has been conducted to verify the validity of the internality-externality dimension as a psychological variable. The results have generally supported the hypothesis that there is a significant difference between internals and externals with regard to their feelings, beliefs, and action tendencies toward some aspects of everyday life. It has been found that such a generalized belief can be measured reliably; and that as a psychological dimension it is predictive of behavior in a variety of circumstances.

The interpretation of locus of control used in this research is that described by Rotter (1966) in his discussion of a generalized expectancy model. "Such generalized expectancies can be measured and are predictive of behavior in a variety of circumstances" (Rotter, 1966, p. 25). As opposed to a specific expectancy, it is an abstraction developed from a host of experiences and situations in which expectations have met with varying degrees of validation. However, this is not meant to imply that all behaviors that are reinforced are repeated. Rather, the individual is selective, based on his/her perception of the relationship between the reinforcement and the preceeding behavior.

Locus of control is a specific and important example of such a generalized expectancy; it is a personality dimension which can be quantified and used in conjunction with other variables to predict human social behavior. The locus of control concept would suggest that internals are more cognitively active, they exhibit better learning and acquisition of material, they more actively seek information, and they are more highly motivated to perform well in situations allowing the exercise of skill and control. The basic characteristic of the internal then appears to be greater skill or greater effort at coping with or attaining mastery over the environment. If an individual is going to exercise such control a desire for reward as a result of that control must be expected, and a reasonable chance of success must be anticipated.

This then leads to the consideration of attribution as it relates to locus of control. Phares (1976, p. 135) states "the topic of attribution of responsibility is intimately related to locus of control. The latter is a personality variable that, by definition,

deals with stable tendencies to attribute control or causality to either personal or extrapersonal forces." DuCette and Wolk (1973) address this same issue as follows:

> The mediating power of locus of control resides in both its cognitive and motivational qualities, neither of which is sufficient but both of which are necessary . . . differing expectancies of control will give rise to differing decisions about the exertion of control (motivation) as well as differing efficiency with which this control is exerted (cognition) . . . The decision to engage in a task must be a function of the ability to do the task and vice versa (pp. 425-426).

The literature discusses several types of attributions.

> Kelly (1983) discusses the understanding of the causality of a particular event; Hamilton (1980) investigates the assessing of responsibility of a particular outcome; and Jones and Davis (1965) attempt to assess the personal qualities of persons involved in the events being considered (Lord and Smith, 1983, p. 50).

Broedling (1975), in discussing this apparent difference, defines locus of control as a relatively enduring, stable personality trait, regarding the world in general, while attribution is a perception based primarily on the current situation. Sims and Szilagyi (1976, p. 214) defined it this way, "Locus of control is often termed a generalized [emphasis added] expectancy because it refers to expectancies of life in general rather than to the contingencies of specific situations." Jones and Nisbett (1971) in their examination of the actor and observer argued that actors attribute their own actions to situational requirements (attribution) whereas observers tend to attribute the same actions to stable personal dispositions (locus of control). Kelly (1973, p. 126) says "that attribution theory deals only with the processes by which attributions are derived from informational input."

The foregoing is not to suggest that the attribution or attempted attribution of causal effect is not significant, as compared to locus of control. In reality it may be the more important, as, in the terms of Weiten and Upshaw (1982, p. 705), it may be the "framework actually employed by the man in the street." However, as it is situation specific, it is neither measurable nor predictive. Therefore, the "stable personality dimension" (Andrisani, 1964, p. 311)--locus of control--will be used as the primary explanatory variable of interest in this evaluation.

Purpose of Research

The objective of this research then is to demonstrate how a generalized personality variable--locus of control--relates to an important human activity. Specifically, the relationship between perceived locus of control and union attitudes and union membership will be investigated. The hypothesis is that an individual classified as an internal will have more positive views of unions and a greater demand for union membership. These relationships, if demonstrated, could be useful in predicting the demand for unionism. The next chapter will review the literature that pertains to union attitudes, union membership, and locus of control.

CHAPTER II

LITERATURE REVIEW

The question of why individuals seek membership in labor organizations, and their attitudes towards such organizations or organizations in general, has intrigued psychologists, sociologists, economists, historians, industrial relationists, and others for years. The majority of the research has centered on economic issues. In a recent study, Gordon and Long (1981, p. 306) concluded "Results indicate that across all age-sex subgroups, the most important factors in joining a union are economic ones." However, from the beginning scholars have recognized there is more to this decision than just economic issues. Geographic region, community size, and occupation have all been found to be related to unionism (Kornhauser, 1961; Scoville, 1971). Pencavel (1971) found social and political factors to be important determinants of unionism.

Individual Differences

As is true of all elements of society, individual differences are a significant factor in all areas of the work environment. As mentioned previously, labor researchers have been aware of this phenomenon as well, beginning with Bakke (1945) who found that a sense of justice as well as economics was of concern to employees. Sex and race (particularly the latter) have been associated with unionism (Kornhauser, 1961;

Scoville, 1971). In an extension of this research, Blinder (1972) found sex to be an important determinant of unionism but found education (and occupation) to be more important.

Attitudes

With the increased interest in behaviorally oriented research in the workplace, it is understandable that union related research has been forthcoming in this area. Significant correlations have been found between job satisfaction, lack of satisfaction with superiors, and the demand for unionism (Evans, 1974; Bigoness, 1978; Hamner and Smith, 1978; Schriesheim, 1978; Behrman, Bigoness, and Perreault, 1981; King, Murray, and Atkinson, 1982). Voting behavior has been used by several researchers as a surrogate for pro-union attitudes, and at least one study has found that voting behavior is largely independent of campaign tactics (Getman, Goldberg, and Herman, 1976). The significant conclusion of the Getman et al. (1976) study relative to the present study is that the demand for unionism is inherent to the individual and for "other" reasons. That is to say, the decision to vote for or against the union (or management) is an attitude resident in the individual prior to the election, and not subject to activities as superficial as the campaign.

Negative life experiences and work involvement have been found related to the demand for unionism in the public sector (Smith and Hopkins, 1979). Such factors as socioeconomic status, skill level or occupational status, and education were found related to pro-union attitudes. A negative correlation was found between employee involvement in the organization and a demand for unionism, which might imply the union gives the individual a source of political release. This

expressed need for influence in the environment relates to Rotter's internals' need for control. However, not all researchers agree on the relationship, and at least one study has indicated that union activists (1) tend to have a higher overall job satisfaction, (2) tend to be more interested and involved in their work, and (3) tend to be no more negative about the employing organization and its management than inactivists (Huszczo and Schmitt, 1983). As far as the present study is concerned, there is a connection between these two research efforts. Both indicate that the unionist actively seeks to influence his enviornment. The internalist seeks to act upon the situation rather than be acted upon. He prefers to proact rather than react.

Several researchers have recently measured directly the attitudes of workers toward unions (Kochan, 1979; LeLorarn, 1979; Smith and Hopkins, 1979). Such factors as socioeconomic status, skill level, occupational status, and education are related to attitudes toward unions (Smith and Hopkins, 1979). As indicated earlier, blacks and other minorities are supportive of unions and indicate that their desire for participation in workplace activities could be provided by union membership. It has been found that the major reason workers vote against unions is not philosophical, they just feel a union is not needed. One conclusion of these studies has been the development of a four component model of the unionization process: attitude toward unions $\longrightarrow$ intent to vote $\longrightarrow$ actual vote $\longrightarrow$ union membership. Given the interest in employee attitudes toward unionism, and the often inconsistent findings about the needs the union satisfies, there is a need for the investigation of other alternatives. This lack of consistency in the literature is highlighted by the Department of

Labor charge (1979) to continue efforts in the area of organizational research, specifically of worker attitudes and the demand for unionism.

Locus of Control

Phares (1957) pioneered the effort to construct an instrument to measure individual differences in a generalized belief in the control of reinforcement. Using a Likert-type scale consisting of 26 items, 13 of which reflected the attitudes of internals, Phares was able to predict individual behavioral differences between internals and externals. Phares' scale was subsequently revised by James (1957), and later by Rotter, Seeman and Liverant (1962). Rotter and his coworkers broadened the James-Phares scale by adding several subscales to distinguish such areas as achievement, affection, and the general and political attitudes. Rotter, Liverant, and Crowne (1961) conducted an item validity study, and reduced the number of items of the scale. The wording of some items was changed to make them more appropriate for non-college subjects (the population used in earlier studies).

In an early study, Strickland (1965, p. 353) stated "individuals who are inclined to see themselves as determiners of their own fate tend to commit themselves to personal and decisive social action." In her study of black college students involvement in civil rights activities, her conclusion was "clearly, the internal-external scale appears to be a useful instrument for the prediction of social action" (1965, p. 358). In fact, she felt the more internal the subject, the greater the likelihood of membership in an active group. However, she did find that her data were confounded by the variables of age and education.

The most definitive source of locus of control in the literature is Rotter's (1966) monograph. In it he argued that:

> . . . a generalized attitude, belief, or expectancy regarding the nature of the causal relationship between one's own behavior and its consequences might affect a variety of behavioral choices in a broad band of life situations (p. 2).

He warned that the individual is selective about what behaviors are repeated or strengthened based on his perception of the relationship between behavior and reinforcement. It is on this premise that he developed the internal-external construct.

Appendix A presents Rotter's Internal-External Scale (I-E Scale) which was developed to measure these situations. Rotter (1966, p. 19) found this instrument most useful in situations where people were attempting to "better their life conditions; that is, to control their environment in important life situations." Joining a union would seem a particularly pertinent example of this behavior. In conclusion, Rotter felt that generalized expectations could be measured and were predictive of behavior in a variety of circumstances. Specifically, he found that individuals with a strong belief that they could control their own destiny, that is, internals, would take steps to improve their environmental conditions. It is the hypothesis of this research that such an individual will turn to a union as one method for this increased control. A further refinement of the I-E Scale was completed by Mirels (1970) using factor analysis to further identify the two elements of personally relevant items versus the more universal issues of politics and world affairs.

A more contemporary version of the original I-E Scale has been developed and will be used in this research. It is called the

Different Situations Inventory (DSI) (Gardner and Warren, 1978). The DSI is attached as Appendix B and is discussed in detail in Chapter IV, Methodology.

Applications of Locus of Control to the Workplace

The use of the internal-external construct in empirical research has been extensive, particularly in psychology and sociology. Several such studies have been related to organizations (Seeman, 1964; Runyon, 1973; Mitchell, Smyser, and Weed, 1975; Glick, Mirvis, and Harder, 1977; Lewis, Cheney, and Dawes, 1977; Dalton and Todor, 1982).

Unionism

Only one study has attempted to measure directly union membership as a function of the I-E construct--Seeman's (1964) investigation of Swedish workers. In this (unpublished) study, Seeman found that union membership, union activity, and a general knowledge of political affairs were all significantly related to internality. Runyon (1973) in an in-depth analysis of interactions between personality variables and management styles, used locus of control as the personality variable. Several of Runyon's (1973) findings support the rationale for the present research:

> . . . the most interesting finding of the study, however, is the apparent strength of the I-E Scale in discriminating between subordinates in terms of their responsiveness to differing managerial styles. The strength of the I-E measure in this regard suggests that it has unrealized potential for use in corporate organizations (p. 293).

Runyon (1973) also found that internals are more involved in the job (sought control) and that age is a critical factor in moderating

internality. Runyon felt the tendency on the part of older workers to be more internal was due to their additional experience that provided them an opportunity for a more balanced perception of the sources of reinforcement. Mitchell, Smyser, and Weed (1975) found that internals were more satisfied with participative management, that is, wanted a larger role. This could be extended to include union-management relationships.

Glick, Mirvis, and Harder (1977) in an extension of the Mitchell et al. (1975) study, found a correlation between a willingness to participate in union activities and an interest in decision making. Lewis, Cheney, and Dawes (1977) using a situation-specific locus of control measure, found it to be an effective instrument for predicting behavior; yielding adequate psychometric properties and sufficient construct validity to warrant further research. A study of the impact of union shop stewards on grievance procedures found that internal stewards filed fewer formal grievances (Dalton and Todor, 1982). Internal stewards preferred instead to work things out for themselves with management. The authors felt the internal-external dimension was predictive of steward behavior and felt it had not been adequately evaluated in the union environment.

Bigoness (1978) investigated the correlates of college faculty attitudes toward collective bargaining, using the locus of control instrument and others to identify differences in individual personality characteristics. Bigoness hypothesized that in the academic environment externals who perceived the conditions of employment beyond their control would support collective bargaining. This hypothesis was supported, but only moderately. After perceived pay equity was

considered, the contribution of locus of control to explained variance was insignificant. Bigoness felt this finding supported the earlier finding of Broedling (1975) that internals saw a stronger relationship between performance and reward. In Bigoness' study (1978) control of rewards was not seen as relating directly to performance, because of the structure of academia, hence the interest in collective bargaining.

Additional applications of the locus of control construct to the workplace, and ones that have direct application to this research, are studies by DuCette and Wolk (1973), Evans (1974), Broedling (1978), Reitz and Jewell (1979), Behrman, Bigoness, and Perreault (1981), Knoop (1981), King, Murray, and Atkinson (1982), Kasperson (1982), and Spector (1982). When relating the concept of locus of control to union membership, the question arises as to whether an external--who feels he is not "in control"--might not be more inclined to seek unionism as a means of gaining at least some control. Or, would an internal--who feels he is in control--be more inclined to seek unionism as a means of assuring this control? As the following will suggest, the literature is not in consensus. In fact, one author (Bigoness, 1978) stated specifically that externals are more favorable toward collective bargaining activity than internals.

Control

The basic issue according to this researcher is one of control, and as stated in the hypothesis, the internal will take positive steps to obtain control. As can be seen, that is the issue in most of these studies. DuCette and Wolk (1973), as a result of the many earlier studies on locus of control, felt that it had been proven that internals

had more ability to extract information from ambiguous situations and to use this information more effectively. However, they did not feel the prior research had adequately addressed the situation-personality interaction. Their research indicated "the internal subject differed from the external subject motivationally as well as cognitively, and that these differences were most salient under demanding task conditions" (DuCette and Wolk, 1973, p. 425). They felt this difference is operationalized in the workplace by an exertion of that expectancy of control into the attainment of various reinforcements. Specifically, they felt the internal would be more inclined to "attempt to directly control the immediate environment" (p. 425).

In an extension of the path-goal theory of motivation, Evans (1974) found that internal subjects who perceive their environment as meaningful and consistent, and who feel able to control it are more likely to make rational decisions, that is, instrumental decisions. Broedling (1975), in a study of the relationship between the I-E concept and expectancy theory, found that internals were more likely to see rewards as being contingent upon job performance, that is, behavior is instrumental to reward and the perception of environment influences behavior.

Autonomy

In an in-depth study of individual characteristics as moderators of job characteristics, Sims and Szilagyi (1976) found that locus of control was a moderator between autonomy and job satisfaction. In a similar study, Kimmons and Greenhaus (1976) examined locus of control as it moderated the relationship between autonomy, feedback, and job involvement with job satisfaction. While the Sims and Szilagyi study

utilized laboring personnel, this study used managers. They did in fact find that internals perceived more autonomy and feedback in the work environment, and were in fact more involved in the work situation.

Cross Cultural Implications

Reitz and Jewell (1979) in a study conducted in six countries (United States, Turkey, Mexico, Yugoslavia, Thailand and Japan) examined the relationship between locus of control and job involvement. The authors defined job involvement as the "degree to which one's work is an important part of his or her life" (Reitz and Jewell, 1979, p. 72), and found it to be a function of both job and individual characteristics, with locus of control being the individual characteristic of interest. The results of this study revealed a strong cross-cultural positive relationship between internals and job involvement, that is, internals see work as a more important aspect of their life.

Job Conditions

Knoop (1981) examined the relationship between locus of control orientation and job enrichment. His hypothesis was that because externals do not feel they control outcomes they would be more receptive to job enrichment activities. This hypothesis was supported. It was found that internals already perceive their jobs as being enriched, and therefore feel less need for enrichment activities than externals. King, Murray, and Atkinson (1982), in an examination of a Canadian national survey (1977), found the two strongest personality correlates of job satisfaction to be alienation and locus of control. Of significance to the present study was not the strong association

between job satisfaction and the personality variables, that is, alienation and locus of control, but evidence that the two are independently associated with job satisfaction. This would indicate individual expectations and traits interact with objective characteristics of the work environment to determine a response to that environment. In this same vein, Kasperson (1982, p. 825) concluded "there is no conclusive evidence that changes in an individual's locus of control can be affected by the organization," and that locus of control is a personality construct that mediates the satisfaction or dissatisfaction an employee will project into the organization.

Spector (1982) in an extensive study of locus of control as it relates to employee behavior in organizations, found locus of control to be related to motivation, effort, performance, satisfaction, perception of the job, compliance with authority, and supervisory style. He stated the intent of his study was to demonstrate the usefulness of personality in explaining human behavior in the organization and to focus on locus of control. Of particular interest to the present research were the following conclusions: (1) "not only do internals perceive greater control, but they may actually seek situations in which control is possible" (Spector, 1982, p. 483). This would certainly support the hypothesis of this research, that internals will seek unionism as a means of exerting control. In a summary of Phares (1976) study, Spector (1983, p. 484) states "internals exert greater efforts to control their environments;" (2) the basic distinguishing characteristics between internals and externals will have significant effect on the organization. As internals tend to believe in personal control, they will attempt to

exert more control provided that control leads to desired outcomes. For some individuals, however, control itself might be more rewarding, leading some internals to attempt control for its own sake" (Spector, 1982, p. 485); (3) locus of control should be a useful selection device for predicting employee suitability. Knowing the job demands, a better match can be made with employee characteristics.

Other Applications of Locus of Control

The I-E instrument has been used extensively in research applicable to other aspects of behavior (Joe, 1971; Silverman and Shrauger, 1971; Silvern and Nakamura, 1971; Abramowitz, 1973; Korte, Kimble, and Cole, 1978; Pandey, 1979; Morris and Carden, 1981). Joe (1971) in an in-depth analysis of studies using the internal-external control construct as a personality variable, supported the construct validity of the instrument in the work environment. He suggested further research using the instrument on specific issues and areas. Silverman and Shrauger (1971) examined the relationship between locus of control and the attraction toward others, and found the attribute most significant to internals was their resistance to manipulation. This supports the present research in that the internal individual, if management attempts to manipulate him, will seek other alternatives to maintain control.

In a departure from most other researchers, Silvern and Nakamura (1971) found a positive correlation between externality and political knowledge and activity. However, this activity may be described as left-wing social-political views, particularly of the protest or demonstration type. They felt this activity was the result of a

disbelief in the individual's ability to control his personal destiny, and felt it would occur in spite of any individual feeling of personal powerlessness. Externality was seen to be associated with an expression of defiance. Abromowitz (1973) tested the dimensionality of Rotter's (1966) I-E Scale as a concept in understanding commitment to social-political action, and found that this behavior could be predicted by the I-E scale. However, he did find some inconsistencies due to region and race, but felt these could have been population specific (college students). Korte, Kimble, and Cole (1978) found that similarity in locus of control increases the likelihood of attraction, that is, internals are attracted to internals. Previous studies had not shown this and the authors felt their results were more meaningful because of their technique of describing similarity, that is, more specific I-E information. Pandey (1979) found that internals participated more actively in efforts for social help and change, since they believed their efforts would have an effect. In a study of academic behavior, Morris and Carden (1981, p. 804) found "clearly, the major predictor of performance differences was locus of control."

Other Determinants of Unionism

Research pertaining to other constructs related to unionism include studies by Allutto and Belasco (1972), Coleman (1973), Seeman (1959, 1962, 1964, 1966, 1975), and Nord (1977). In a study of "decisional deprivation" of university faculty, Allutto and Belasco (1972) concluded that such deprivation constitutes the basis for the increased militancy evidenced among many professional organizations (which may take the form of unionization). Power is another relevant

construct. Coleman (1973) studied power as it relates to the individual and the organization. His basic premise was that the rights inherent in property and other resources can be divided into benefit rights and usage rights, and that in society persons give over usage rights (that is, direct control over actions) through membership, to increase benefit rights. The resources invested may be money (investment or dues), the right to act as agent (negotiation of a contract), or time and effort. This decision to yield control to some outside agency is given in expectation of greater combined resources. The decision is between acting independently with more freedom, or collectively with more power. But, the point relevant to the present study is that the individual feels he has the freedom to make the choice. He is still able to control his own destiny. Only the mechanism of such control is the issue.

A construct somewhat similar to the idea of internality-externality is that of alienation and powerlessness. Perhaps the foremore exponent of this construct is Seeman. In a series of studies (Seeman, 1959, 1966, 1975; Seeman and Evans, 1962; Neal and Seeman, 1964) this concept was examined as it affects the individual in the workplace. In the 1962 study, Seeman and Evans examined the individuals' desire for knowledge as a function of powerlessness. They found that the individuals sense of control in the situation will determine his level of interest, and the degree of knowledge he will seek in the situation. The authors further found that this feeling extends to work associations, and summarized their research with this quote from Kornhauser's (1959) study:

> Informal work groups supply some basis for fellowship and control at work, but with the growth in scale and complexity of the factory, office, and work institutions generally, they are insufficient. Therefore, all kinds of formal work associations are needed. To the extent that they fail to develop, or, at the other extreme, themselves grow so far out of reach of their members as to no longer be capable of providing the individual with a sense of participation and control, people are less likely to find the whole sphere of work an interesting or rewarding experience (p. 108).

This again identifies the individual's need for control at work (interal) with the demand for a labor organization. In a 1964 study, Neal and Seeman found that organizational membership would mediate powerlessness. They found that the organization (union) served as an instrument of personal mobility for the employee, and for the manual worker served as an instrument of security and economic well-being.

In a 1966 study, Seeman related his construct of alienation, as a part of mass society theory (Kornhauser, 1959), to social learning theory as described in Rotter's (1966) locus of control construct. He saw the idea of internal and external control as a corollary to powerlessness. Perhaps the most significant finding of the study, relative to the present research was that organized workers expressed significantly greater interest in political affairs, which reflects a generalized interest in knowledge (control) which is empirically traceable (can be measured). This motivation to learn was seen as being dependent not only upon expectancies for control of the outcome (internal), but also upon the value one places on those outcomes (valence).

Nord (1977) examined the issue of the powerlessness-alienation hypothesis as it relates to job satisfication and found, contrary to popular belief, that alientation and dissatisfaction are not the same

thing. He felt that only the politically conscious worker was able to experience alienation, and was therefore apt to be an agent for social change. That while the person experiencing job dissatisfaction or meaningless work looks to rearrange the work within the existing social structure, the powerlessness-alienation view would cause the individual to focus on the structure itself. A labor organization might provide such a mechanism for structural change.

In the next chapter an in-depth discussion of the theoretical rationale for the internal-external construct is provided, along with a suggested model for examination of the relationship.

CHAPTER III

THEORY

The questions of why an individual joins a labor organization or develops certain attitudes about unions are not easily answered. While it is the primary intent of this research to examine the locus of control construct as a factor in the decision to join a union or in the formation of attitudes about unions, it is obvious from the literature that many variables have been examined and are of interest. As a review of previously cited studies, Table I is provided.

In this chapter, the theoretical rationale for the models to be used in this research will be developed. Three models will be used, each to examine one of the dependent variables: union instrumentality, union effectiveness, and union membership. Union effectiveness, union membership and union instrumentality will also appear as independent variables, attitudes, in the models as well. Each of these dependent variables will be influenced by the independent variables of interest.

Dependent Variables

In this research three factors will be evaluated as dependent variables, union membership, union instrumentality, and union effectiveness.

TABLE I

REVIEW OF EFFECTS OF VARIABLES' INFLUENCE ON UNIONISM

	Income	Alienation	Occupation	Participation	Union Membership	Ethnic Background	Perceived Influence	Region (Right-to-Work)	Dissatisfaction with Superiors	Union Instrumentality	Union Effectiveness	Organization Size	Effort/Reward Expectations	Satisfaction	Work Involvement	Pay Equity
Alutto & Belasco				−												
BLS						+										
Bigoness	−								+					−	−	−
Chacko & Greer					+					+	+					
Decotiis & LeLouarn										+						
Hammer & Berman				−			−							−		
Hamner & Smith									+					−		
Hirsch	+		−					−								
Hunt & White	−							+								
Kimmons & Greenhaus													+		−	
King, Murray & Atkinson		+	−											−		
Kochan					+	+				+	+		−	−		+
Maxey & Mohrman				+						+				−		+
Odewhan & Petty	−		−											−		
Perry & Angle							−									
Reith & Jewel						+								−	−	
Rose												+				
Schriesheim																+
Scoville			−			+		−					−			
Seeman		+													−	
Sims & Szilagyi			−													
Smith & Hopkins			−				−					+		−	−	
Warren & Strauss								−								

Union Membership

Union membership is defined as simply the fact of belonging to a union or union-like organization.

As shown by Kochan (1979) and Chacko and Greer (1982), union membership also has a strong influence on how the other two dependent variables--union effectiveness and union instrumentality--are evaluated. Therefore, union membership will also be considered as an independent variable in the measurement of these other two dependent variables. For the purpose of this evaluation, only active membership at the time of the survey will be considered as "union membership", and is expected to be positively correlated with union effectiveness and union instrumentality.

Union Instrumentality

The concept of union instrumentality refers to the perceived usefulness of a union to a particular individual. As discussed previously, why the union may be perceived as important may vary significantly from individual to individual, and perhaps from situation to situation. In general, the respondent who sees the union as "instrumental" feels that unions have a lot of influence in how the country is run, over what laws are passed, who gets elected to public office, and is in general more powerful than employers. In the specific job situation being evaluated, the respondent sees the union as being beneficial, and as a means to gain influence in the work environment. Union instrumentality is predicted to be positively related to both union effectiveness and union membership when it is evaluated as an independent variable.

Union Effectiveness

Webster (1976, p. 724) defines effectiveness as (among other things): "Capable of bringing about an effect, productive of results, marked by the quality of being influential, and exerting authority." Kochan (1979) in measuring the "effectiveness" of a union attempted to evaluate his variable in terms of workplace conditions. Chacko and Greer (1982) describe this characteristic as "union service", the degree to which the union is able to care for its own. The individual who evaluates the union as effective feels it protects workers against unfair actions by employers, improves job security, improves wages and working conditions, and gives the member his money's worth for his dues. Two other items examine union leadership as evaluated by the respondent, leader behavior and control. This variable, when examined as an independent variable, is predicted to be positively correlated with union instrumentality and union membership because for an individual to seek membership in an organization, and to evaluate subjectively that organization as useful, he must evaluate its activities as effective.

Independent Variables

Employee attitudes towards unions have been of substantial interest to researchers (Rosen and Salling, 1971; Schriesheim, 1978; Hamner and Smith, 1978; Smith and Hopkins, 1979; Odewahn and Petty, 1980; Maxey and Mohrman, 1980; Hirsch, 1980; Perry and Angle, 1981; Hammer and Berman, 1981; Brief and Rude, 1981) and have been extensively examined in recent research. Schriesheim (1978) found that pro-union attitudes and job satisfaction were significant

contributors to pro-union voting, but that these parameters take months and perhaps years to develop. They are not the result of a brief election campaign. Hamner and Smith (1978) evaluated work attitudes as predictors of unionization activity. They found that job-related attitudes that indicate dissatisfaction with the work setting can predict the success a union will have in gaining support.

The present research is not only concerned with union attitudes as pre-conditions of the demand for unionism, but also with the determinants of pro-union attitudes. Smith and Hopkins (1979) examined the factors determining public sector employee attitudes. In examining the literature, the authors found that:

> Personal characteristics constitute one of the most commonly examined clusters of factors related to human attitudes. These have typically been examined because of their surrogate measurement of pre-work and life experiences. Among the most frequently examined indicators have been employee family socioeconomic status, skill level or occupational status, and education (Smith and Hopkins, 1979, p. 485).

In this context, the authors cite Bakke's (1945) finding that independence and the opportunity to exercise some control over one's life are major reasons for favorable union attitudes and union membership. Smith and Hopkins (1979) argue that while specific characteristics such as education and socioeconomic situations are significant, that individual characteristics and early life experience will be more important in the development of union attitudes. Perry and Angle (1981) examined the structure of the bargaining unit as it relates to various parameters, to include employee attitudes, and found that workplace democracy (influence) was related to union activity.

In an extensive study of the determinants of unionism, Hirsch (1980) found wage level, occupation, and sex related to the demand for unionism; he did not examine personality variables. Brief and Rude (1981), in a conceptual analysis of union voting behavior, defined the event of an employee seeking unionization as a two-part process; the actual act of voting they describe as an index of the subjective probabilities that the union will lead to better benefits, wages, job security, and so on. The subjective support for unionism was hypothesized to be a function of tenure, education, occupation, ability, commitment, involvement, age, income, and locus of control. They did not, however, test the hypothesized relationships.

Those independent variables to be considered in this research, in addition to union membership, union instrumentality, and union effectiveness, previously discussed, are: ethnic background, income, geographic region, right-to-work laws, occupation, sex, organization size, perceived equity of pay, alienation, perceived influence, participation in decision making, dissatisfaction with supervision, satisfaction, effort/reward expectations of work situation, and work involvement. Each of these variables is discussed as follows.

Perceived Influence

Several authors have examined the idea of perceived influence and influence deprivation as it relates to union attitudes and unionism. Maxey and Mohrman (1980, p. 327) defined perceived influence as ". . . employee perceptions of their own ability to modify current organizational policies or practices." And in their study which measured influence deprivation, the authors found that the development

of pro-union attitudes was a response to such conditions. Price (1972, p. 43) called this aspect "centralization" and defined it as an objective situation in which "the degree to which members of a social system believe that their behavior can determine the outcome they seek." In Hammer and Berman's (1981) study of noneconomic factors in faculty union voting, they found that the desire for more influence in organizational decision making contributed significantly to the decision to unionize. The union was found to be an attractive countervailing force against arbitrary and unfavorable treatment, and as a means to regain control. Unionization was viewed as a means of redistributing power.

Cameron (1982) in an investigation of university faculty unionism gave two explanations for the growth of such unions. One, that faculty seek unions to reduce the equivocality of the organization; that is, to increase their own influence capabilities. The other explanation Cameron gave is that faculty seek unions to increase the effectiveness of the organization in times of reduced budgets, funding, and enrollments. The point to be made is that on the one hand the individual faculty member is seeking increased personal power, while on the other he is seeking increased organizational effectiveness, both within the mechanism of the union.

High levels of responsibility and a demand for unionism were found to be positively correlated by Fiorito and Dauffenbach (1982). This finding relates to issues also raised about occupation and to the question of "professionalism." The issue of decisional deprivation relates to this same issue. The distance between management, particularly middle management, and the decision making echelon is

increasing, making yesterdays "manager" simply feel he too is "only" an employee.

Perceived influence should be negatively correlated with the dependent variables as the individual who feels he already has influence in the work environment will not see the union as an effective or a necessary mechanism to gain it.

Alienation

As discussed previously, the attitude of alienation has been extensively examined, particularly by Seeman (1959). In a 1959 study Seeman identified five alternative meanings of alienation. One, powerlessness, he defined as "the expectancy or probability held by an individual that his own behavior cannot determine the occurrence of the outcomes, or reinforcement, he seeks" (Seeman, 1959, p. 784). As can be seen, this definition correlates well with that of the external belief in locus of control. Seeman also raised the issue of individuals being "differentially realistic" in different areas, that is, may feel powerless with regard to war or politics, but feel quite differently about work relationships. In a study of particular relevance to the present work, Neal and Seeman (1964) looked specifically at the association between powerlessness and organization membership. The authors theorized from Kornhauser's findings that the individual who seeks to control his life (internal) will seek intermediate groups in the workplace (unions) to facilitate this control. King, Murray, and Arkinson (1982) found alienation to be a significant factor in job satisfaction. It is therefore anticipated

that alienation will correlate positively with a demand for union membership, and a positive evaluation of union instrumentality and effectiveness.

Ethnic Background

As can be seen in Table I, the literature is anything but consistent on several of the variables--the issue of race for example. Certainly the preponderance of the literature indicates that non-whites are prone to look favorably upon unionization activities as a means to achieve their ends. In a particularly significant study, Kochan (1979) found that approximately 67 percent of the minority workers surveyed indicated they would vote to unionize. Scoville (1971) in a reevaluation of the Kornhauser (1952, 1954) studies, found a strong correlation between non-whites and the demand for labor organizations. The Bureau of Labor Statistics (1977) data reported in the Introduction shows a strong relationship in the white-collar areas. In fact, it is only in the blue-collar areas that the races are equally represented. Hirsch (1980) however, found that the question of race and unionization was not an easy one to specify. He found race to be negatively related to union membership if separated from contract coverage. He found that union discrimination practices, both past and present, often outweighed the relative benefits to be gained by non-whites as union members. He felt this apparent dichotomy might be exhibited by non-whites voting for union representation, but then not joining the union. With respect to locus of control, the preponderance of the literature has shown that blacks tend to be external (Andrisani, 1964; Strickland, 1965; Joe, 1971; Abramowitz, 1973). Thus, race (non-white)

would be predicted to be positively related to pro-union attitudes or perceptions of union instrumentality, and to union effectiveness. The relationship to union membership is more difficult to predict but it should be positive.

Occupation

Such issues as decisional deprivation are of paramount interest only to certain echelons of occupations, so what is said here somewhat pre-supposes those areas. Again, Kochan (1979) looked closely at the aspect of occupation as it related to the individual's demand for unions, and found several interesting results. For white-collar workers the issue was more often job "content" issues, rather than bread-and-butter economic issues. He found that dissatisfaction can rise both because of absolute standards (like seniority, pay scales) or because of perceived inequities in the way standards are administered. This latter condition is particularly pertinent to the rapid growth of unions in the white-collar and "professional" occupations. Kochan (1979) found a significant positive correlation between perceptions of inequity and the propensity to unionize. Much of the recent literature discussing faculty unionization addresses this same point. Scoville (1966) too found that the demand for unionism was inversely related to occupational status. It is predicted that this relationship will hold in the present research as the individual will see the union as a way to improve his occupational situation.

Region and Right-to-Work

The question of geographic region too is a complex one. The

so-called "southern effect" has frequently been mentioned with respect to unionism, often in conjunction with the issue of right-to-work (RTW) laws. As indicated in Table I, and as discussed in the introductory chapter, the literature is far from unanimous in evaluating the RTW effect. In a recent study, Hunt and White (1983) found that unionization activity was highest in RTW states simply because the quantity of unorganized labor was greater there. And that, in fact, national union organizational budgets reflected this emphasis.

It is predicted that all three dependent variables will be less supported in those areas where the employee is given a legal option in the decision to choose or reject union protection because in those situations the employee will be at liberty to act freely upon his opinions and/or convictions.

Sex

Perhaps the most consistent variable with respect to the demand for unionism has been the propensity of male employees to favor unionism. But Kochan (1979) found that even this is changing, and the female professional is equally willing to support the idea of representation. This, of course, appears to be congruent with the changing relationship of the female in the workplace. No longer is her work temporary or an interlude between marriage and babies. Today's professional woman looks upon her career with all the permancy of her male counterpart, and recognizes the union as an influential entity to be considered. Hirsch (1980) on the other hand, still found males more positive in their attitudes toward unionism.

For these reasons, it is predicted that the sex relationship (male) will be positively associated with all three dependent variables.

Organization Size

The question of organizational size as it relates to the demand for unionism has been addressed in the literature (Rose, 1972). The conclusion of Rose's research was that the very large firm, because of its benefit programs, and the very small firm, because of its inherent "togetherness" are less likely to be unionized.

However, the literature is certainly not in agreement as to what constitutes a good measure of size. Alternatives include number of personnel, amount of assets, and extent of expenditures. The concern with using "number of employees" is that this might not be a true indication of size if the organization is heavily automated, etc. Thus "scale of operations" might be a better measure, with number of employees one indicator of this scale. This, however, would require a knowledge of the company few employees have. Also, often the employee will identify the size of his individual work unit when asked for organization size. Because of these and other factors present, the relationship between organization size and the dependent variables will have to be determined empirically.

Income and Perceived Equity of Pay

Income, whether evaluated as actual pay level, or in terms of pay equity, has been found to be a contributor to the demand for unionism. This factor bears heavily too on the evaluation of union instrumentality and union effectiveness. Income can be and is used

as an indicator of status and soci-economic situation, among other things, and may be used in conjunction with education to evaluate "success."

Perceived equity of pay is defined by Allen and Keavey (1981, p. 583) as ". . . strong desire to earn the right amount, that is, receive neither too little nor too much income relative to one's job responsibilities." Price (1972, p. 94) calls this "distributive justice--perceived probability that pay depends upon job performance factors." Bigoness (1978) found that perceived equity is every bit as important to the employee as actual equity. Kochan (1979) found that perceptions of pay equity were significantly related to a propensity to unionize among white-collar workers: those respondents with inadequate income and/or fringe benefits, or the belief that such was true, were more likely to support unionism.

In this study it is hypothesized that income and perceived equity of pay will be negatively correlated with all three dependent variables because a poor evaluation of these variables by the respondents will reflect a need for the union, hence will increase the attractiveness of union activities.

Participation in Decision Making

As Alutto and Belasco (1972) discussed, there are several indentified themes of participation in decision making by employees. The first concerns organized changes. It has been found that employees who participate in decision making are more inclined to accept change, and that overall organizational effectiveness as a result of this change is higher. Secondly, the authors found that participation in

decision making was a function of the perceived influence of superiors. And lastly, and of most importance to this research, they found that a strong relationship exists between participation in decision making and job satisfaction. However, not all elements of the work force are equally desireous of participation. The question then is do individuals who want the opportunity to participate in decision making have it?

The authors found that a correlation exists between those who have this desire and greater militance--as exhibited by union membership. In a subsequent study, Hammer and Berman (1981) found the union to be an attractive mechanism for use against arbitrary and unfavorable treatment, and a means to redistribute power in organizational decision making. Maxey and Mohrman (1980) found the union an effective mechanism to influence organizational policies and practices. In the present research it is predicted that participation in decision making will be negatively correlated with the three dependent variables, union instrumentality, union effectiveness, and union membership as the individual who is participating and who does feel he has influence will not see the union as necessary to gain this capability.

Work Involvement

Work involvement is defined by Lodahl and Kejner (1965, p. 24) as ". . . the degree to which a person's work performance affects his self-esteem." This variable was examined by several researchers (Kimmons and Greenhaus, 1976; Reitz and Jewell, 1979) and all found a positive relationship between an internal locus of control

orientation and involvement in the work situation. In this research it is predicted that this involvement will be extended to include union membership, a positive attitude toward union instrumentality, and a belief in the effectiveness of unions.

(Dis)Satisfaction with Supervisors

While no implicit definition of dissatisfaction with supervision was found, it can be considered included in such definitions as "general attitudes expressing dissatisfaction with the work environment" (Hamner and Smith, 1978, p. 415) in which these researchers found dissatisfaction with supervision to be a significant predictor of unionization activity. The literature commonly distinguishes various dimensions of satisfaction to include that of supervision. So it is possible to have different degrees of satisfaction for different dimensions. Inherent in this discussion too is Herzberg's (1968) contention that dissatisfaction and satisfaction are not opposite ends of the same continuum. Herzberg (1968) points out that dissatisfaction is generally a result of the conditions of work (as compared to work content) and supervision is listed as one of the major sources of dissatisfaction. It is felt dissatisfaction with supervision will be positively correlated with all three dependent variables.

Satisfaction

For the purpose of this research this variable will be evaluated using the definition provided by Price (1972, p. 156) ". . . the degree to which the members of a social system have a positive

affective orientation toward membership in the system." This will be evaluated by ascertaining the employee's opinions of the company's interest in him as an individual. Satisfaction should be negatively correlated with the dependent variables because the satisfied employee should see no need for unionism nor see the union as instrumental.

Effort/Reward Expectations

This variable is a measure of the employees belief that performance is dependent upon effort and that reward is contingent upon performance. It is particularly relevant to the employee interested in doing above average work. It is predicted this variable will be negatively correlated with union membership, union instrumentality, and union effectiveness in that as the employee feels there is less of a relationship between performance-reward, he is more inclined toward joining a union. He sees the union as a way to correct this situation (Hamner and Berman, 1981).

Table II is provided as a summation of the predicted relationships.

Moderating Variable

In this research, it is hypothesized that the relationships between the independent and dependent variables will be moderated by the locus of control construct. This relationship is shown in Figures 1, 2, and 3. As discussed previously, it is hypothesized that the internal locus of control individual will be more positively inclined toward the dependent variables of union membership, union instrumentality, and union effectiveness.

TABLE II

PREDICTED RELATIONSHIPS

Independent Variables	Union Membership	Union Instrumentality	Union Effectiveness
Perceived Influence	-	-	-
Alienation	+	+	+
Ethnic Background (non-white)	+	+	+
Occupation	-	-	-
Region and Right-to-Work Laws	+	+	+
Sex (male)	+	+	+
Organization Size	?	?	?
Income	-	-	-
Perceived Pay Equity	-	-	-
Participation in Decision Making	-	-	-
Work Involvement	+	+	+
(Dis)Satisfaction with Superiors	+	+	+
Satisfaction	-	-	-
Effort/Reward Expectations	-	-	-
Union Membership	+	+	+
Union Instrumentality	+		+
Union Effectiveness	+	+	

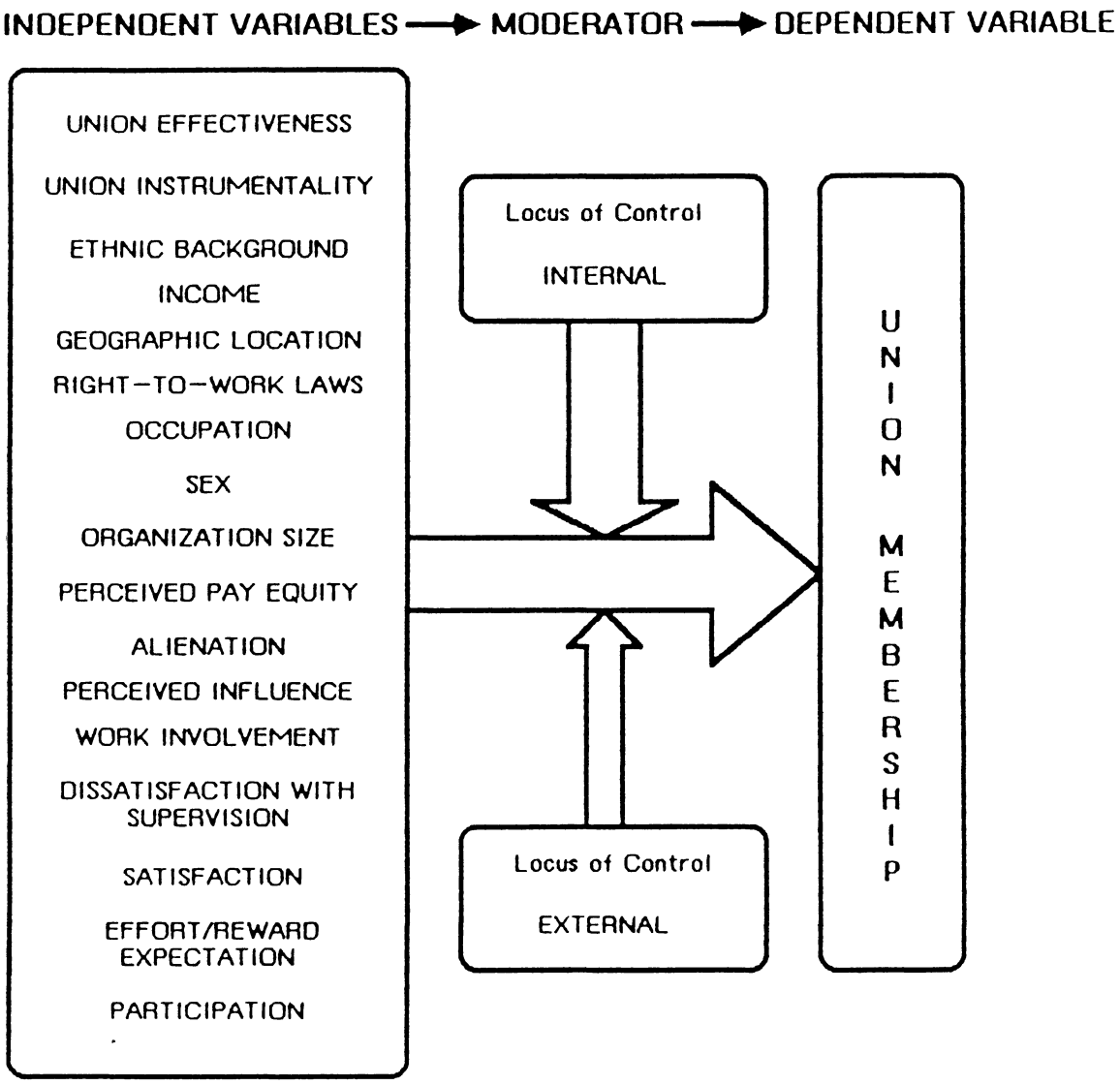

Figure 1. Suggested Model of Locus of Control Effect on Union Membership

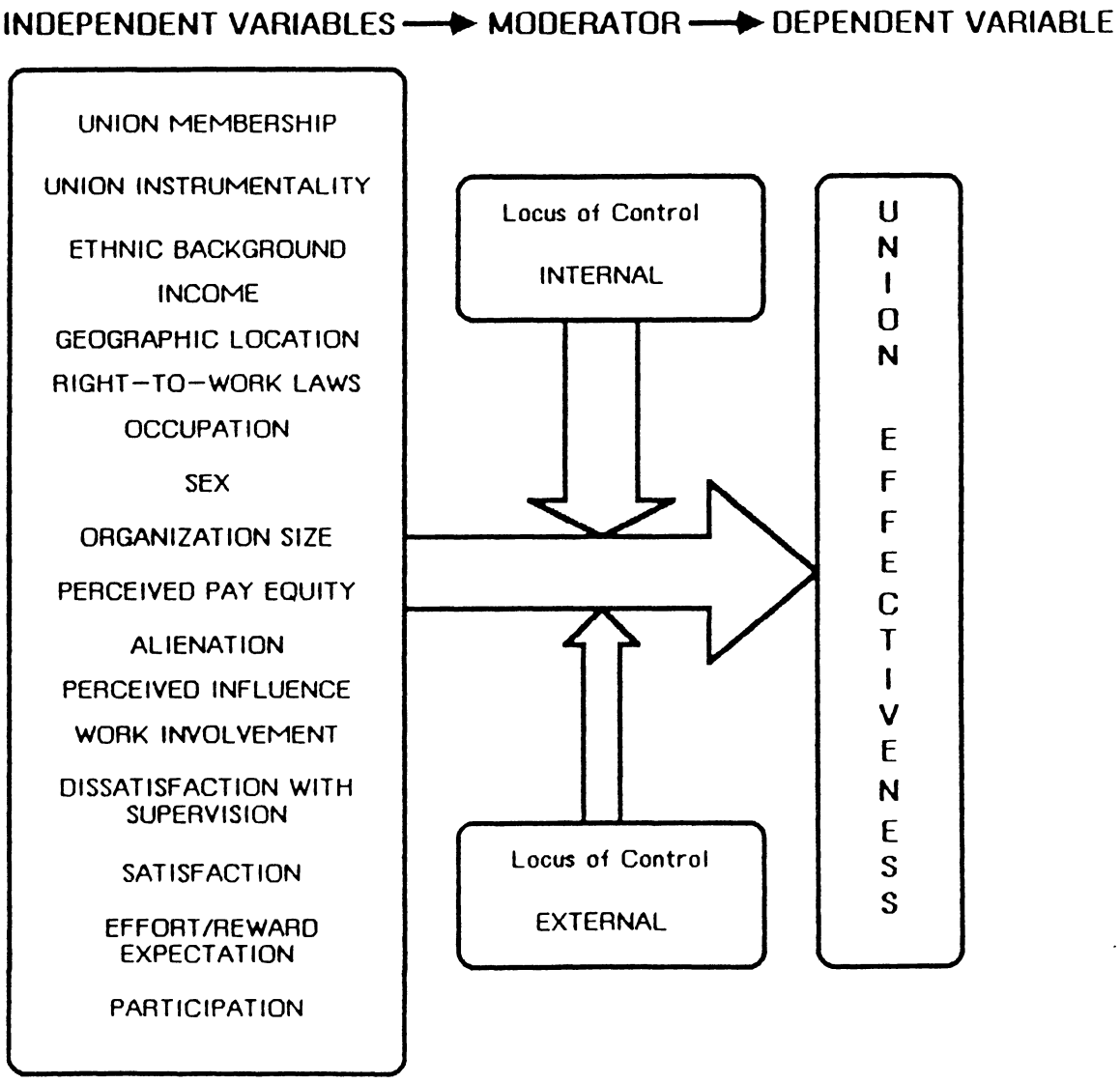

Figure 2. Suggested Model of Locus of Control Effect on Union Effectiveness

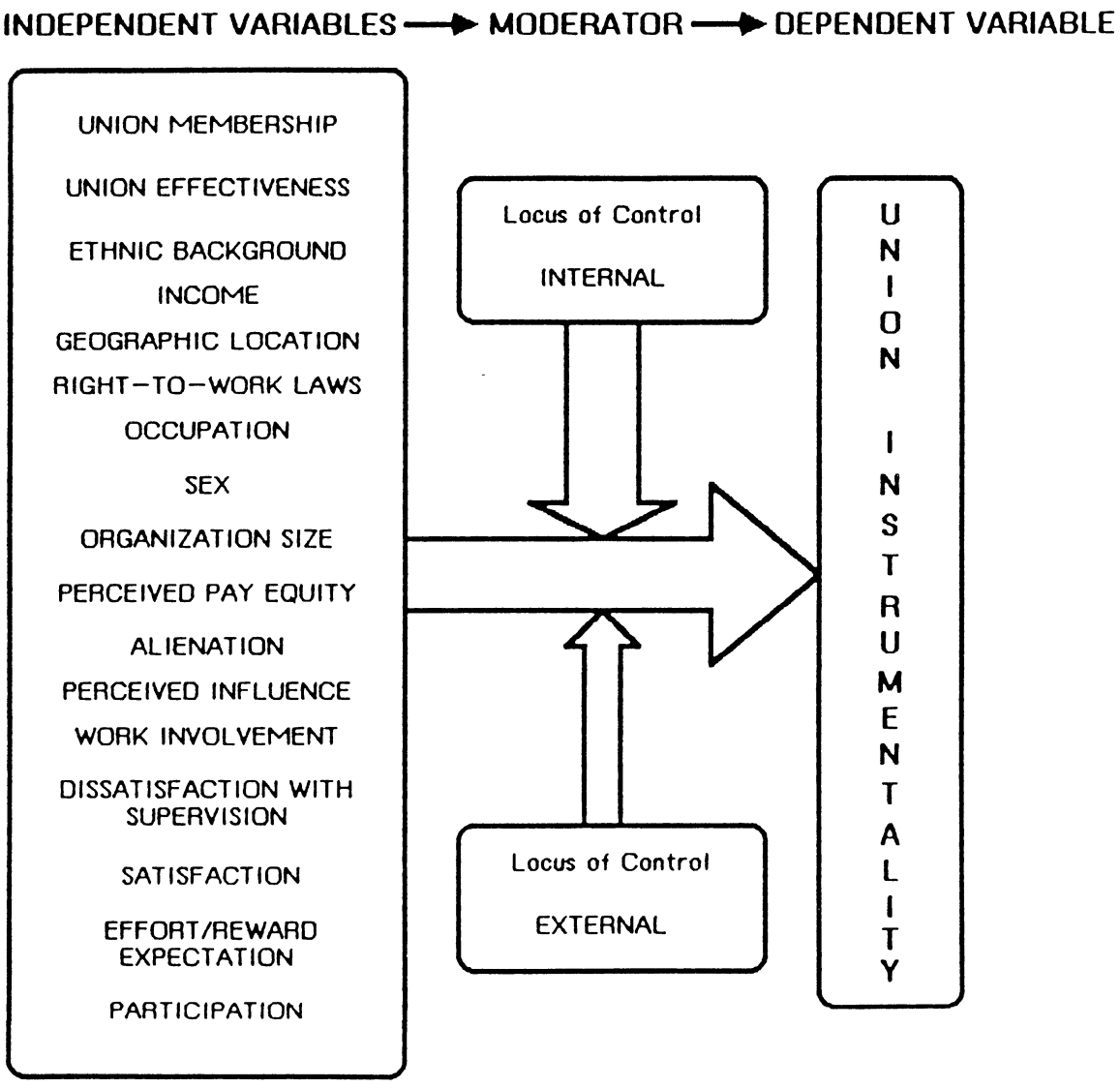

Figure 3. Suggested Model of Locus of Control Effect on Union Instrumentality

The literature provides several examples of this phenomenon as follows. Sims and Szilagyi (1976) found locus of control to be a moderator between autonomy and job satisfaction. Blinder (1972) found females to be more internal than males. Smith and Hopkins (1979) defined life experiences as a personal assessment of the quality of one's life experiences, and they found that those holding negative views of their life will be predisposed to unionism. Their definition of negative life experience would more closely correspond to the external locus of control predisposition.

Locus of Control

In his development of the locus of control construct, Rotter (1966) suggested that there are individual differences in the way a person perceives a particular reward, and consequently, how he responds to it. Therefore, in its function as a reinforcing agent, reward may be conceived of as following from or being contingent upon a behavior being demonstrated. It follows then that the effectiveness of the reinforcer depends in large part upon whether or not the person showing the behavior perceives the existence of a causal relationship between his behavior and the reinforcer.

In the case of an internal individual in the workplace who looks for and expects a causal relationship between performance and reward, and does not find it, it is the hypothesis of this research that he will look to a union organization to enhance or improve this relationship.

Extensive empirical research has been conducted to verify the validity of the internality-externality dimension as a psychological

variable. The results have generally supported the hypothesis that there is a significant difference between internals and externals with regard to their beliefs, feelings, and action tendencies toward some aspects of everyday life. It has also been found that such a generalized belief can be measured reliably, and that, as a psychological dimension, it is predictive of behavior in a variety of circumstances.

Other relevant empirical work examined political participation as a function of locus of control and found that such activity did correlate positively with an internal locus of control (Rosen and Salling, 1971). In fact, Rosen and Salling found that many of the traits of politically active individuals resembled those of Rotter's criterion for the internal: (1) greater alertness to important and useful information in the environment, (2) increased effort to improve the present environment, (3) heightened concern with skill and individual ability, and (4) greater resistance to subtle attempts to be influenced. Odewahn and Petty (1980, p. 154) suggest that "future studies that attempt to predict pro-union behavior should include personality measures of competence/self-esteem", as the employee rather than the organization may be the source of dissatisfaction.

If individuals possess a general set of beliefs that they have little control over the occurrence of rewards in their lives, then it is difficult to understand how or why they would engage in activities calculated to attain power or influence over their environment. Therefore, if the individual is going to make an effort to exercise

such power, then a belief in the internal locus of control would appear to be a prerequisite.

The most basic characteristic of internal individuals appears to be their greater efforts at coping with or attaining mastery over their environments. This is the most elemental deduction that can be made from the nature of the I-E variable. This hypothesis has found support both in the field and in the laboratory. The literature has indicated there is reason to expect a relationship between the locus of control belief and the attempt to influence the environment. It is the belief of this researcher that this phenomenon is evidenced in the workplace by pro-union attitudes, perceptions that unions are instrumental, and the propensity to form or join labor organizations. Therefore, this study will investigate the hypothesis that an internal locus of control belief is positively related with both pro-union attitudes and labor organization membership.

Control and the I-E Construct

As the basic difference between internals and externals is the question of where responsibility for the decisions for their life resides, the issue of control is paramount to any discussion of the impact of locus of control. Three studies that specifically address this issue in the workplace are Lyon (1965), Hammer and Berman (1981), and Allen and Keaveny (1981). In a study of job security as it relates to the individual employee, Lyon (1965, p. 4) asserts that since the passage of the Wagner Act in 1935 that "only collectively can they (the employees) assert their individuality at work." He therefore feels this makes the union attractive for two reasons.

(1) As work is necessary, the collective action afforded by the union protects job and pay, and may prevent or at least alleviate arbitrary treatment by the employer. (2) While membership in a union is in itself somewhat of a restriction, it is an expression of independence from management control; greater control of the work environment--through restrictions on the formal authority of management--may be possible.

Hammer and Berman (1981) examined the impact of several work related issues on pro-union voting in a representative election. In this study the authors found the union to be an attractive countervailing force in the work situation to regain control. That "unionization is a means toward a redistribution of power through the collective bargaining process" (Hammer and Berman, 1981, p. 416). They did find, however, that the type of union desired was different. For employees who joined a union to obtain power, a militant or aggressive union was desired. For the employee looking to enhance the rewards of employment, a more "protective" union was desirable. The more significant finding was the admonitation to researchers of psychological determinants of unionism to be aware of contextual differences. But, that the fundamental issue, collective action to gain power because of distrust of the power holders, holds across all relationships.

In another study, of university faculty, Allen and Keaveny (1981) looked at several demographic and perceptual characteristics as they relate to the demand for unionism. In research related to the present effort, they examined the question of control as it relates to faculty interest in unionizing. They found that faculty see the union as

instrumental in several situations. First, they felt union support might be an attempt on the part of the faculty to improve a deficient performance--reward situation. Or that secondly, it could be a backlash against the administration for failure to establish an adequate performance--reward link. But in any case, in a situation in which the faculty see a loss of control over the performance--reward situation--the union is seen as a mechanism to regain it.

The techniques for analysis of the locus of control variable as it moderates these relationships will be discussed in the following chapter. Also provided is a discussion of the research design and application.

CHAPTER IV

METHODOLOGY

In the present research respondent data on opinions and attitudes were collected using questionnaires. Analysis of this information was performed using moderated regression, ordinary least squares regression, factor analysis, and other statistical techniques. This chapter will discuss the development of the questionnaire, methodology and rationale for data collection, and statistical analysis.

Questionnaire and Instrumentation

A valid means of measuring locus of control expectancies is necessary. Phares (1955) made the first crude efforts to develop such a scale using an instrument of 13 skill and 13 chance items in a Likert format. These were developed from a priori ideas about the nature of skill-chance situations, and common sense. James (1957) followed by improving and revising Phares' work. His version of the scale has been used in several studies. Extensive scale development work was initiated by Rotter, Seeman, and Livernant (1962).

In order to develop a satisfactory instrument, it is desirable to make explicit exactly what is to be measured. Rotter and his associates distinguished among ideal, theoretical, and operational definitions for the Internal-External variable. The ideal definition refers to the verbal description of the I-E concept in broad general

terms. The theoretical definition states the antecedent conditions for the I-E and the subsequent behavior that is mediated by the I-E. The operational definition refers to the test or measure of I-E that is utilized. It is this last definition that is of primary concern to the present research.

Early efforts to develop the scale recognized that for any given individual, behavior based upon locus of control beliefs would be more highly related within a given need area than across several different needs. That is to say, with respect to a specific need the individual's locus of control beliefs could be predicted, but that does not mean that this same belief will hold across all need areas. From an applications standpoint, this means that prediction ought to be enhanced when we measure perceived locus of control separately in different life areas. Therefore, early efforts at scale development contained subscales from several areas--academic recognition, social identification, love and affection, dominance, social-political events, and general life philosophy. The first version of the I-E scale by Rotter, Seeman, and Liverant (1962) contained 100 forced-choice items with an internal and external response. However, item and factor analysis, social desireability measures, and subscale correlations forced abandonment of the subscale approach.

Rotter, Liverant, and Crowne (1961) then collaborated to develop the 23-item version that became known as the Rotter Internal-External Scale, or the I-E Scale (see Appendix A). The criterion for selection of the final 23 items was based on internal consistency and validity as demonstrated in two early studies. Six filler items were added

to partially disguise the intent of the instrument. The scale is described as a measure of generalized expectancy, and is additive.

Internal consistencies have been reported ranging from .65 to .79. Rotter (1966) felt the generalized nature of the items precluded higher consistency. Test-retest reliability of the instrument appears adequate. Phares (1976) gives figures from four studies as follows: .49 to .80, .48 to .84, .71 to .83, and .26 to .75, over three and nine month intervals.

Social desirability effects are always a problem in any instrument, but extensive examination of the I-E scale reveals that while at least a portion of the variance associated with the scale is attributable to social desirability, it would be incorrect to conclude the scale is seriously impaired (Phares, 1976).

As indicated earlier, the present I-E Scale consists of 29 items, of which six are fillers. The maximum score which an individual may obtain is 23, indiciating an extreme degree of externality. The more nearly the score is to zero, the more internally oriented the individual.

The I-E Scale has been modified for specific uses ranging from a four question I-E format used in the National Longitudinal Study done by Ohio State University, to the full questionnaire, and almost every combination in between. The most frequently deleted questions are those dealing with the academic environment (5, 10, 23) when the instrument is to be used in a work setting.

The particular version to be used in the present research is called the Different Situations Inventory (DSI), and is a more contemporary instrument for measuring locus of control (see Appendix B).

This instrument was developed in 1978 by Gardner and Warren of Boston University. The scale has been evaluated as follows: (1) A test-retest reliability of .90 was reported by Ifenwanta (1978) in an unpublished doctoral dissertation at Boston University. (2) Item analysis revealed the instrument to be a "very reliable instrument with about 85 percent of the test items significantly correlated to the total score" (Ifenwanta, 1978, p. 13). Criterion validity of the DSI and Rotter's I-E Scale has been found to be $r = .66$ ($p < .01$). Content validity was measured by Curry (1980) using three professional judges who had published research on locus of control in refereed journals. Assessments of the judges with respect to internal versus external was 100 percent in agreement. Construct validity was evaluated by Ifenwanta (1979), Cowan (1979), and Bigelow (1980). All found good consistency between the instrument and locus of control theory.

As the population to be sampled in this research was primarily blue-collar, and several in fact spoke no English, several of the DSI questions were modified in terminology. As an example, one question asked: "I might attribute difficulty in learning to improve at tennis to . . ." This was changed to read: "I might attribute difficulty in learning to improve at my favorite sport to . . ." Several questions were altered in a similar manner to make them more compatible with the sample population.

As the purpose of this research was to investigate the moderating effects of locus of control on several attitudes normally prevalent in the workplace, a proven mechanism for sampling these attitudes was required. Therefore, the remainder of the instrument to be used in this research was extracted from proven instruments, as will be discussed.

The questionnaire (see Appendices C, D, and E) is basically divided into four sections, with one being the Different Situations Inventory previously discussed. The purpose of this section is to ascertain the respondents' position on the Internality-Externality continuum. This section contains 20 questions in a forced choice format. One answer is "internal" in orientation, the other "external." This section is scored with a zero for an internal answer, a one (1) for an external answer. The range is therefore 0-20 with the higher score being the more external. As might be expected, the literature indicates that frequently the I-E results are skewed toward the internal end of the scale (Rotter, 1966; Joe, 1971). This could be as a result of the populations sampled, which to a large degree have been college students. In the incumbent research, however, the population is predominantly blue-collar employees, consequently the selection of criteria to identify an "internal" versus an "external" is somewhat problematic.

In this research the I-E scores will be used to determine the range of the values of this variable. The mean and standard deviation of the sample will be calculated. Then, using the technique of Runyon (1973), Mitchell, Smyser, and Weed (1975), and Kasperson (1982), those individuals scoring one standard deviation or greater above the mean will be classified as externals, and those scoring one standard deviation or more below the mean will be identified as internals. The group in the center, identified as "moderates" (Kasperson, 1982) will not be considered in one part of the analysis. The reason for this technique is because the data have normally been skewed toward the internal side, that is, respondents tend to mark the more "socially

acceptable" answers which skews the data to the left. This technigue is an attempt to get a more definitive sample. In a second set of evaluations, the locus of control variable will be applied and evaluated as a continuous variable. That is to say, the actual locus of control value for each respondent will be used in the calculation of the various regression coefficients and interaction terms used in the analysis. These two techniques will be compared and discussed.

The second section of the questionnaire deals primarily with the independent variables of interest in this research. In this section the respondent is asked to answer 30 questions on a five point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." The following sections will discuss the specific questions used to tap each independent variable, and the coding scheme used with that particular series of questions.

Pay Equity

This variable will be addressed by the following three questions:

1. In my opinion, the pay here is lower than other companies.
2. I'm paid fairly compared with other employees.
3. I feel I am adequately paid for what I do.

The source of these questions is the Science Research Associates Attitudes Survey, which is described in Miller (1977). This instrument was reported to have a product moment correlation of .89 with reliabilities of from .96 to .99 reported for groups larger than 50. Validity of the instrument was measured by conducting nondirective interviews among a cross-section of employees, with a good correspondence found to exist between study results and the considered judgments of

experienced observers. In a factor analysis of the SRA instrument, Dabas (1958, p. 221) identified this factor as "general satisfaction with financial reward for effort."

The "value" to be assigned the pay equity variable will be obtained by summing the response to these three questions. In all cases, the questionnaire is set up on a five-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." However, as the wording of the question is often altered to reduce order effects, the coding of the questions is important. In this particular instance, the coding is 1-5, 5-1, and 5-1 respectively. The value for all remaining variables will be determined in a similar fashion; the appropriate coding will be indicated after the question.

Income

The amount of compensation received can be used, along with education and other variables, as an indicator of status and socio-economic position. The following question will be asked:

4. The benefit program here provides well for my needs (5 = Strongly Agree, 1 = Strongly Disagree).

This question too came from the SRA survey (1977), as evaluated by Dabas (1958). In addition, the respondent will be asked a direct question about income. This will be discussed in the material covering section four of the questionnaire.

Alienation

Alienation will be examined by the following questions:

5. I often do things here that I wouldn't otherwise do if it were up to me (5 = Strongly Agree, 1 = Strongly Disagree).

This question was taken from an instrument designed by Pearlin (1962). Pearlin determined a reliability of .91 for this scale. This instrument is described in Price (1972).

One question from an instrument by Dean (1961, p. 751) was also used to evaluate alienation:

6. Sometimes I have the feeling other people are using me (5 = Strongly Agree, 1 = Strongly Disagree).

Dean determined a reliability of .78 for his instrument.

7. A person who wants to make his own decisions would be quickly discouraged here. (5 = Strongly Agree, 1 = Strongly Disagree.)

Question (7) was taken from a study by Aiken and Hage (1968, p. 928) which gave no estimates of reliability or validity, but which has been used extensively in other studies.

Perceived Influence

This attitude was examined using the following questions:

8. Even small matters have to be referred to some one else for a final decision. (1 = Strongly Agree, 5 = Strongly Disagree).

This question was also taken from the study by Aiken and Hage (1968, p. 928).

9. I am often able to do my job independently of others. (5 = Strongly Agree, 1 = Strongly Disagree.)

This question was taken from a study by Dunnette, Campbell, and Hakel (1967, p. 151).

10. I have to ask my boss before I do almost everything. (5 = Strongly Agree, 1 = Strongly Disagree) (Aiken and Hage, 1968, p. 928).

Work Involvement

The following question was taken from an instrument used by Lodahl and Kejner (1965, p. 137):

11. I'm really a perfectionist about my work. (5 = Strongly Agree, 1 = Strongly Disagree.)

Lodahl and Kejner (1965) determined a split-half reliability for their instrument for three groups of respondents (nurses, engineers, and students) corrected by the Spearman-Brown formula, of .72, .80, and .89 respectively.

A fourth question from the SRA survey (Miller, 1977, p. 357) was:

12. I'm really doing something worthwhile in my job. (5 = Strongly Agree, 1 = Strongly Disagree.)

13. I often have the opportunity to do a job from beginning to end. (5 = Strongly Agree, 1 = Strongly Disagree) (Aiken and Hage, 1968, p. 928).

14. I often see projects or jobs through to completion. (5 = Strongly Agree, 1 = Strongly Disagree) (Dunnette, Campbell, and Hakel, 1967, p. 151).

Satisfaction

The questions to be used to evaluate this attitude include:

15. I find real enjoyment in my work. (5 = Strongly Agree, 1 = Strongly Disagree.)

This question was taken from the work of Brayfield and Rothe (1951, p. 310) in which the authors calculated a reliability for their instrument of .77 using split-half calculations, corrected to .87 using the Spearman-Brown formula, and a validity of .92.

Additionally, two questions from the SRA survey were used to evaluate satisfaction (Miller, 1977, p. 359):

16. Management is really interested in the welfare of employees. (5 = Strongly Agree, 1 = Strongly Disagree.)

17. You always know where you stand with this company. (5 = Strongly Agree, 1 = Strongly Disagree.)

(Dis)Satisfaction with Supervision

The questions to be used to evaluate this attitude include:

18. My boss tells me where I stand. (1 = Strongly Agree, 5 = Strongly Disagree.)

This item was obtained from an instrument developed by Smith, Kendall, and Hulin (1969, p. 322) who reported a reliability of .87 (corrected using the Spearman-Brown formula).

19. My boss really tries to get our ideas about things. (1 = Strongly Agree, 5 = Strongly Disagree.)

20. My boss knows very little about his job. (5 = Strongly Agree, 1 = Strongly Disagree.)

The above questions are part of the SRA attitude survey (Miller, 1977, p. 359).

21. My boss insists that everything be done his way. (5 = Strongly Agree, 1 = Strongly Disagree.)

22. My boss emphasizes the quality of work. (1 = Strongly Agree, 5 = Strongly Disagree.)

These last two questions were extracted from a 48-item questionnaire developed by Fleishman (1957, p. 111) which has a test-retest reliability range from .46 to .87 and a split-half reliability from .68 to .98.

Effort/Reward Expectations

Effort/Reward expectations concerns the belief that performance is dependent upon effort and that reward is contingent upon performance (Sims and Szilagyi, 1976). This will be evaluated using the following questions:

23. Producing high quality work is rewarded with higher pay here. (5 = Strongly Agree, 1 = Strongly Disagree.)

24. Management gives me recognition when I produce high quality work. (5 = Strongly Agree, 1 = Strongly Disagree.)

These questions are taken from the study by Sims and Szilagyi (1976, p. 218), who reported a Cronbach alpha reliability of .88.

Participation in Decision Making

This variable will be examined as follows:

25. I frequently participate in decisions to hire new personnel. (5 = Strongly Agree, 1 = Strongly Disagree.)

26. I often have the opportunity for independent thought and actions. (5 = Strongly Agree, 1 = Strongly Disagree.)

These questions were extracted from the work of Aiken and Hage (1968, p. 928).

27. People like myself often have a lot of say in the way things are done here. (5 = Strongly Agree, 1 = Strongly Disagree.)

This question was taken from the study done by Pearlin (Price, 1972, p. 30).

Union Instrumentality

This variable is concerned with evaluating the apparent "usefulness" of a union to the individual involved, and is evaluated by two questions:

28. Employees in my job classification would benefit from a union. (5 = Strongly Agree, 1 = Strongly Disagree.)

29. A union is an effective means to gain influence. (5 = Strongly Agree, 1 = Strongly Disagree.)

These questions were taken from the work of Maxey and Mohrman (1980, p. 329), and were specifically designed to measure the potential efficacy of a union and to evaluate the respondents' subjective expectation of benefits. Correlation between the two items was found to range from .63 to .91 (depending on the type employee), however, no overall evaluation of validity and reliability was given.

The third section of the questionnaire deals with the respondents' evaluation of union instrumentality and union effectiveness. These attitudes will be measured using 10 questions from the 1977 Quality of Employment Survey (Kochan's (1979) study called these factors "general union attitudes"). Eight of these same items were evaluated in Chacko and Greer's (1982) study. Using test-retest techniques, Chacko and Greer's reliability coefficients for the instrumentality questions were .69, .56, .64, and .43 while the reliability coefficients for the effectiveness items were .73, .69, .63, and .75. Again because of the wording of these questions the coding is sometimes different. The items used are as follows.

Instrumentality

Unions in this country

1. Have a lot to say about who gets elected to public office. (5 = Strongly Agree, 1 = Strongly Disagree.)

2. Have a lot of influence over what laws are passed. (5 = Strongly Agree, 1 = Strongly Disagree.)

3. Are more powerful than employers. (5 = Strongly Agree, 1 = Strongly Disagree.)

4. Have a lot to say in how the country is run. (5 = Strongly Agree, 1 = Strongly Disagree.)

Effectiveness

Unions in this country

5. Protect workers from unfair actions by employers. (5 = Strongly Agree, 1 = Strongly Disagree.)

6. Improve the job security of workers. (5 = Strongly Agree, 1 = Strongly Disagree.)

7. Improve the wages and working conditions of workers. (5 = Strongly Agree, 1 = Strongly Disagree.)

8. Give members their money's worth for the dues they pay. (5 = Strongly Agree, 1 = Strongly Disagree.)

9. Have leaders who do what is best for themselves rather than what is best for their members. (1 = Strongly Agree, 5 = Strongly Disagree.)

10. Require members to go along with decisions they don't like. (1 = Strongly Agree, 5 = Strongly Disagree.)

The final section of the questionnaire, to a large degree, deals with demographic information on the respondent and is solicited for the most part by direct questions.

Union Membership

This variable is addressed simply by asking the respondent the direct question if he or she is a member of a union. (The question of choice of union membership is clouded somewhat by the fact that the large preponderance of the responses were collected in non-right-to-work states, so membership could be (and is) a condition of work in several cases.) This response was coded "1" for membership, "0" otherwise.

Sex

This variable was coded "0" for male respondents; "1" for female.

Ethnic Background

As has been indicated previously, ethnic background and the locus of control variable have been extensively investigated. In this particular research, because several of the sampled population are nonwhite (mostly Hispanic), the influence of race could be evaluated. Racial categories specified were Hispanic, black, caucasian, indian, oriental and other. Examination of the relationship between race and locus of control was conducted in a white/nonwhite format.

Income

In addition to the single question on income discussed in

section two of the questionnaire, the respondent was also asked to indicate his/her income on a scale provided. The scale choices and coding are as follows: under $5000 = 1; $5001-$8000 = 2; $8001-$11000 = 3; $11001-$14000 = 4; $14001-$17000 = 5; $17001-$20000 = 6; $20001 or greater = 7. This type of scale format was used to increase the likelihood the respondent would answer this sensitive item. The response on this scale, rather than the question in section two, was used to categorize the respondent with respect to income.

Size of Organization

In this research the employees were asked a simple question requesting an estimate on the part of the respondent as to the number of employees in his/her organization. Size of the organization was identified as follows: less than 100 employees = 0; from 100-1000 = 1; greater than 1000 = 2. (Obviously, the size variable would be the same for all subjects from the same organization but with pooled observations from all subject organizations the variable has variance.)

Occupation

The respondent was asked to describe his occupation in his own words. This was then categorized into one of the following groups: professional, technical, or kindred worker; business managers, official, or proprietor; clerical or sales; craftsman, foreman, or kindred worker; operator or kindred worker; and unskilled, service, or domestic worker.

Administration of the Questionnaire

For the most part the questionnaire was administered personally

by the researcher. In a large segment of the sample population, because of the nature of the work, a video tape was prepared and presented to a portion of the work force to explain the questionnaire. The respondents were promised anonymity and all data collection, coding, etc. was done by the researcher. However, in the case of the Spanish speaking and reading respondents, an assistant was used with translations and to answer questions. The purpose of the research was explained to the respondents, along with the promise that in no way would it be possible for their supervisors to become aware of their responses. They were then given the opportunity to withdraw from the survey. Three individuals in one of the New Mexico groups exercised this option. The respondents were given all the time they wanted to complete the questionnaire, though most finished in less than 20 minutes. Questionnaires are provided in Appendices C, D, and E. To protect against order bias in the responses, two versions of the questionnaire were developed (in both English and Spanish) with both the order of the questions scrambled as well as the order of the sections. Appendices C and D are examples of the same questionnaire with the order of the questions scrambled. The questionnaire at Appendix E is an example of one of the Spanish versions.

The respondents for the most part were not volunteers, but had in fact been directed to participate in the survey by their supervisors. Consquently, the problem of non-response bias was for the most part non-existant.

In each instance, a brief introductory presentation was given to explain the purpose of the study. The respondents were told the research was being done to complete requirements for a degree program.

They were told the kinds of things being investigated were job satisfaction, satisfaction with supervision, and attitudes toward unions. The respondents were encouraged to ask question, and many did--particularly about how they might benefit from the research. They were told the employer would be provided a cumulative analysis of his particular employees with respect to the variables of interest, and of the sample population as a whole. They were told however that how--or if--the employer used this information was beyond the control of the researcher. But they were told that the supervisors had all indicated interest in the results. If a union was present, the subjects were told that it too would be provided the information. Last but not least, the subjects were assured anonymity.

As the work units surveyed were for the most part small, it was possible for the researcher to develop some rapport with both employees and management.

The preponderance of the research was conducted using firefighter personnel (70 percent). However, these personnel represented a good cross-section with respect to age, education, race (17 percent Hispanic), union membership, income, location, and even to some extent sex as there were 17 female firefighter personnel in the sample. For the most part the respondents were cooperative, and interested in the research. And while they often wanted to know "what is in it for me?"--a natural reaction--they were none-the-less supportive of the research objectives. In practically every instance they wished the researcher well in his endeavors.

Sample Organizations

Several organizations were used in this research. They are briefly described in the following sections.

1. The custodial section of the physical plant of a large southwestern university. The parent organization in this situation was responsible for providing the utilities, maintenance, and other support for the academic and staff sections of the university. The custodial section was responsible for the direct housekeeping duties within the various organizations. These employees work primarily during the night hours, and were examined during that period. They were, for the most part, Hispanic, low income, and low education individuals. Many, in fact, spoke only Spanish, and several were "green carders"; Mexican citizens with temporary work permits in the U.S. The entire custodial section, to include supervisors, completed the questionnaires. The response rate was 100 percent except for three employees that were excused due to an inability to read either Spanish or English.

2. The employees of a large high quality motel in Las Cruces, New Mexico. These employees ranged broadly in education, income, age, and skill level. They were Hispanic and caucasians, as well as females and males. Due to a recent incident in the organization in which employee confidentiality had been compromised, fewer of the employees agreed to participate in the survey than had been anticipated. Again, these questionnaires were administered by the researcher.

3. The third group of employees were the management section of a light manufacturing company located in Dallas, Texas. The personnel of this organization ranged from semi-skilled to semi-professionals. Income levels, educational levels, and ethnic background also varied. This was the only group from a right-to-work state. In this instance, due to the nature of the work, the researcher gave an orientation to the supervisors, and they administered the questionnaire.

4. Firefighters, which represented the preponderance of the survey population, consisuted the final group of subjects. Specific organizations evaluated were as follows: Oklahoma City, Oklahoma; Las Cruces, New Mexico; Enid, Oklahoma; Midwest City, Oklahoma; Guthrie, Oklahoma; Bartlesville, Oklahoma; and Stillwater, Oklahoma. This sample represented a cross-section of most of the demographic categories discussed. For example, since firefighters from both New Mexico and Oklahoma were used, Hispanics, blacks, caucasians, and indians were sampled. Also, as the Las Cruces and Enid firefighters were not unionized, nonunion employees were represented in the sample. Variable organization size was represented by Guthrie, Oklahoma (less than 50), and Oklahoma City, Oklahoma (greater than 600). Income variations were also apparent between the Las Cruces firefighters and several of the smaller Oklahoma cites, when compared to the pay scales in Oklahoma City and Bartlesville. In addition, as would be expected, the respondents varied greatly in age, and work experience. With respect to education, most had at least finished high school. In the case of the firefighters, due to the nature of the work, the researcher administered the questionnaire to one "shift". The orientation and explanation of the questionnaire was video-taped,

and administered to the other two shifts by their supervisors. As far as could be determined response was 100 percent of those who were available to take the questionnaire.

Statistical Analysis

The procedures used in this analysis were done for the most part using the Statistical Analysis System (SAS) package.

The determination of the internal-external "split" points to be used was made by the researcher. This required the computation of data set means and standard deviations. The mean ± 1 standard deviation was used to identify the internal and external respondents (as indicated in the literature by Runyon, 1973; Mitchell, Smyser, and Weed, 1975; and Kasperson, 1982). The results obtained using this "splitting" of the locus of control measure were compared to results obtained with the continuous locus of control measure.

The questionnaire was produced in two versions to test for order effects of the questions (answers biased due to the procedural order of the questions). The literature suggests this is often a problem, hence suggests the use of two forms of the questionnaire with both the order of the questions altered, as well as the order of responses within given questions. This was done in this research (see Appendices C, D, and E). To ascertain whether there were order effects, a t-statistic was calculated to evaluate the mean score of the same question on the two versions (question order differences). For example, question 1 of version A appears as question 44 of version B. The t-statistic permits the opportunity to evaluate the hypothesis that the means of the two data sets--for the data item in question--are

not significantly different. If the hypothesis is supported, that is the means are not significantly different, then it can be said that order bias is not a factor in the analysis (within some selected level of significance).

Factor analyses were conducted of both the questionnaire items and the summed item variables (Pay Equity, Satisfaction, and so on). The primary purpose of performing this analysis was to determine whether the independent variables were really "independent." If these variables are not in fact independent, this technique facilitates the condensation of the original set of variables into a smaller set of variables (each measuring a similar phenomenon). Additional analysis can then be conducted using this new configuration. In this research an a priori assignment of questionnaire items to each of the summed variables was made (as discussed perviously). However, factor analysis was performed of the allocations to examine compatibility.

Several alternatives were available with respect to the criteria for selection of the number of factors to be extracted. The first used in this analsyis was the latent root criteria, or the eigenvalue method of factor selection. In this technique, only factors having an eigenvalue of one or greater were utilized. The rationale for this selection was that any individual factor should account for at least the variance of a single variable if it were to be retained.

A second technique, also used in this research to verify the a priori assignments, was an a priori factor selection by the researcher. In this situation, the researcher simply specified the number of factors to be used and the computer allocated items to these factors optimally. These results will be discussed in the next chapter.

Reliability can be broadly defined as the degree to which a measure is free from error, and therefore will yield consistent results. While it is true that behavioral measures are seldom totally reliable, that is free of error, their degree of reliability can be evaluated.

The literature identifies three basic methods of assessing the reliability of a measurement scale: test-retest, internal consistency, and alternative forms. The intent of all three is to determine the proportion of the variance in a measurement scale that is systematic, that is, recurring. All three make this evaluation by correlating scores obtained from a scale with some form of replication of that scale. If correlation between the two scores is high, then most of the variance can be said to be systematic, and therefore the measure can be depended upon to yield the same results in repeated use, with some degree of consistency.

Due to the nature of the data collection used in this research, the method used for determining reliability was internal consistency. In this technique, a measurement scale is applied to all subjects at one point and subsets of items within the scale are correlated. The measure of reliability is Cronbach's coefficient alpha, which is the most commonly accepted formula for assessing reliability of a measurement scale with multipoint items (Peters, 1979). The appropriate formulas are:

$$\alpha = \left(\frac{k}{(k-1)}\right)\left(1 - \frac{\sum_{i=1}^{k} \sigma_i^2}{\sigma_T^2}\right) \qquad (1)$$

where k = number of items in scale,

σ_i = variance of item, and

σ_T = total variance.

$$KR - 20 = \left(\frac{k}{(k-1)}\right)\left(1 - \frac{\sum_{i=1}^{k} PQ}{\sigma_T^2}\right) \text{ (for dichotomous variables)} \qquad (2)$$

where k = number of items in scale,

P = proportion of respondents of first type,

Q = proportion of respondents of second type (1-P), and

σ_T = total variance.

Because the total variance can be restructured as the sum of the item variances plus two times the sum of the item covariance, Cronbach alpha can be computed using the following formula as well:

$$\alpha = \left(\frac{k}{(k-1)}\right)\left(1 - \frac{\sum_{i=1}^{k} \sigma_i^2}{\sum_{i=1}^{k} \sigma_i^2 + 2\sum_{i>j}^{k}\sum^{k} \sigma_{ij}}\right) \qquad (3)$$

where k = number of items,

σ_i = item variance, and

σ_{ij} = item covariance.

The bulk of the primary analysis was done using two versions of regression analysis. In both cases the technique used was moderated regression (Saunders, 1956; Cohen, 1968; Zedeck, 1971; Darrow and Kahl, 1982; Greer and Castro, to be published). Moderated regression is a variation of multi-variate regression in which the variable of interest--locus of control, in this instance--is entered into the equations as an interaction term with all other predictor variables (Pay Equity, Satisfaction, and so on). It is felt this technique is more informative than simply the use of dummy variables to explain relationships. By this method the moderating influence of both

perspectives of locus of control--internal and external--can be evaluated on each of the other specific variables. In the first case a dichotomous variable for locus of control was entered, and in the second case locus of control was entered as a continuous variable.

The rationale for this technique is explained in Saunders (1956, p. 209), "There are many examples of situations in which the predictive validity of some psychological measure varies systematically in accord with some other independent psychological variables." Zedeck (1971) made the following observation about the technique:

> Moderated regression resulted in increases in predictive validity over the multiple correlation method and defines a general moderator variable as a qualitative or quantitative variable that improves the usefulness of a predictor by isolating subgroups of individuals for whom a predictor or set of regression weights are especially appropriate (p. 301).

In a recent application of the technique, Darrow and Kahl (1982) stated the following:

> Using this technique, a moderator effect will manifest itself as a relationship between the dependent variable and the cross product of the independent and moderator variable, allowing the postulations of individual differences in the relationships between the variables (p. 35).

In the present research, the relationship between the dependent variables union effectiveness, union instrumentality, union membership, and the cross product of locus of control and the other independent variables was examined.

The second variation of the moderated regression analysis technique investigated the relationship of the various independent variables to the three dependent variables, using the continuous version locus of control construct as an interaction term with the various independent variables. That is to say, the variable "locus

of control" was operationalized continuously across its entire range of 0-20. In each specific instance, the measured locus of control value was interacted with the other variable values for each respondent.

The results of the various analyses will be presented and discussed in the next chapter.

CHAPTER V

RESULTS

This chapter contains an explanation of the statistical results obtained using the methods described in Chapter IV. An analysis of these results provides answers to the questions posed in Chapter I concerning the degree and nature of the relationship between certain employee attitudes, demographics, and measures of unionism (union membership, evaluations of union instrumentality, and union effectiveness). The conclusions that may be reached from these analyses are discussed in Chapter VI.

This chapter is organized into three parts. The first section gives a brief summary of the collection effort involved in the study. This is basically qualitative. The second section will present evidence indicating the validity and reliability of the information collected, the techniques used and the results. The third section discusses the data collected. In this section various tables are provided to present graphic illustration of the responses received.

Data Presentation

Questionnaires were completed by 565 respondents. Table III provides a summary of the demographic data of these persons. As can be seen, a fairly wide cross-section was achieved. Table IV provides a summary of the respondents by occupation and geographic location.

TABLE III

DEMOGRAPHIC DATA OF RESPONDENTS

Data Item	Distribution
Sex	Male=493; Female=72
Ethnic Background	Hispanic=94; Black=19; Caucasian=433; Indian=17
Size of Organization	Less then 100=215; 100 to 1000=285; greater than 1000=65
Occupation	Business manager, official, proprietor=23; clerical or sales=23; craftsman, foreman=16; operator=387; unskilled, service=116
Location	Las Cruces, New Mexico=144; Dallas, Texas=39; Oklahoma City, Oklahoma=139; Midwest City, Oklahoma=59; Enid, Oklahoma=66; Guthrie, Oklahoma=21; Bartlesville, Oklahoma=59; Stillwater, Oklahoma=39
Right-to-Work	Yes=39; No=526
Income	Under $5000=31; $5000-$7999=38; $8000-$10999=57; $11000-$13999=66; $14000-$16999=72; $17000-$19999=79; greater than $20000=222

TABLE IV

LOCATION-OCCUPATION SUBGROUPS

Location	Occupation	Distribution
Las Cruces, N. M.	Custodial Personnel	86
Las Cruces, N. M.	Motel Employees	35
Las Cruces, N. M.	Firefighters	22
Dallas, Texas	Industrial Workers	39
Oklahoma City, Ok.	Firefighters	139
Midwest City, Ok.	Firefighters	59
Enid, Ok.	Firefighters	66
Guthrie, Ok.	Firefighters	21
Bartlesville, Ok.	Firefighters	59
Stillwater, Ok.	Firefighters	39

Order Effects Test

In a data collection effort of this magnitude, certainly concern for the collection effort is significant. Two tests were conducted of this effort to evaluate this concern.

First, a test for order bias was performed on the pairs of questionnaire items. As mentioned in Chapter IV, a t-statistic was used for this evaluation. The hypothesis in this instance was that the mean value of the answer to the same question (regardless of location in the questionnaire) would be the same--within some level of significance. In this instance a significance level of .05 was selected. With a 60 item questionnaire, for the hypothesis to be supported (that question position is not significant) no more than three item-pairs could fail the t-test. At Appendix F is a portion of these test results. Two sets of item-pairs did in fact fail this test (using the .05 criterion), but this is within the acceptable tolerance. Thus, it can be said, that order or position bias in not significant in this particular collection effort.

Reliability

Reliability of the questionnaire was evaluated using Cronbach's alpha to examine internal consistency (this procedure is discussed in Chapter IV). As the number of questionnaire items used to evaluate the variables was often different, the Spearman-Brown formula (Guilford, 1954; Peter, 1979) was used to correct for attenuation. The results of this evaluation are shown in Table V, with the attenuated values adjusted to a questionnaire length of three. The literature has this to say about coefficient alpha:

TABLE V

INSTRUMENT RELIABILITY

Variable	Questionnaire Items	Original Coefficient Alpha	Attenuated Coefficient Alpha
Pay Equity	3	.61	.61
Alienation	3	.54	.54
Perceived Influence	3	.42	.42
Work Involvement	4	.42	.35
Satisfaction	3	.52	.52
Dissatisfaction with Supervision	5	.64	.52
Effort/Reward Expectations	2	.55	.67
Participation	3	.57	.57
Union Instrumentality	6	.65	.48
Union Effectiveness	6	.81	.68
Locus of Control	20	.71	.27*

*Locus of control was evaluated using a separate instrument of 20 dichotomous items.

> Though no hard and fast rules have been offered for evaluating the magnitude of reliability coefficients, Nunnally (1967, p. 226) suggests the following guidelines. In early stages of research, modest reliability in the range of .5 to .6 will suffice. For basic research, it is argued that increasing reliability beyond .8 is unnecessary because at that level correlations are attenuated very little by measurement error (Peter, 1979, p. 15).

This would suggest that the instrument used in this research is in fact a reliable measure.

Factor Analysis Results

On an a priori basis 13 "independent" variables were identified for use in the analysis. Of these five were identified rather easily. income (INCOME) and union membership (UNIONMEM) were identified by direct questions. As noted earlier, locus of control (LOCUS), union instrumentality (UNIONIN), and union effectiveness (UNIONEFF) were measured using parts of instruments designed specifically to measure these variables. The remaining eight variables were measured using selected items from several source instruments. The selection of questionnaire items to be used to measure each of these eight specific variables was done a priori by the researcher. To evaluate the quality of this selection process, a factor analysis was done on the independent variables.

Using a criterion of eignvalues of one or greater, five factors were extracted as significant from the 13 a priori variables. Table VI shows the factor pattern as a result of this analysis. This is a rotated pattern (varimax rotation technique). The highest loading for each variable has been underlined. In this configuration, 63 percent of the variance is explained. This factor analysis was based on 565 observations.

TABLE VI

FACTOR ANALYSIS OF SUMMED VARIABLES, N=5

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
PAYEQ	0.6808	0.1215	-0.3189	0.1720	0.0132
INCOME	0.7773	0.0043	0.1320	-0.1245	0.0475
ALIENA	0.3126	0.5654	-0.1622	0.1137	-0.2033
PERINF	0.0750	0.7595	-0.0145	0.1205	-0.0112
WORKINV	0.1127	0.1027	0.0904	-0.0126	-0.7132
SAT	0.6697	0.4050	0.0195	0.0417	-0.1917
DISSAT	-0.1283	-0.7902	0.0993	0.0750	0.0853
EXPECT	0.6048	0.4323	-0.0511	0.2033	0.0596
PARTIC	-0.0757	0.2541	0.0512	0.8265	0.0187
UNIONIN	0.0387	-0.0621	0.8446	0.1274	0.0334
UNIONEFF	-0.1043	-0.1410	0.7459	-0.2734	-0.0720
UNIONMEM	-0.3635	0.2358	0.2947	-0.6296	0.0348
LOCUS	0.0998	-0.0508	0.0655	-0.0071	0.7629

VARIANCE EXPLAINED BY EACH FACTOR

Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
2.1746	2.0436	1.5301	1.2919	1.1899

The value of factor analysis is in the apparent explanation provided by the factors. For this to be meaningful, some definition must be given to these newly identified factors, based on the variables contained in them. This requires a substantive interpretation of the pattern of factor loadings, based on the evidence represented by those variables. Titles were assigned to the five factors identified in this analysis according to the following rationale.

Factor 1--Work Compensations

This factor contains four independent variables: Pay Equity (PAYEQ), Income (INCOME), Satisfaction (SAT), and Effort/Reward Expectations (EFFORT/REWARD). Analysis of these variables shows that a high score on Pay Equity indicates the respondent perceives his pay as equitable. A high score on Income means the respondent feels his needs are being met. Satisfaction is an indication of the respondent's attitude toward his work and management, a high score indicates satisfaction (or economic satisfaction). Effort/Reward Expectations reflect the opinion of the respondent toward an effort/reward relationship. A high score indicates the respondent feels effort is adequately rewarded. As these are all generally related forms of compensation, this factor is labeled "Work Compensations."

Factor 2--Work Attitudes

This factor is made up of the variables Alienation (ALIENA), Perceived Influence (PERINF), and Dissatisfaction (DISSAT). Alienation is an indication of the respondent's feelings of alienation, or isolation, in the work environment. A low score on this variable

indicates low alienation, that is, the respondent does not feel alienated. Perceived Influence is a measure of the respondents perceived influence in the workplace, or a feeling of how much autonomy he/she may have. A high score indicates he/she does feel they have influence in the particular work situation. Dissatisfaction is an indication of the respondent's dissatisfaction with supervision. A low score indicates the employee is not dissatisfied with the quality of the supervision. This factor is labeled "Work Attitudes" as all these variables deal with how the respondent perceives his work situation.

Factor 3--Union Attitude

This factor contains the two variables Union Influence (UNIONIN) and Union Effectiveness (UNIONEFF). These variables are both the result of a subjective evaluation on the part of the respondent about what the union does, and how well it does it. In both cases, a high score indicates that the respondent evaluates unionism positively. Thus the factor is called "Union Attitudes."

Factor 4--Union Support

This factor contains two variables, Participation (PARTIC) and Union Membership (UNIONMEM). As Union Membership is a dichotomous variable, "1" indicating active union membership and "0" indicating nonmembership, a low score on Union Membership indicates nonmembership. Participation on the other hand is an evaluation on the part of the respondent of his feeling about his ability to participate in decision making in the workplace. A high score

indicates a feeling of an ability--or opportunity--to be involved. This relationship is supported in the literature (Smith and Hopkins, 1979) as participation in decision making was found to be negatively correlated with union membership. This factor is labeled "Union Support" for these reasons.

Factor 5--Control

This factor is the most supportive of the hypothesis of this research. The factor contains two variables--Work Involvement (WORKINV) and Locus of Control (LOCUS). Work Involvement measures the respondents feeling about his involvement in various aspects of the workplace. A high score indicates he is involved. Locus of Control on the other hand is the measure of the respondents position on the Internal-External Scale. In this particular evaluation, the respondents actual score is used, so a high score indicates an external orientation. This relationship then, a high locus of control score and a low work involvement score would indicate an external does not get involved in work situations. This is explained by the external's philosophy that since he cannot change things anyhow, why try. Hence this factor is called "Control." The internal will get involved, because he seeks control.

While the literature suggests that loadings greater than .30 may be used to identify factors, certainly these must be considered cautiously. Loadings of greater than .50 are considered "good," with those greater than .70 being considered "excellent" indicators of commonality. A factor loading of .70 indicates that almost 50 percent of the variance of the data variable in question is common to the

factor. As can be seen in Table VI, at least one variable satisfies this criterion in each factor identified, and all loadings are greater than .50 (the least being .56, which indicates almost 32 percent common variance). This would suggest a large degree of overlapping true variance between the data variable and the factor. It will be noted however, that many of the data variables are not "factor pure," that is, do not just relate to a single factor. If again, a factor loading of .30 is considered adequate, many of the data variables load to this degree on two factors. This impacts the ability to make inferences about the nature of the factor.

The literature suggests that factor analysis, unlike some other analytic techniques, is a technique to evaluate interdependence in which all variables are considered simultaneously. Four functions are normally attributed to factor analysis. In this particular situation, the "R" type analysis was done, which is simply the identification of a latent set of dimensions in a large set of variables. In the "R" type analysis, this is the end in itself. In addition, the amount of variance explained was compared to that obtained in a second factor analysis.

A second function of factor analysis is to identify appropriate variables for subsequent regression, correlation or discriminant analysis. This was done in a second set of factor analysis. This set was used to validate the assignment process of the data items to the original a priori 13 variables. As five of the original variables were relatively well defined (Income, Union Instrumentality, Union Effectiveness, Union Membership, and Locus of Control), a forced factor selection of eight was used in the second factor selection.

Only pertinent questionnaire items were used in contrast to the a priori variables in the previous factor analysis. The analysis is based on 565 observations and the results are shown in Table VII.

Titles were assigned to the seven significant factors identified in this analysis according to the following rationale.

Factor 1--Autonomy

This factor contains the data received in response to the following questionnaire items:

23. I often have the opportunity for independent thought and actions.

31. I have to ask my boss before I do almost anything.

32. My boss knows very little about his job.

37. Even small items have to be referred to someone higher up for a final decision.

40. A person who wants to make his own decisions would be quickly discouraged here.

46. My boss insists that everything be done his way.

As can be seen, all the questions address the respondent's evaluation of his autonomy, or ability to operate independently in the work environment. Questions 32 and 46 are directly related to the respondent's evaluation of his supervisor. They have a negative sign in this situation because of the way they are scored in the original analysis. It is felt that all these questions require a subjective evaluation on the part of the respondent as to his independence on the job. Hence the tital "Autonomy."

TABLE VII

ROTATED FACTOR ANALYSIS, N=8

	Fac 1	Fac 2	Fac 3	Fac 4	Fac 5	Fac 6	Fac 7	Fac 8
V21	-0.094	-0.041	0.711	-0.122	-0.054	0.009	-0.050	-0.074
V23	0.397	0.052	-0.364	0.329	0.081	-0.004	0.273	-0.091
V24	-0.397	0.052	0.682	0.329	0.081	-0.004	0.273	-0.091
V25	-0.008	0.497	-0.373	0.117	0.079	0.340	0.098	0.078
V26	0.049	-0.114	-0.123	-0.009	0.728	0.034	0.100	-0.110
V27	0.172	0.280	0.377	0.148	0.532	-0.100	-0.188	0.065
V28	0.145	0.090	0.005	0.301	-0.159	0.132	0.501	0.191
V29	0.062	0.343	-0.485	0.211	0.039	0.200	0.092	-0.173
V30	0.123	0.177	-0.329	0.642	0.068	0.012	0.023	-0.050
V31	0.710	-0.070	0.045	0.035	0.076	0.094	0.126	-0.205
V32	-0.587	-0.120	0.231	0.204	-0.280	-0.003	-0.007	-0.010
V33	-0.050	0.267	-0.360	0.175	-0.004	0.518	0.029	-0.047
V35	0.017	0.612	-0.088	0.001	0.139	-0.017	0.054	-0.327
V36	0.034	0.774	0.024	0.189	0.040	0.037	0.010	0.067
V37	0.547	0.216	0.127	0.214	-0.014	0.078	0.165	-0.270
V38	-0.036	0.194	-0.130	0.724	-0.038	0.024	-0.024	0.123
V40	0.547	-0.033	-0.233	0.161	0.087	0.346	-0.080	0.031
V41	0.377	0.229	-0.068	-0.152	0.042	0.481	-0.104	-0.100
V42	0.202	0.658	0.030	0.020	-0.082	0.077	-0.011	0.189
V43	0.184	0.055	-0.282	0.117	0.171	-0.032	0.582	-0.137
V44	-0.174	-0.280	0.068	0.353	0.212	0.438	0.258	-0.111
V45	-0.123	0.010	0.368	-0.041	-0.271	-0.090	-0.145	0.310
V46	-0.687	-0.067	0.246	0.030	0.069	-0.034	-0.076	-0.122
V47	0.285	0.080	0.060	-0.027	0.068	0.699	0.031	0.070
V48	0.006	-0.010	-0.040	-0.168	0.154	-0.010	0.746	-0.005
V49	-0.077	0.531	-0.359	0.303	-0.112	0.187	0.028	-0.104
V50	0.060	0.096	-0.245	-0.028	0.707	0.181	0.187	0.103
	VARIANCE EXPLAINED BY EACH FACTOR							
	2.608	2.521	2.504	1.717	1.705	1.586	1.487	1.198

Factor 2--Compensation

The questionnaire items loading heaviest on this factor include:

25. Management is really interested in the welfare of the employee.

35. I'm paid fairly compared with other employees.

36. I feel I am adequately paid for what I do.

42. In my opinion, the pay here is lower than other companies.

49. Producing high quality work is rewarded with high pay here.

This factor is labeled "Compensation" as all the items deal with pay, perceived equity of pay, or employee welfare. This is an evaluation on the part of the respondent about his perception of his position relative to that of others. It relates most directly to the "bread and butter" question often raised in the literature.

Factor 3--Recognition

This factor taps the respondent's feelings about how well his/her efforts in the workplace are recognized. It contains the questionnaire items:

21. My boss tells me where I stand.

24. My boss really tries to get our ideas about things.

29. Management gives me recognition when I produce high quality work.

45. My boss emphasizes the quality of work.

To a large degree this deals directly with the respondent's perception of how well he/she is personally rewarded for work well done. It taps the individual's need to be recognized.

Factor 4--Influence

Two questionnaire items are used to evaluate this factor:

30. People like myself often have a lot to say or influence on the way things are run.

37. I frequently participate in decisions to hire people.

This factor relates to Perceived Influence in the original analysis, and measures the respondent's opinion of how well he/she is allowed to participate in decision making. As is frequently the case, it requires a very subjective evaluation on the part of the respondent.

Factor 5--Work Satisfaction

In this situation the respondent is required to evaluate his job and work environment as they relate to his/her personal evaluation scheme. The following questionnaire items are used to tap this attitude:

26. I'm really doing something worthwhile in my work.

27. Most things in life are more important than work.

50. I find real enjoyment in my work.

As can be seen, these items address the person's evaluation of the job--relative to his own specific expectancies.

Factor 6--Work Attitudes

The questionnaire items used to make up this factor include:

33. You always know where you stand with this company.

41. Sometimes I have the feeling other people are using me.

44. I'm really a perfectionist about my job.

47. I often do things in my work that I wouldn't otherwise do if it were up to me.

In this situation the respondent is asked to evaluate several different situations with respect to his/her work. In all cases he/she is asked to evaluate some aspect of the work environment relative to some personal standard.

Factor 7--Responsibility

In this situation the respondent is asked to quantify his/her ability or opportunity to perform independent actions. For many, this opportunity is significant to job satisfaction and good performance. The questionnaire items used in this instance are:

28. I am often able to do my job independently of others.

43. I often have the opportunity to do a job from beginning to end.

48. I often see projects of jobs through to completion.

As can be seen at the bottom of Table VII using this factor pattern, 57 percent of the variance is explained. This is determined by summing the values given in "Variance Explained by Each Factor" and dividing by the number of items. That is to say, if the individual questionnaire items had been grouped into the seven factors discussed (rather than the original 13 selected a priori), 57 percent of the variance could be explained. The configuration reported in Table VI, the original configuration, explained 63 percent of the variance.

Regression analyses were run using the seven factor arrangement of questionnaire items. The results of these analyses are shown in Tables VIII through XIII. The results of the analyses performed on

TABLE VIII

UNION EFFECTIVENESS (FACTOR), LOCUS=CONTINUOUS

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	16.25	17.46	17.13	17.96
	(6.94)***	(7.28)***	(7.27)***	(3.15)***
LOCUS		-0.15		-0.17
		(2.19)**		(0.16)
FACTOR 1 (Autonomy)	-0.26	-0.26	-0.21	-0.21
	(4.30)***	(4.39)***	(1.55)	(1.51)
FACTOR 2 (Compensation)	-0.15	-0.14	-0.12	-0.13
	(2.90)***	(2.66)***	(0.99)	(1.00)
FACTOR 3 (Recognition)	0.06	0.06	0.31	0.29
	(0.85)	(0.89)	(2.56)**	(1.79)*
FACTOR 4 (Influence)	-0.06	-0.06	0.01	0.01
	(0.57)	(0.56)	(0.05)	(0.01)
FACTOR 5 (Work Sat.)	0.01	0.02	0.01	0.01
	(0.06)	(0.25)	(0.08)	(0.05)
FACTOR 6 (Work Attitudes)	0.12	0.11	-0.23	-0.23
	(1.64)	(1.52)	(1.34)	(1.33)
FACTOR 7 (Responsibility)	0.08	0.07	0.17	0.16
	(0.80)	(0.68)	(0.73)	(0.66)
SEX	0.73	0.69	1.28	1.26
	(1.38)	(1.30)	(1.02)	(1.00)
WHITE/NONWHITE	-1.09	-1.20	-3.16	-3.17
	(2.45)***	(2.71)***	(2.98)***	(2.98)***
RIGHT-TO-WORK	0.08	0.04	0.60	0.60
	(0.13)	(0.06)	(0.42)	(0.41)
OCCUPATION	0.88	0.87	0.34	0.33
	(1.91)*	(1.88)*	(0.33)	(0.32)
UNION INSTRUMENTALITY	0.35	0.35	0.35	0.35
	(8.20)***	(8.29)***	(4.01)***	(3.77)***
UNION MEMBERSHIP	2.42	2.47	2.80	2.86
	(5.92)***	(6.06)***	(3.10)***	(2.98)***
FAC 1 * LOCUS			-0.01	-0.01
			(0.56)	(0.46)
FAC 2 * LOCUS			-0.01	-0.01
			(0.22)	(0.19)
FAC 3 * LOCUS			-0.06	-0.05
			(2.73)***	(1.72)*
FAC 4 * LOCUS			-0.02	-0.01
			(0.42)	(0.49)
FAC 5 * LOCUS			-0.01	-0.01
			(0.39)	(0.34)
FAC 6 * LOCUS			0.08	0.09
			(2.59)***	(2.54)**
FAC 7 * LOCUS			-0.02	-0.02
			(0.49)	(0.42)
SEX * LOCUS			-0.18	-0.18
			(0.76)	(0.74)
RACE * LOCUS			0.41	0.41
			(2.07)**	(2.07)**
RTW * LOCUS			-0.16	-0.15
			(0.56)	(0.55)
OCCUP * LOCUS			0.09	0.10
			(0.50)	(0.51)
UNIONIN * LOCUS			-0.01	-0.01
			(0.80)	(0.01)
UNIONMEM * LOCUS			-0.10	-0.09
			(0.56)	(0.51)
N	564	564	564	564
R^2	0.3133	0.3193	0.3431	0.3432
F	19.341	18.427	10.809	10.391
F_{1-3}			1.87	
F_{2-4}				1.50

t-values indicated in parentheses
***Indicates significance at $p<.01$ with two-tailed test
**Indicates significance at $p<.05$ with two-tailed test
*Indicates significance at $p<.10$ with two-tailed test

TABLE IX

UNION EFFECTIVENESS (FACTOR), LOCUS=BINARY

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	14.21	14.63	14.60	14.29
	(5.56)***	(5.69)***	(5.65)***	(4.16)***
LOCUS		-0.45		0.70
		(1.29)		(0.13)
FACTOR 1 (Autonomy)	-0.25	-0.26	-0.29	-0.28
	(3.91)***	(3.95)***	(3.34)***	(3.20)***
FACTOR 2 (Compensation)	-0.08	-0.07	-0.12	-0.12
	(1.42)	(1.28)	(1.55)	(1.54)
FACTOR 3 (Recognition)	0.09	0.10	0.20	0.21
	(1.30)	(1.34)	(2.34)**	(2.31)**
FACTOR 4 (Influence)	-0.10	-0.10	-0.01	0.01
	(0.91)	(0.93)	(0.01)	(0.02)
FACTOR 5 (Work Sat.)	-0.07	-0.08	-0.05	-0.06
	(0.70)	(0.87)	(0.47)	(0.44)
FACTOR 6 (Work Attitudes)	0.14	0.13	0.12	0.12
	(1.70)*	(1.64)	(1.20)	(1.20)
FACTOR 7 (Responsibility)	0.13	0.12	0.12	0.12
	(1.19)	(1.13)	(0.84)	(0.85)
SEX	0.70	0.71	0.79	0.79
	(1.21)	(1.23)	(1.02)	(1.02)
WHITE/NONWHITE	-1.26	-1.32	-2.08	-2.07
	(2.61)***	(2.72)***	(3.31)***	(3.29)***
RIGHT-TO-WORK	0.20	0.17	0.40	0.40
	(0.30)	(0.25)	(0.47)	(0.47)
OCCUPATION	0.90	0.91	0.68	0.68
	(1.79)*	(1.80)*	(1.03)	(1.04)
UNION INSTRUMENTALITY	0.39	0.40	0.41	0.41
	(8.58)***	(8.62)***	(6.90)***	(6.77)***
UNION MEMBERSHIP	2.63	2.67	2.74	2.74
	(5.99)***	(6.07)***	(4.70)***	(4.69)***
FAC 1 * LOCUS			0.03	0.02
			(0.20)	(0.15)
FAC 2 * LOCUS			0.07	0.07
			(0.65)	(0.61)
FAC 3 * LOCUS			-0.27	-0.28
			(2.48)**	(1.88)*
FAC 4 * LOCUS			-0.26	-0.27
			(1.19)	(1.19)
FAC 5 * LOCUS			-0.07	-0.08
			(0.39)	(0.41)
FAC 6 * LOCUS			0.19	0.19
			(1.15)	(1.09)
FAC 7 * LOCUS			-0.01	-0.02
			(0.03)	(0.07)
SEX * LOCUS			-0.77	-0.79
			(0.65)	(0.66)
RACE * LOCUS			2.00	1.99
			(1.99)**	(1.98)**
RTW * LOCUS			-0.61	-0.62
			(0.43)	(0.43)
OCCUP * LOCUS			-0.02	-0.02
			(0.02)	(0.02)
UNIONIN * LOCUS			-0.02	-0.03
			(0.28)	(0.31)
UNIONMEM * LOCUS			-0.25	-0.26
			(0.28)	(0.31)
N	470	470	470	470
R^2	0.3360	0.3385	0.3600	0.3600
F	17.792	16.665	9.606	9.231
F_{1-3}			1.28	
F_{2-4}				1.14

t-values indicated in parentheses
***Indicates significance at $p<.01$ with two-tailed test
**Indicates significance at $p<.05$ with two-tailed test
*Indicates significance at $p<.10$ with two-tailed test

TABLE X

UNION INSTRUMENTALITY (FACTOR), LOCUS=CONTINUOUS

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	15.78	14.90	15.46	11.83
	(7.19)***	(6.53)888	(6.93)***	(2.20)**
LOCUS		0.09		0.75
		(1.40)		(0.74)
FACTOR 1 (Autonomy)	-0.08	-0.07	-0.06	-0.02
	(1.38)	(1.30)	(0.47)	(0.17)
FACTOR 2 (Compensation)	-0.02	-0.02	0.05	0.07
	(0.38)	(0.50)	(0.49)	(0.63)
FACTOR 3 (Recognition)	-0.15	-0.15	-0.27	-0.20
	(2.40)**	(2.42)**	(2.25)**	(1.27)
FACTOR 4 (Influence)	-0.12	-0.12	-0.46	-0.40
	(1.30)	(1.30)	(2.21)**	(1.83)*
FACTOR 5 (Work Sat.)	0.04	0.06	0.40	0.42
	(0.49)	(0.68)	(2.13)**	(2.22)**
FACTOR 6 (Work Attitudes)	-0.15	-0.15	-0.09	-0.09
	(2.21)**	(2.13)**	(0.59)	(0.42)
FACTOR 7 (Responsibility)	0.33	0.34	0.09	0.13
	(3.51)***	(3.57)***	(0.41)	(0.61)
SEX	-0.47	-0.44	0.98	1.03
	(0.94)	(0.88)	(0.83)	(0.87)
WHITE/NONWHITE	-0.83	-0.75	-1.78	-1.75
	(1.98)**	(1.78)*	(1.76)*	(1.73)*
RIGHT-TO-WORK	-0.91	-0.88	1.26	1.26
	(1.46)	(1.41)	(0.94)	(0.94)
OCCUPATION	-0.13	-0.12	0.86	0.89
	(0.30)	(0.29)	(0.88)	(0.91)
UNION EFFECTIVENESS	0.31	0.31	0.25	0.27
	(8.20)***	(8.29)***	(3.06)***	(3.13)***
UNION MEMBERSHIP	-0.16	-0.21	0.96	1.06
	(0.41)	(0.52)	(1.04)	(1.14)
FAC 1 * LOCUS			-0.01	-0.01
			(0.03)	(0.27)
FAC 2 * LOCUS			-0.02	-0.02
			(0.92)	(1.07)
FAC 3 * LOCUS			0.02	0.01
			(1.10)	(0.25)
FAC 4 * LOCUS			0.07	0.06
			(1.90)**	(1.51)*
FAC 5 * LOCUS			-0.07	-0.07
			(1.95)**	(2.05)**
FAC 6 * LOCUS			-0.02	-0.02
			(0.52)	(0.66)
FAC 7 * LOCUS			0.05	0.03
			(1.18)	(0.83)
SEX * LOCUS			-0.24	-0.26
			(1.09)	(1.14)
RACE * LOCUS			0.21	0.21
			(1.15)	(1.14)
RTW * LOCUS			-0.43	-0.44
			(1.71)*	(1.71)*
OCCUP * LOCUS			-0.18	-0.18
			(0.97)	(1.00)
UNIONEFF * LOCUS			0.01	0.01
			(0.91)	(0.56)
UNIONMEM * LOCUS			-0.24	-0.26
			(1.41)	(1.50)
N	564	564	564	564
R^2	0.1999	0.2028	0.2294	0.2302
F	10.591	9.992	6.161	5.948
F_{1-3}			1.58	
F_{2-4}				1.47

t-values indicated in parentheses
***Indicates significance at $p<.01$ with two-tailed test
**Indicates significance at $p<.05$ with two-tailed test
*Indicates significance at $p<.10$ with two-tailed test

TABLE XI

UNION INSTUMENTALITY (FACTOR), LOCUS=BINARY

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	14.99	14.62	14.39	13.13
	(6.25)***	(6.02)***	(5.89)***	(4.03)***
LOCUS		0.33		2.88
		(0.98)		(0.58)
FACTOR 1 (Autonomy)	-0.06	-0.05	-0.01	-0.01
	(0.92)	(0.86)	(0.18)	(0.01)
FACTOR 2 (Compensation)	0.02	-0.03	-0.01	0.01
	(0.45)	(0.55)	(0.04)	(0.02)
FACTOR 3 (Recognition)	-0.16	-0.16	-0.24	-0.22
	(2.30)**	(2.33)**	(2.88)***	(2.36)**
FACTOR 4 (Influence)	-0.10	-0.10	-0.19	-0.17
	(0.10)	(0.95)	(1.46)	(1.32)
FACTOR 5 (Work Sat.)	0.04	0.06	0.13	0.14
	(0.51)	(0.63)	(1.08)	(1.17)
FACTOR 6 (Work Attitudes)	-0.12	-0.12	-0.15	-0.14
	(1.60)	(1.55)	(1.60)	(1.50)
FACTOR 7 (Responsibility)	0.25	0.25	0.19	0.21
	(2.44)**	(2.48)**	(1.46)	(1.55)
SEX	-0.38	-0.38	0.16	0.16
	(0.69)	(0.70)	(0.22)	(0.21)
WHITE/NONWHITE	0.69	0.65	-0.67	-0.65
	(1.51)	(1.40)	(1.12)	(1.07)
RIGHT-TO-WORK	-0.95	-0.92	-0.20	-0.20
	(1.47)	(1.43)	(0.24)	(0.24)
OCCUPATION	0.02	0.01	0.84	0.85
	(0.03)	(0.02)	(1.36)	(1.37)
UNION EFFECTIVENESS	0.35	0.35	0.35	0.36
	(8.58)***	(8.62)***	(6.73)***	(6.66)***
UNION MEMBERSHIP	-0.61	-0.64	-0.47	-0.46
	(1.42)	(1.49)	(0.81)	(0.80)
FAC 1 * LOCUS			-0.05	-0.08
			(0.42)	(0.60)
FAC 2 * LOCUS			-0.06	-0.08
			(0.59)	(0.70)
FAC 3 * LOCUS			-0.06	-0.08
			(0.59)	(0.70)
FAC 4 * LOCUS			0.17	0.12
			(1.61)	(0.82)
FAC 5 * LOCUS			0.24	0.21
			(1.15)	(0.99)
FAC 6 * LOCUS			-0.12	-0.15
			(0.64)	(0.78)
FAC 7 * LOCUS			-0.01	-0.01
			(0.04)	(0.04)
SEX * LOCUS			0.12	0.08
			(0.61)	(0.38)
RACE * LOCUS			-0.96	-1.02
			(0.85)	(0.90)
RTW * LOCUS			0.34	0.30
			(0.35)	(0.31)
OCCUP * LOCUS			-1.76	-1.76
			(1.75)*	(1.76)*
UNIONEFF * LOCUS			0.02	0.01
			(0.29)	(0.02)
UNIONMEM * LOCUS			-0.48	-0.50
			(0.55)	(0.57)
N	470	470	470	470
R^2	0.2117	0.2133	0.2361	0.2367
F	9.439	8.833	5.277	5.087
F_{1-3}			1.09	
F_{2-4}				1.04

t-values indicated in parentheses
***Indicates significance at p<.01 with two-tailed test
**Indicates significance at p<.05 with two-tailed test
*Indicates significance at p<.10 with two-tailed test

TABLE XII

UNION MEMBERSHIP (FACTOR), LOCUS=CONTINUOUS

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	0.17	0.05	0.09	0.10
	(0.70)	(0.21)	(0.36)	(0.17)
LOCUS		0.01		-0.01
		(1.87)*		(0.02)
FACTOR 1 (Autonomy)	0.01	0.01	0.03	0.03
	(1.55)	(1.64)	(1.84)*	(1.70)*
FACTOR 2 (Compensation)	-0.03	-0.03	-0.04	-0.04
	(5.19)***	(5.33)***	(3.12)***	(3.09)***
FACTOR 3 (Recognition)	-0.01	-0.01	-0.03	-0.03
	(2.07)**	(2.10)**	(2.26)**	(1.78)*
FACTOR 4 (Influence)	0.01	0.01	0.01	0.01
	(0.04)	(0.03)	(0.25)	(0.23)
FACTOR 5 (Work Sat.)	0.01	0.01	-0.01	-0.01
	(0.76)	(1.01)	(0.08)	(0.08)
FACTOR 6 (Work Attitudes)	-0.01	-0.01	-0.01	-0.01
	(1.19)	(1.08)	(0.75)	(0.74)
FACTOR 7 (Responsibility)	-0.01	-0.01	-0.02	-0.02
	(1.31)	(1.20)	(1.03)	(1.00)
SEX	-0.14	-0.14	-0.15	-0.13
	(2.69)***	(2.61)***	(1.08)	(1.08)
WHITE/NONWHITE	0.22	0.23	0.24	0.23
	(4.96)***	(5.15)***	(2.23)**	(2.21)**
RIGHT-TO-WORK	-0.17	-0.17	-0.07	-0.07
	(2.60)***	(2.53)**	(0.45)	(0.45)
OCCUPATION	0.35	0.35	0.39	0.39
	(7.89)***	(7.87)***	(3.79)***	(3.77)***
UNION INSTRUMENTALITY	-0.01	-0.01	0.01	0.01
	(0.41)	(0.52)	(0.64)	(0.62)
UNION EFFECTIVENESS	0.02	0.02	0.03	0.03
	(5.92)***	(6.06)***	(3.00)***	(2.89)***
FAC 1 * LOCUS			-0.01	-0.01
			(1.25)	(1.13)
FAC 2 * LOCUS			0.01	0.01
			(1.04)	(1.03)
FAC 3 * LOCUS			0.01	0.01
			(1.46)	(1.06)
FAC 4 * LOCUS			-0.01	-0.01
			(0.32)	(0.29)
FAC 5 * LOCUS			0.01	0.01
			(0.66)	(0.65)
FAC 6 * LOCUS			0.01	0.01
			(0.25)	(0.25)
FAC 7 * LOCUS			0.01	0.01
			(0.60)	(0.58)
SEX * LOCUS			0.01	0.01
			(0.06)	(0.06)
RACE * LOCUS			-0.01	-0.01
			(0.01)	(0.01)
RTW * LOCUS			-0.02	-0.02
			(0.77)	(0.77)
OCCUP * LOCUS			-0.01	-0.01
			(0.32)	(0.31)
UNIONIN * LOCUS			-0.01	-0.01
			(0.99)	(0.95)
UNIONEFF * LOCUS			-0.01	-0.01
			(0.33)	(0.31)
N	564	564	564	564
R^2	0.4557	0.4591	0.4644	0.4644
F	35.481	33.347	17.941	17.244
F_{1-3}			0.67	
F_{2-4}				0.04

t-values indicated in parentheses
***Indicates significance at p<.01 with two-tailed test
**Indicates significance at p<.05 with two-tailed test
*Indicates significance at p<.10 with two-tailed test

TABLE XIII

UNION MEMBERSHIP (FACTOR), LOCUS=BINARY

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	0.37	0.30	0.31	0.21
	(1.37)	(1.11)	(1.12)	(0.57)
LOCUS		0.06		0.23
		(1.72)*		(0.41)
FACTOR 1 (Autonomy)	0.01	0.01	0.02	0.02
	(1.21)	(1.27)	(2.10)**	(2.13)**
FACTOR 2 (Compensation)	-0.03	-0.03	-0.04	-0.04
	(5.54)***	(5.68)***	(4.63)***	(4.57)***
FACTOR 3 (Recognition)	-0.02	-0.02	-0.02	-0.02
	(2.57)***	(2.62)***	(2.42)***	(2.01)**
FACTOR 4 (Influence)	-0.01	-0.01	-0.01	-0.01
	(0.01)	(0.03)	(0.46)	(0.37)
FACTOR 5 (Work Sat.)	0.01	0.01	-0.01	-0.01
	(0.44)	(0.67)	(0.25)	(0.18)
FACTOR 6 (Work Attitudes)	-0.01	-0.01	-0.01	-0.01
	(0.79)	(0.71)	(0.80)	(0.74)
FACTOR 7 (Responsibility)	-0.01	-0.01	-0.01	-0.01
	(1.16)	(1.07)	(0.82)	(0.73)
SEX	-0.15	-0.16	-0.14	-0.14
	(2.61)***	(2.63)***	(1.75)*	(1.75)*
WHITE/NONWHITE	0.20	0.20	0.21	0.21
	(4.11)***	(4.25)***	(3.22)***	(3.24)***
RIGHT-TO-WORK	-0.17	-0.16	-0.14	-0.21
	(2.38)**	(2.30)**	(1.64)	(1.64)
OCCUPATION	0.35	0.35	0.37	0.37
	(7.08)***	(7.02)***	(5.77)***	(5.77)***
UNION INSTRUMENTALITY	-0.01	-0.01	-0.01	-0.01
	(1.42)	(1.49)	(0.87)	(0.79)
UNION EFFECTIVENESS	0.03	0.02	0.03	0.03
	(5.99)***	(6.07)***	(4.59)***	(4.59)***
FAC 1 * LOCUS			-0.02	-0.02
			(1.75)*	(1.78)*
FAC 2 * LOCUS			0.01	0.01
			(0.82)	(0.71)
FAC 3 * LOCUS			0.01	0.01
			(0.79)	(0.32)
FAC 4 * LOCUS			0.01	0.01
			(0.40)	(0.31)
FAC 5 * LOCUS			0.02	0.02
			(1.33)	(1.16)
FAC 6 * LOCUS			0.01	0.01
			(0.18)	(0.11)
FAC 7 * LOCUS			0.01	0.01
			(0.04)	(0.08)
SEX * LOCUS			-0.03	-0.03
			(0.24)	(0.28)
RACE * LOCUS			0.03	0.02
			(0.29)	(0.25)
RTW * LOCUS			-0.05	-0.05
			(0.36)	(0.37)
OCCUP * LOCUS			-0.05	-0.06
			(0.36)	(0.37)
UNIONIN * LOCUS			-0.01	-0.06
			(0.50)	(0.60)
UNIONEFF * LOCUS			0.01	0.01
			(0.14)	(0.02)
N	470	470	470	470
R^2	0.4592	0.4627	0.4699	0.4701
F	29.848	28.044	15.138	14.556
F_{1-3}			0.69	
F_{2-4}				0.47

t-values indicated in parentheses
***Indicates significance at p<.01 with two-tailed test
**Indicates significance at p<.05 with two-tailed test
*Indicates significance at p<.10 with two-tailed test

the original 13 a priori variables are presented in Tables XIV through XIX. An examination of Tables VIII through XIII compared to Tables XIV through XIX shows no significant difference in variance explained by the regression results.

Recall there were three dependent variables to be investigated, union effectiveness, union instrumentality, and union membership. Also, these variables were being examined as they were moderated by the locus of control variable when applied under two situations, locus of control as a dichotomous variable (internal-external) and locus of control applied in a continuous fashion. As can be seen in Tables VIII through XIII and XIV through XIX, this makes for 12 different analyses. Each of these tables is arranged similarly, as follows: Column 1 shows the regression coefficients for the variables, without the moderating variable--locus of control--in the equation. Column 2 shows the regression results for the basic equation with locus of control entered in the equation, but operating as just another independent variable. Column 3 is the first of the two moderated regression equations, this one including locus of control operating interactively, but not as an independent variable. Column 4 is the most comprehensive equation with locus of control appearing as both an interactive term and as an independent variable. For all the equations, in addition to the regression coefficients, shown in parenthesis is the t-statistic for these coefficients. Significance levels of .01, .05, and .10 are indicated. Also shown are the R^2 and F values for these various regression equations. F_{1-3} and F_{2-4} are a comparison of the equations in Columns 1 and 3, and 2 and 4, respectively.

TABLE XIV

UNION EFFECTIVENESS (VARIABLES), LOCUS=CONTINUOUS

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	11.24	12.17	11.50	9.98
	(4.50)***	(4.81)***	(4.55)***	(3.55)***
LOCUS		-0.15		-1.79
		(2.15)**		(1.68)*
PAY EQUITY	-0.32	-0.31	-0.44	-0.52
	(3.98)***	(3.85)***	(2.29)**	(2.63)***
INCOME	0.31	0.31	0.27	0.23
	(1.92)*	(1.94)*	(0.65)	(0.57)
ALIENATION	0.07	0.06	-0.09	-0.19
	(0.74)	(0.63)	(0.39)	(0.77)
PERCEIVED INFLUENCE	-0.05	-0.06	-0.02	-0.03
	(0.67)	(0.72)	(0.08)	(0.16)
WORK INVOLVEMENT	0.05	0.02	-0.06	-0.08
	(0.49)	(0.24)	(0.31)	(0.36)
SATISFACTION	0.06	0.06	-0.10	-0.11
	(0.60)	(0.60)	(0.41)	(0.47)
DISSATISFACTION WITH SUPERVISION	0.22	0.23	0.42	0.31
	(3.77)***	(3.89)***	(3.72)***	(2.37)**
EFFORT/REWARD EXPECTATIONS	-0.02	0.01	0.10	0.10
	(0.14)	(0.12)	(0.39)	(0.41)
PARTICIPATION	-0.16	-0.15	-0.11	-0.30
	(1.43)	(1.32)	(0.44)	(1.06)
SEX	0.82	0.78	1.69	1.48
	(1.56)	(1.48)	(1.30)	(1.14)
WHITE/NONWHITE	-1.04	-1.16	-2.19	-2.43
	(2.37)**	(2.63)***	(2.06)**	(2.27)**
RIGHT-TO-WORK	0.05	0.02	0.67	0.58
	(0.07)	(0.02)	(0.45)	(0.40)
OCCUPATION	0.69	0.67	0.36	0.36
	(1.50)	(1.46)	(0.34)	(0.34)
UNION INSTRUMENTALITY	0.34	0.35	0.37	0.34
	(8.11)***	(8.21)***	(3.94)***	(3.51)***
UNION MEMBERSHIP	2.40	2.45	2.69	2.31
	(5.91)***	(6.05)***	(2.81)***	(2.35)**
PAYEQ * LOCUS			0.02	0.04
			(0.56)	(0.95)
INCOME * LOCUS			0.01	0.02
			(0.17)	(0.21)
ALIENA * LOCUS			0.03	0.05
			(0.75)	(1.16)
PERINF * LOCUS			-0.01	-0.01
			(0.41)	(0.01)
WORKINV * LOCUS			-0.01	-0.02
			(0.24)	(0.50)
SAT * LOCUS			0.04	0.04
			(0.83)	(0.95)
DISSAT * LOCUS			-0.04	-0.01
			(1.85)*	(0.56)
EXPECT * LOCUS			-0.02	-0.02
			(0.41)	(0.42)
PARTIC * LOCUS			-0.01	-0.02
			(0.25)	(0.48)
SEX * LOCUS			-0.22	-0.17
			(0.89)	(0.68)
RACE * LOCUS			0.21	0.27
			(1.08)	(1.34)
RTW * LOCUS			-0.15	-0.13
			(0.54)	(0.45)
OCCUP * LOCUS			0.04	0.04
			(0.18)	(0.19)
UNIONIN * LOCUS			-0.01	0.01
			(0.28)	(0.15)
UNIONMEM * LOCUS			-0.05	0.02
			(0.28)	(0.12)
N	564	564	564	564
R^2	0.3198	0.3255	0.3404	0.3439
F	17.207	16.526	9.188	9.013
F_{1-3}			1.11	
F_{2-4}				0.99

TABLE XV

UNION EFFECTIVENESS (VARIABLES), LOCUS=BINARY

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	9.54	9.82	9.51	11.12
	(3.50)***	(3.58)***	(3.40)***	(3.07)***
LOCUS		-0.39		-3.99
		(1.31)		(0.77)
PAY EQUITY	-0.21	-0.20	-0.32	-0.33
	(2.34)**	(2.25)**	(2.74)***	(2.81)***
INCOME	0.31	0.32	0.40	0.39
	(1.74)*	(1.76)*	(1.65)*	(1.58)
ALIENATION	0.04	0.04	-0.01	-0.02
	(0.37)	(0.33)	(0.01)	(0.15)
PERCEIVED INFLUENCE	-0.06	-0.06	-0.01	-0.01
	(0.68)	(0.72)	(0.01)	(0.09)
WORK INVOLVEMENT	0.07	0.05	0.05	0.02
	(0.68)	(0.54)	(0.04)	(0.13)
SATISFACTION	0.04	0.04	0.02	0.02
	(0.37)	(0.39)	(0.13)	(0.16)
DISSATISFACTION WITH SUPERVISION	0.23	0.23	0.32	0.30
	(3.65)***	(3.68)***	(4.28)***	(3.78)***
EFFORT/REWARD EXPECTATIONS	-0.01	-0.01	0.01	0.01
	(0.04)	(0.10)	(0.03)	(0.09)
PARTICIPATION	-0.17	-0.16	-0.14	-0.17
	(1.34)	(1.27)	(0.82)	(0.98)
SEX	0.84	0.85	0.96	0.96
	(1.43)	(1.46)	(1.22)	(1.21)
WHITE/NONWHITE	-1.30	-1.35	-1.97	-1.99
	(2.71)***	(2.80)***	(3.10)***	(3.12)***
RIGHT-TO-WORK	0.12	0.10	0.27	0.27
	(0.18)	(0.15)	(0.32)	(0.31)
OCCUPATION	0.68	0.68	0.46	0.44
	(1.36)	(1.36)	(0.70)	(0.66)
UNION INSTRUMENTALITY	0.39	0.39	0.40	0.39
	(8.38)***	(8.42)***	(6.54)***	(6.35)***
UNION MEMBERSHIP	2.59	2.63	2.68	2.64
	(5.89)***	(5.96)***	(4.57)***	(4.50)***
PAYEQ * LOCUS			0.21	0.23
			(1.14)	(1.23)
INCOME * LOCUS			-0.20	-0.19
			(0.55)	(0.50)
ALIENA * LOCUS			0.13	0.17
			(0.58)	(0.73)
PERINF * LOCUS			-0.17	-0.14
			(1.01)	(0.79)
WORKINV * LOCUS			0.15	0.08
			(0.08)	(0.40)
SAT * LOCUS			0.14	0.15
			(0.63)	(0.69)
DISSAT * LOCUS			-0.19	-0.13
			(1.78)*	(1.01)
EXPECT * LOCUS			-0.01	-0.01
			(0.04)	(0.34)
PARTIC * LOCUS			-0.06	0.01
			(0.26)	(0.04)
SEX * LOCUS			-0.59	-0.51
			(0.48)	(0.42)
RACE * LOCUS			1.58	1.70
			(1.57)	(1.66)*
RTW * LOCUS			-0.51	-0.49
			(0.35)	(0.36)
OCCUP * LOCUS			-0.09	-0.02
			(0.08)	(0.02)
UNIONIN * LOCUS			-0.02	0.01
			(0.19)	(0.01)
UNIONMEM * LOCUS			-0.08	-0.03
			(0.90)	(0.03)
N	470	470	470	470
R^2	0.3360	0.3378	0.3565	0.3572
F	15.347	14.476	8.125	7.872
F_{1-3}			0.93	
F_{2-4}				0.88

TABLE XVI

UNION INSTRUMENTALITY (VARIABLES), LOCUS=CONTINUOUS

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	12.58	11.83	12.33	6.23
	(5.34)***	(4.91)***	(5.15)***	(1.15)
LOCUS		0.10		1.26
		(1.54)		(1.26)
PAY EQUITY	-0.12	-0.12	0.10	0.15
	(1.55)	(1.62)	(0.53)	(0.81)
INCOME	0.22	0.22	0.04	0.07
	(1.47)	(1.45)	(0.11)	(0.18)
ALIENATION	-0.17	-0.16	-0.17	-0.11
	(1.82)*	(1.73)*	(0.79)	(0.47)
PERCEIVED INFLUENCE	-0.02	-0.02	-0.01	-0.02
	(0.31)	(0.27)	(0.03)	(0.13)
WORK INVOLVEMENT	0.26	0.27	0.20	0.31
	(2.97)***	(3.12)***	(1.05)	(1.49)
SATISFACTION	-0.05	-0.05	0.23	0.24
	(0.56)	(0.55)	(1.00)	(1.05)
DISSATISFACTION WITH SUPERVISION	-0.02	-0.02	-0.01	-0.02
	(0.29)	(0.39)	(0.80)	(0.12)
EFFORT/REWARD EXPECTATIONS	0.08	0.08	-0.34	-0.34
	(0.76)	(0.74)	(.42)	(1.40)
PARTICIPATION	-0.03	-0.04	-0.04	-0.09
	(0.28)	(0.35)	(0.19)	(0.33)
SEX	-0.17	-0.15	1.65	1.76
	(0.35)	(0.30)	(1.34)	(1.43)
WHITE/NONWHITE	-0.69	-0.60	-1.96	-1.76
	(1.64)	(1.41)	(1.94)*	(1.72)*
RIGHT-TO-WORK	1.00	0.98	1.44	1.42
	(1.60)	(1.56)	(1.05)	(1.03)
OCCUPATION	-0.29	-0.28	1.01	0.98
	(0.66)	(0.63)	(1.00)	(0.97)
UNION EFFECTIVENESS	0.31	0.32	0.27	0.29
	(8.11)***	(8.21)***	(3.09)***	(3.28)***
UNION MEMBERSHIP	-0.30	-0.35	1.17	1.37
	(0.75)	(0.87)	(1.24)	(1.43)
PAYEQ * LOCUS			-0.05	-0.06
			(1.39)	(1.64)
INCOME * LOCUS			0.03	0.30
			(0.47)	(0.42)
ALIENA * LOCUS			0.01	-0.01
			(0.19)	(0.13)
PERINF * LOCUS			-0.01	-0.01
			(0.09)	(0.31)
WORKINV * LOCUS			0.01	-0.01
			(0.39)	(0.25)
SAT * LOCUS			-0.06	-0.06
			(1.33)	(1.41)
DISSAT * LOCUS			0.01	-0.01
			(0.60)	(0.18)
EXPECT * LOCUS			0.08	0.08
			(1.88)*	(1.70)*
PARTIC * LOCUS			0.01	-0.02
			(0.18)	(0.37)
SEX * LOCUS			-0.37	-0.40
			(1.60)	(1.70)*
RACE * LOCUS			0.29	0.25
			(1.57)	(1.31)
RTW * LOCUS			-0.49	-0.49
			(1.87)*	(1.87)*
OCCUP * LOCUS			-0.25	-0.25
			(1.35)	(1.32)
UNIONEFF * LOCUS			0.01	0.01
			(0.62)	(0.35)
UNIONMEM * LOCUS			-0.32	-0.36
			(1.80)*	(1.98)**
N	564	564	564	564
R^2	0.1902	0.1937	0.2160	0.2183
F	8.597	8.228	4.905	4.803
F_{1-3}			1.17	
F_{2-4}				1.12

TABLE XVII

UNION INSTRUMENTALITY (VARIABLES), LOCUS=BINARY

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	10.74	10.42	10.25	8.29
	(4.18)***	(4.03)***	(3.89)***	(2.40)**
LOCUS		0.38		4.72
		(1.14)		(0.88)
PAY EQUITY	-0.15	-0.15	-0.07	-0.06
	(1.74)*	(1.82)*	(0.64)	(0.49)
INCOME	0.26	0.26	0.28	0.30
	(1.56)	(1.52)	(1.21)	(1.29)
ALIENATION	-0.08	-0.08	-0.11	-0.08
	(0.76)	(0.73)	(0.80)	(0.60)
PERCEIVED INFLUENCE	-0.04	-0.03	-0.03	-0.02
	(0.46)	(0.41)	(0.27)	(0.14)
WORK INVOLVEMENT	0.25	0.30	0.23	0.27
	(2.63)***	(2.74)***	(1.87)*	(2.06)**
SATISFACTION	-0.08	-0.08	-0.03	-0.03
	(0.76)	(0.77)	(0.19)	(0.23)
DISSATISFACTION WITH SUPERVISION	-0.01	-0.02	-0.07	-0.04
	(0.21)	(0.25)	(0.89)	(0.58)
EFFORT/REWARD EXPECTATIONS	0.14	0.14	0.04	0.04
	(1.20)	(1.25)	(0.24)	(0.27)
PARTICIPATION	0.04	0.03	0.05	0.10
	(0.32)	(0.25)	(0.35)	(0.58)
SEX	-0.14	-0.15	0.57	0.58
	(0.25)	(0.28)	(0.77)	(0.77)
WHITE/NONWHITE	-0.48	-0.43	-0.55	-0.52
	(1.06)	(0.94)	(0.90)	(0.86)
RIGHT-TO-WORK	-1.02	-0.99	-0.31	-0.30
	(1.57)	(1.53)	(0.37)	(0.37)
OCCUPATION	-0.11	-0.10	0.74	0.77
	(0.22)	(0.22)	(1.18)	(1.22)
UNION EFFECTIVENESS	0.35	0.35	0.34	0.35
	(8.38)***	(8.42)***	(6.29)***	(6.35)***
UNION MEMBERSHIP	-0.72	-0.76	-0.44	-0.42
	(1.67)*	(1.76)*	(0.76)	(0.72)
PAYEQ * LOCUS			-0.20	-0.22
			(1.10)	(1.22)
INCOME * LOCUS			-0.04	-0.06
			(0.13)	(0.18)
ALIENA * LOCUS			0.14	0.09
			(0.67)	(0.43)
PERINF * LOCUS			-0.03	-0.07
			(0.20)	(0.43)
WORKINV * LOCUS			0.08	-0.01
			(0.49)	(0.01)
SAT * LOCUS			-0.19	-0.21
			(0.94)	(1.01)
DISSAT * LOCUS			0.10	0.03
			(0.93)	(0.20)
EXPECT * LOCUS			0.29	0.27
			(1.27)	(1.18)
PARTIC * LOCUS			0.02	-0.07
			(0.08)	(0.29)
SEX * LOCUS			-1.75	-1.83
			(1.51)	(1.59)
RACE * LOCUS			0.76	0.61
			(0.80)	(0.62)
RTW * LOCUS			-1.79	-1.80
			(1.31)	(1.31)
OCCUP * LOCUS			-1.97	-2.03
			(1.99)**	(2.05)**
UNIONEFF * LOCUS			0.02	0.01
			(0.22)	(0.01)
UNIONMEM * LOCUS			-0.84	-0.86
			(0.96)	(0.98)
N	470	470	470	470
R^2	0.2098	0.2120	0.2354	0.2368
F	8.051	7.634	4.516	4.393
F_{1-3}			0.98	
F_{2-4}				0.95

TABLE XVIII

UNION MEMBERSHIP (VARIABLES), LOCUS=CONTINUOUS

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	0.24	0.14	0.17	0.42
	(0.93)	(0.55)	(0.65)	(0.73)
LOCUS		0.01		-0.05
		(1.96)*		(0.49)
PAY EQUITY	-0.02	-0.02	-0.01	-0.01
	(2.52)**	(2.60)***	(0.56)	(0.65)
INCOME	-0.01	-0.01	0.01	0.01
	(0.31)	(0.34)	(0.50)	(0.03)
ALIENATION	-0.01	-0.01	0.01	0.01
	(1.43)	(1.31)	(0.14)	(0.02)
PERCEIVED INFLUENCE	-0.01	-0.01	-0.02	-0.02
	(0.21)	(0.17)	(1.19)	(1.24)
WORK INVOLVEMENT	0.02	0.02	0.03	0.03
	(1.86)*	(2.06)**	(1.44)	(1.12)
SATISFACTION	-0.02	-0.02	-0.03	-0.03
	(2.26)**	(2.23)**	(1.22)	(1.12)
DISSATISFACTION WITH SUPERVISION	-0.01	-0.01	-0.03	-0.03
	(1.89)*	(2.00)**	(2.34)**	(2.31)**
EFFORT/REWARD EXPECTATIONS	-0.01	-0.01	-0.02	-0.02
	(0.31)	(0.33)	(0.74)	(0.75)
PARTICIPATION	0.01	-0.01	-0.03	-0.03
	(1.14)	(1.22)	(0.98)	(1.09)
SEX	-0.14	-0.14	-0.16	-0.16
	(2.68)***	(2.61)***	(1.20)	(1.23)
WHITE/NONWHITE	0.23	0.24	0.25	0.24
	(5.13)***	(5.34)***	(2.38)**	(2.21)**
RIGHT-TO-WORK	-0.21	-0.20	-0.17	-0.17
	(3.11)***	(3.05)***	(1.12)	(1.12)
OCCUPATION	0.36	0.36	0.34	0.34
	(8.20)***	(8.20)***	(3.25)***	(3.22)***
UNION INSTRUMENTALITY	-0.01	-0.01	0.01	0.01
	(0.75)	(0.87)	(0.74)	(0.66)
UNION EFFECTIVENESS	0.02	0.03	0.03	0.03
	(5.91)***	(6.05)***	(2.82)***	(2.68)***
PAYEQ * LOCUS			-0.01	-0.01
			(0.57)	(0.45)
INCOME * LOCUS			-0.01	-0.01
			(0.17)	(0.16)
ALIENA * LOCUS			-0.01	-0.01
			(0.71)	(0.57)
PERINF * LOCUS			0.01	0.01
			(1.25)	(1.31)
WORKINV * LOCUS			-0.01	-0.01
			(0.53)	(0.26)
SAT * LOCUS			-0.01	-0.01
			(0.37)	(0.39)
DISSAT * LOCUS			0.01	0.01
			(1.55)	(1.58)
EXPECT * LOCUS			0.01	0.01
			(0.70)	(0.72)
PARTIC * LOCUS			0.01	0.01
			(0.50)	(0.66)
SEX * LOCUS			0.01	0.01
			(0.20)	(0.24)
RACE * LOCUS			-0.01	-0.01
			(0.05)	(0.08)
RTW * LOCUS			-0.01	-0.02
			(0.35)	(0.34)
OCCUP * LOCUS			0.01	0.01
			(0.24)	(0.26)
UNIONIN * LOCUS			-0.01	-0.01
			(1.28)	(1.18)
UNIONEFF * LOCUS			-0.01	-0.01
			(0.18)	(0.09)
N	564	564	564	564
R^2	0.4529	0.4567	0.4632	0.4634
F	30.302	28.793	15.357	14.848
F_{1-3}			0.68	
F_{2-4}				0.44

TABLE XIX

UNION MEMBERSHIP (VARIABLES), LOCUS=BINARY

Variable	Column 1	Column 2	Column 3	Column 4
INTERCEPT	0.35	0.29	0.30	0.42
	(1.24)	(1.05)	(1.04)	(1.12)
LOCUS		0.07		-0.30
		(1.82)*		(0.50)
PAY EQUITY	-0.03	-0.03	-0.02	-0.03
	(3.18)***	(3.28)***	(2.00)**	(2.05)**
INCOME	0.01	0.01	-0.01	-0.01
	(0.13)	(0.08)	(0.43)	(0.47)
ALIENATION	-0.01	-0.01	0.01	0.01
	(0.52)	(0.46)	(0.26)	(0.16)
PERCEIVED INFLUENCE	-0.01	-0.01	-0.01	-0.01
	(0.71)	(0.63)	(0.81)	(0.87)
WORK INVOLVEMENT	0.02	0.02	0.03	0.02
	(1.88)*	(2.07)**	(1.90)*	(1.63)
SATISFACTION	-0.03	-0.03	-0.03	-0.03
	(2.64)***	(2.65)***	(1.96)**	(1.94)*
DISSATISFACTION WITH SUPERVISION	-0.02	-0.02	-0.02	-0.02
	(2.40)**	(2.45)**	(2.80)**	(2.91)***
EFFORT/REWARD EXPECTATIONS	0.01	0.01	-0.01	-0.01
	(0.04)	(0.13)	(0.44)	(0.46)
PARTICIPATION	-0.01	-0.01	-0.01	-0.02
	(0.65)	(0.75)	(1.11)	(1.12)
SEX	-0.15	-0.15	-0.14	-0.14
	(2.55)**	(2.58)***	(1.70)*	(1.70)*
WHITE/NONWHITE	0.21	0.22	0.23	0.23
	(4.29)***	(4.44)***	(3.48)***	(3.44)***
RIGHT-TO-WORK	-0.20	-0.19	-0.18	-0.18
	(2.82)***	(2.75)***	(2.04)**	(2.04)**
OCCUPATION	0.36	0.36	0.37	0.37
	(7.40)***	(7.37)***	(5.78)***	(5.73)***
UNION INSTRUMENTALITY	-0.01	-0.01	-0.01	-0.01
	(1.67)*	(1.76)*	(0.67)	(0.72)
UNION EFFECTIVENESS	0.03	0.03	0.03	0.03
	(5.89)***	(5.96)***	(4.56)***	(4.44)***
PAYEQ * LOCUS			-0.01	-0.01
			(0.75)	(0.66)
INCOME * LOCUS			0.03	0.03
			(0.80)	(0.82)
ALIENA * LOCUS			-0.02	-0.02
			(0.81)	(0.66)
PERINF * LOCUS			0.01	0.01
			(0.50)	(0.61)
WORKINV * LOCUS			-0.01	-0.01
			(0.48)	(0.19)
SAT * LOCUS			0.01	0.01
			(0.01)	(0.05)
DISSAT * LOCUS			0.02	0.02
			(1.56)	(1.57)
EXPECT * LOCUS			0.02	0.02
			(0.87)	(0.90)
PARTIC * LOCUS			0.02	0.03
			(0.88)	(1.01)
SEX * LOCUS			-0.04	-0.04
			(0.34)	(0.30)
RACE * LOCUS			0.01	0.02
			(0.11)	(0.20)
RTW * LOCUS			-0.03	-0.02
			(0.17)	(0.16)
OCCUP * LOCUS			-0.04	-0.04
			(0.41)	(0.36)
UNIONIN * LOCUS			-0.01	-0.04
			(1.16)	(1.04)
UNIONEFF * LOCUS			0.01	0.01
			(0.06)	(0.14)
N	470	470	470	470
R^2	0.4572	0.4612	0.4695	0.4698
F	25.553	24.286	12.978	12.547
F_{1-3}			0.68	
F_{2-4}				0.47

The dependent variable "Union Effectiveness" is examined in Tables XIV and XV. As can be seen, explanatory power is increased about three percent when the locus of control construct is operationalized as a continuous variable (Table XIV), and about two percent when locus of control is used as a dichotomous variable (Table XV). However, this minimal increase was achieved by the introduction of 15 additional variables. Obviously, this is not significant. In all situations, too, the F value was reduced greatly, normally by a factor of about two.

What should be noted however, is the behavior of some of the variables. Pay Equity (PAYEQ) was significant at at least the .05 level in all equations with a negative coefficient. This supports the literature (Getman et al., 1976; Kochan, 1979; Maxey and Mohrman, 1980) that one measure of union effectiveness is the ability of the union to improve wages and working conditions. This relates to the actual income (INCOME) measure which was significant in over half the equations. Dissatisfaction with supervision was highly significant in all equations. This would suggest a high correlation between recognition of the union as effective, and a feeling of dissatisfaction with superiors. This corresponds to one of the parameters of union effectiveness that says the union protects workers from unfair actions by employers. Race was very significantly related to the perception of union effectiveness in all equations. As this variable was evaluated on a white/non-white dichotomy, the negative sign on the coefficient in all cases indicates non-whites evaluate union effectiveness higher. This corresponds to Kochan's (1979) finding that 67 percent of the non-white respondents in his study indicated

they would support unionism if given the opportunity. Union instrumentality, too, was highly significant in all equations. What this would suggest is that the respondent who evaluates the union as effective also evaluates it as instrumental. That is to say, to the respondent not only is the union doing the right things, it is doing them well. There is also a highly significant relationship between union membership and perceived union effectiveness. This supports the study by Kochan (1979) in which he found over 70 percent of the respondents that were union members were at least satisfied with their union.

"Union Instrumentality" is evaluated in Tables XVI and XVII. In this situation the effect of the variables is neither as significant nor as consistent. As can be seen, Alienation, Pay Equity, and Work Involvement all appear significant in some of the equations. However, the only one showing any consistency is Work Involvement. Recalling that Work Involvement consists of questions about how the respondent evaluates his/her ability to control the work, and that instrumentality addresses the question of the unions ability to control various aspects of the social and political environment, perhaps these two tap the same response. Union Effectiveness was highly significant in these equations. Several of the moderated terms are also marginally significant. So in these particular situations, locus of control does have some interactive effect on Occupation, Union Membership, Effort/Reward Expectations, and Right-to-Work status. However, as can be seen in the F comparisons at the bottom of each table, the moderating effect is small.

The evaluation of "Union Membership" is interesting, particularly with respect to the demographic variables. As can be seen (Tables XVIII and XIX), Sex, Race, Right-to-Work, and Occupation are all highly significant in almost all the basic equations, and in most of the moderated equations. These results certainly support the literature, at least in concept. Scoville (1971), Kochan (1979), Hirsch (1980), and others have found race to be significantly related to a desire for union membership. This was supported. Kornhauser (1961), Blinder (1972), Getman et al. (1976), to name a few, found sex to be related to the likelihood of union membership. This too was supported in this research. However, what is most interesting is the difference between desire for union membership and actual union membership. In the present research race is in fact significantly correlated with union membership. However, as this variable was coded "1" for white and "0" for non-white, a positive sign on the coefficient suggests that whites are more inclined to be union members than non-whites. The relationship of sex to union membership was consistent with the literature. The variable was significant in most cases but with a negative sign. Based on the coding used, this would suggest males are more likely to be union members. The Right-to-Work impact is not so clearly understood in the literature (see Chapters I and III), but non-the-less, in this research the relationship was significant. However, as only 39 respondents (out of 565) were from a right-to-work state this result should be evaluated accordingly. Occupation (Smith and Hopkins, 1979; Hirsch, 1980) was highly significant with Union Membership. This result too may be somewhat suspect in that (1) well

over half the respondents fell into one occupational category and (2) roughly 80 percent of these were union members.

Several variables were significantly associated with Union Membership. Pay Equity was significant in 75 percent of the equations. Again this would suggest, and support, the hypothesis that union members are concerned about "bread and butter" issues. The same might be said for the variable Satisfaction, which was also significant in 75 percent of the equations. Satisfaction was defined in terms of management related items, so perhaps the significance here means that the dissatisfied employee sees management as derelict, and looks to the union for resolution. The significance of Dissatisfaction with Supervision again refers to the respondent's reaction to this situation. If he/she is in fact dissatisfied, the union is seen as a mechanism to allow for a collective voice of disapproval--or the union serves to sensitize employees to the failings of management.

While the regressions in Tables VIII through XIII were used primarily to validate the a priori assignment of data items to the original 13 variables, none-the-less an examination of them will reveal that they support the results generated in Tables XIV through XIX. In these equations Autonomy, Compensation and Recognition are typically significant.

In addition to an examination of the six regression equations, various other analyses were made of the data. Table XX examines locus of control as applied to the data. In this situation locus of control as a dichotomous variable (that is, split along the internal-external lines discussed previously) was examined using the t-statistic. In this analysis the data set was only 450 respondents as 95 "moderates"

TABLE XX

ANALYSIS OF DIFFERENCES IN INDEPENDENT VARIABLES
ALONG LOCUS OF CONTROL DICHOTOMY

Variable	Internal Mean	External Mean	t-statistic	Prob.
PAYEQ	8.135	8.213	.3405	.73
INCOME	2.887	2.975	.8384	.40
ALIENA	8.178	8.620	2.3022	.02**
PERINF	6.697	6.447	1.6708	.09*
WORKINV	11.036	10.553	3.1501	.001***
SAT	9.406	9.613	1.0099	.31
DISSAT	13.259	12.620	2.0970	.04**
EXPECT	5.223	5.431	1.1841	.23
PARTIC	11.912	11.848	.3567	.72
UNIONIN	19.299	19.000	.8368	.40
UNIONEFF	19.620	19.650	.0723	.94
UNIONMEM	.500	.528	.5910	.55

*Indicates significance at .10 level.

**Indicates significance at .05 level.

***Indicates significance at .01 level.

were dropped. As can be seen, four of the variables were significantly different. What these differences suggest is that the individual perceives the various situations differently, based on his/her own locus of control orientation. For example, in the case of "Alienation" the conditions that create alienation is the "external" worker may not do so for this "internal" worker, as he may feel these conditions are only temporary--that given time he can get them under control. This is supported by the literature (Seeman, 1966, 1975). The same explanation may apply to Work Involvement. The internal who sees work involvement as essential to his maintaining some degree of control in the work environment, and as essential to the maintenance of self-esteem, gets mot involved than the external. This too is supported by the literature (Kimmons and Greenhaus, 1976). The questions concerning Dissatisfaction with Supervision deal with the quality of work and with the respondent's opportunity to contribute in the work environment; the kind of things an internal would seek and want. As can be seen, if those things are missing they are much more apparent (and important) to the internal. Hamner and Smith (1978) investigated this phenomenon. Finally, although these three differences are significant (Alienation, Work Involvement, and Dissatisfaction with Supervision), their magnitude is not large.

A comparison of the R^2 values for the six regression equations is shown in Table XXI. As can be seen, in the case of Union Effectiveness, when the data set is separated on the internal/external dichotomy, a large difference is noted. An additional 8.5 percent of the variance can be explained for internals. This would suggest that the model does a better job of explaining perceptions of union effectiveness

for internals than for externals and that perhaps the employee with an internal locus of control orientation does indeed evaluate these characteristics somewhat differently, but that the technique of moderated regression was unable to adequately evaluate this difference. The difference noted on the other two dependent variables was less than two percent of additional variance explained. In the case of Union Instrumentality the external had more variance explained, and for Union Membership the internal.

TABLE XXI

ANALYSIS OF DIFFERENCE IN R^2 ALONG LOCUS OF CONTROL DICHOTOMY

Variable	Locus of Control	R^2	F	Sample Size
UNIONEFF	INTERNAL	.3710	14.05	274
UNIONEFF	EXTERNAL	.2860	6.74	196
UNIONIN	INTERNAL	.2139	6.48	274
UNIONIN	EXTERNAL	.2282	4.97	196
UNIONMEM	INTERNAL	.2478	7.85	274
UNIONMEM	EXTERNAL	.2352	5.17	196

Another perspective on locus of control is shown in Table XXII. In this instance the regression coefficients for the various independent variables, separated by internal-external and dependent variables, as well as their t-statistic are shown. There are a few differences in results depending upon whether the data were collected from internals or externals. For example, the contribution of Pay Equity (PAYEQ) to

TABLE XXII

ANALYSIS OF DIFFERENCES IN INDEPENDENT VARIABLES--BY DEPENDENT VARIABLE SUB-GROUP, ALONG LOCUS OF CONTROL DICHOTOMY

VARIABLE	INTERNAL N=274			EXTERNAL N=196		
	PARAMETER EST.	t-STAT	SIGNIFICANCE	PARAMETER EST.	t-STAT	SIGNIFICANCE
			UNIONEFF			
PAYEQ	0.394	3.354	.004***	0.131	0.973	.33
INCOME	0.412	1.708	.08*	0.237	0.879	.38
ALIENA	0.008	0.058	.95	0.174	1.034	.30
PERINF	0.004	0.035	.92	0.163	1.237	.21
WORKINV	0.002	0.014	.98	0.099	0.673	.50
SAT	0.027	0.193	.85	0.167	1.063	.29
DISSAT	0.322	3.949	.001***	0.162	1.667	.09*
EXPECT	0.019	0.119	.90	0.022	0.121	.90
PARTIC	0.265	1.529	.12	0.151	0.795	.42
UNIONIN	0.420	6.858	.001***	0.386	5.432	.001***
UNIONMEM	2.126	4.252	.001***	2.660	4.780	.001***
			UNIONIN			
PAYEQ	0.081	0.738	.47	0.279	2.179	.03**
INCOME	0.310	1.377	.17	0.193	0.744	.46
ALIENA	0.073	0.539	.59	0.037	0.231	.82
PERINF	0.019	0.178	.86	0.098	0.777	.44
WORKINV	0.256	1.970	.04**	0.258	1.828	.07*
SAT	0.003	0.010	.99	0.237	1.561	.12
DISSAT	0.041	0.526	.60	0.034	0.356	.72
EXPECT	0.020	0.131	.90	0.346	2.035	.04**
PARTIC	0.066	0.409	.68	0.071	0.387	.70
UNIONEFF	0.362	6.858	.001***	0.357	5.432	.001***
UNIONMEM	0.274	0.572	.57	1.448	2.599	.01**
			UNIONMEM			
PAYEQ	0.038	2.717	.007***	0.020	1.182	.24
INCOME	0.010	0.361	.72	0.018	0.549	.58
ALIENA	0.001	0.070	.94	0.023	1.112	.27
PERINF	0.033	2.395	.01**	0.000	0.001	.99
WORKINV	0.029	1.759	.08*	0.034	1.866	.06*
SAT	0.015	0.844	.40	0.057	2.935	.004***
DISSAT	0.033	3.391	.008***	0.033	2.750	.007***
EXPECT	0.039	2.034	.04**	0.030	1.356	.18
PARTIC	0.024	1.167	.24	0.006	0.268	.79
UNIONEFF	0.030	4.252	.001***	0.041	4.780	.001***
UNIONIN	0.004	0.572	.57	0.024	2.599	.01**

*** Indicates significant at .01 level
** Indicates significant at .05 level
* Indicates significant at .10 level

Union Effectiveness for the internal is significant at greater than the .01 level. For the external, Pay Equity is not significantly related to Union Effectiveness at all. On the other hand, Pay Equity is very significantly related to the way an external evaluates Union Instrumentality, but is of no significance to the internal's evaluation. Several interesting observations may be made concerning Union Membership. Pay Equity again is only an important consideration for the internal, that is the internal views the union as a mechanism to gain equity. Perceived Influence (PERINF) is important too only to the internal, with respect to union membership. Because the internal seeks control and influence in the work environment, he or she sees the union as influential in this objective. This conclusion supports the hypothesis of this research, that the internal--as a means to effectuate control--will be more likely to join a union or be a union member. Effort/Reward Expectations (EXPECT) are more highly valued by the internal with respect to union membership. What is interesting too is the vast disagreement on the part of the internal and external with respect to Satisfaction (SAT) and union membership. For the external there is a highly significant relationship for satisfaction while for the internal there is no indicated relationship at all. This suggests the external will seek union membership for reasons of lack of satisfaction with the job itself, while the internal seeks union membership for other reasons--like influence and equity.

The conclusion to be reached from all this is that Darrow and Kahl (1982) were correct. Locus of control is a valuable and informative parameter to be used in evaluating employee attitudes. But as a moderating variable its effect may be too weak to measure.

Additional Analyses

With a data set the size of the one used in this research and with the type of questions asked, the effects of several demographics can be investigated. These will be discussed in the following paragraphs.

Certainly no demograhpic has received more attention in the literature than race. And this certainly extends to the locus of control literature as well. In Table XXIII the summed variables are examined as a function of ethnic background, using the t-statistic. In this instance the division is on a white/non-white separation, with non-white including Hispanics, blacks, indians, and orientals. As can be seen, over half of the differences are significant, with over one-third being significant at the .01 level, including locus of control.

A second significant demographic in the literature is that of sex. In a work environment in which the percentage of women is increasing, differences in the sexes with respect to various work attitudes are of great interest. As can be seen in Table XXIV, this was the case for several of the variables examined in this research.

Table XXV uses t-statistics to evaluate the perspective of the union and non-union member relative to the various attitudes used in the research. As can be seen, almost all of them are significantly different for the two groups of respondents, most to at least the .05 level of significance. However, locus of control was not significantly different for the two groups. In fact the two means are virtually the same.

Table XXVI examines the variables with respect to the question of right-to-work laws. As can be seen, most were significantly

TABLE XXIII

EVALUATION OF VARIABLE DIFFERENCES FOR WHITE/NON-WHITE

Variable	Non-White	White	t-statistic
PAYEQ	7.7879	8.1709	1.5655
INCOME	3.1288	2.8730	2.2811**
ALIENA	8.5682	8.5427	0.1572
PERINF	9.2424	9.9030	3.0528***
WORKINV	15.1742	15.4273	1.3417
SAT	9.9167	9.4319	2.1092**
DISSAT	14.1061	12.6143	4.4640***
EXPECT	5.5076	5.2333	1.4543
PARTIC	8.8788	8.9400	0.3887
UNIONIN	20.1894	18.9723	3.1496***
UNIONEFF	20.5303	19.6651	2.1506**
UNIONMEN	0.2045	0.6120	9.6262***
LOCUS	5.4697	4.6582	3.3606***

*Significant at .10 level.

**Significant at .05 level.

***Significant at .01 level.

TABLE XXIV

EVALUATION OF VARIABLE DIFFERENCES FOR SEX

Variable	Male	Female	t-statistic
PAYEQ	8.0325	8.4167	1.3432
INCOME	2.9635	2.7222	1.5423
ALIENA	8.4706	9.0833	2.8334**
PERINF	9.6795	10.2222	1.9483*
WORKINV	15.3874	15.2361	0.6102
SAT	9.5213	9.7083	0.6634
DISSAT	12.9533	13.0277	0.178
EXPECT	5.2495	5.6250	1.7683*
PARTIC	8.9229	8.9444	0.1096
UNIONIN	19.2961	18.9861	0.5825
UNIONEFF	19.9736	19.1389	1.5674
UNIONMEM	0.5781	0.0972	9.5617***
LOCUS	4.8783	4.6389	0.8528

*Significant at .10 level.

**Significant at .05 level.

***Significant at .01 level.

TABLE XXV

EVALUATION OF VARIABLE DIFFERENCE FOR UNION/NON-UNION MEMBERSHIP

Variable	Non-Union	Union	t-statistic
PAYEQ	8.7949	7.4144	6.9136***
INCOME	3.0476	2.8253	2.3412**
ALIENA	8.7363	8.3733	2.6182***
PERINF	9.9194	9.5890	1.8049*
WORKINV	15.1758	15.5479	2.3242**
SAT	9.9707	9.1473	4.4182***
DISSAT	13.0806	12.8527	0.8203
EXPECT	5.7179	4.9041	5.3880***
PARTIC	9.0513	8.8082	2.0623**
UNIONIN	18.9084	19.5822	1.7399*
UNIONEFF	18.3993	21.2397	8.0768***
UNIONMEM	0	1	infinity
LOCUS	4.8498	4.8459	0.0198

*Significant at .10 level.

**Significant at .05 level.

***Significant at .01 level.

TABLE XXVI

EVALUATION OF VARIABLE DIFFERENCE FOR RIGHT-TO-WORK LAWS

Variable	Non-Right-to-Work	Right-to-Work	t-statistic
PAYEQ	7.9183	10.2821	6.1069***
INCOME	2.9030	3.333	2.7484***
ALIENA	8.5418	8.6410	0.3566
PERINF	9.6730	10.7692	3.1805***
WORKINV	15.3479	15.6410	0.9237
SAT	9.4639	10.6410	3.8947***
DISSAT	13.0304	12.0513	1.8651*
EXPECT	5.1996	6.6154	5.0938***
PARTIC	8.9240	8.9487	0.1044
UNIONIN	19.3764	17.6410	2.4507**
UNIONEFF	20.0646	17.2051	4.3040***
UNIONMEM	0.5532	0.0256	15.7070***
LOCUS	4.8745	4.4872	0.9336

*Significant at .10 level.

**Significant at .05 level.

***Significant at .01 level.

different, but locus of control was not. However, these results should be considered carefully as only 39 respondents were in the "right-to-work" data set.

The last two sub-groups to be investigated were part of the larger group "Occupation." As discussed in Chapter IV, the respondent was asked to describe his/her work, and then was assigned to an occupational group by the researcher. A majority of the sample population (387) were in the operative or kindred worker group, due primarily to the large number of firefighters. An analysis was made of the group operator versus non-operator, and the results are shown in Table XXVII. As can be seen, several of the independent variables are in fact significant.

Chapter VI will discuss the conclusions that might be inferred from these results, and some additional thoughts on the research.

TABLE XXVII

EVALUATION OF VARIABLE DIFFERENCES FOR OPERATOR/NON-OPERATOR

Variable	Operator	Nonoperator	t-statistic
PAYEQ	7.8269	8.6348	3.5305***
INCOME	2.9535	2.8876	0.6105
ALIENA	8.5013	8.6517	0.9957
PERINF	9.6305	10.0056	1.8064*
WORKINV	15.4884	15.1067	2.1734**
SAT	9.4832	9.6800	0.9541
DISSAT	12.7804	13.3596	1.8261*
EXPECT	5.1008	5.7247	3.6587***
PARTIC	8.8631	9.0618	1.4404
UNIONIN	19.3359	19.0843	4.5013***
UNIONMEM	20.4315	18.6404	18.7368***
LOCUS	4.7700	5.0168	1.0891

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

CHAPTER VI

CONCLUSIONS

At the termination of this research three questions are pertinent, "What was done?", "Was it done property?", and "So what?" The first of these questions deals with the basic purpose or purposes of the research.

Purpose

In this instance the work can be described as descriptive research, conducted in a field environment, using questionnaire instruments, and is both qualitative and quantitative in nature. The primary purpose was to sample work attitudes of a cross-section of employees, analyze those attitudes, and using the locus of control construct as a moderating variable, develop a technique to predict employee behavior toward various aspects of unionism. The idea of being able to predict union preferences by various work attitudes is not unique, and much of the literature review chapter dealt with this aspect.

This research supported much of that earlier work. Such characteristics as perceived equity of pay, alienation, dissatisfaction with supervision, and income were consistently correlated with union instrumentality and union effectiveness. That is, those characteristics contributed greatly to the way an employee perceived the usefulness or the effectiveness of the union. On the other hand, and again as

suggested by the literature, a large number of attitudes being investigated were significantly related to union membership.

In addition to perceived equity of pay, alienation, and dissatisfaction with supervision, the attitudes of perceived influence, involvement in the work, satisfaction with the work situation, effort/reward expectations, and participation in the work situation were all significantly related to union membership. And in fact, 46 percent of the variance in this dependent variable was explained by these independent variables.

The research was not, however, able to show that the construct locus of control acts as a moderator. The construct, when acting as an independent variable, was sometimes marginally significant to the employee's evaluation of union instrumentality and union effectiveness. When locus of control was applied as a moderating variable, the hypothesis that an internal locus of control orientation would be more supportative of unionism, was not supported. While this was not totally unexpected, it was none-the-less disappointing.

Sims and Szilagyi (1976) used locus of control as a moderator between various work characteristics and such attitudes as job satisfaction and job expectancies. They too found little support for locus of control as a moderator, but concluded that locus of control, like several other individual characteristics, was useful when considering employee performance. Darrow and Kahl (1982) had the following to say about the use of moderators:

> It has been widely accepted that the search for moderator effects is often futile. These results give an indication of one potential reason for this futility. It would appear that the detection of moderator effects depends not so much on the existance of those effects, but rather on the strength of those effects. This appears particularly

> true when the moderator candidate is continuous rather than discrete. This result implies that in many cases where hypothesized moderators have not been found to be statistically significant, they may, in fact, exist but be too weak to be significant using this method . . . Failure to find such an effect (moderator), however, does not necessarily mean that the effect does not exist, only that the effect is not extremely strong. This idea should be kept in mind when evaluating research using moderated regression (pp. 45-46).

An examination of the R^2 values for the various configurations reveals some significant results. In the case of union effectiveness, the results for internal respondents explained 8.5 percent more of the variance than that for external respondents on the same dependent variable. This would suggest that the answers provided on the questionnaire items are indeed different for an internal, at least for the particular dependent variable. Those questions used to define union effectiveness were very work oriented, dealing with unfair actions of employers, job security, wages, and working conditions. This would suggest that perhaps the employee with an internal locus of control orientation does indeed evaluate these characteristics somewhat differently, but that the technique of moderated regression was unable to evaluate adequately this different.

Adequacy

Was the research done properly? From a statistical standpoint it was shown by the use of the t-statistic that order bias was not a factor in the responses. Thus, it can be assumed, that the responses were not affected by the position of a particular question in the questionnaire. Also, the reliability of the various elements of the instrument, as measured by Cronbach's alpha coefficient, were satisfactory. This would suggest the measure was in fact reliable.

No attempt was made to directly evaluate validity of the instrument, but as discussed in Chapter 4, the instruments from which the questionnaire items were taken were used by other researchers. This is in line with admonition of Nunnally (1978, p. 92) that the test of content validity is not done "after they are constructed; one should insure validity by the plan and procedures of construction." In an effort to verify the manner in which the various questionnaire items were grouped to define independent variables, several factor analyses were conducted.

There were other aspects of the research that are worthy of mention. The basic instrument used to evaluate attitudes were five-interval Likert type scales with forced-choice dichotomous scales for the locus of control portion. In both instances the respondent was unable to indicate an opinion other than that solicited. And, even more important, as Nunnally (1978) pointed out, using data of this type for further analytical evaluation is often misleading. As discussed in Chapters IV and V, the selection of various questionnaire items to be used to evaluate a particular independent variable was done by the researcher. While examples from the literature, and statistical analyses were used to validate this selection, none-the-less the potential for error was certainly present.

Too, as is the case in any survey of "attitudes," several error mechanisms may become operative. As mentioned earlier, an attempt was made to control order bias. But control was not possible for several other sources of error. One is always the issue of social acceptability with respect to answering questions. As discussed in

Chapter IV, it was necessary to "adjust" the separation point between internals and externals due to the skewing of the curve toward the internal end of the continuum. This is the result of people responding the way they think they "should" rather than the way they really perhaps would. The same may have been true in other parts of the instrument. For someone who has been a member of the work force for a long time, the promise of anonymity may not convince him or her to answer the question "My boss knows very little about his job" truthfully. As mentioned earlier, this was the problem in one of the data collection sites. The employees had previously been promised confidentiality only to have the results of a survey published. This situation certainly carried over into the present research. One question was in fact not used in the analystical results. On the question "I as a perfectionist in my work" every one answered "Agree" or "Strongly Agree." This question was discarded.

It is felt the sample was representative of the population. While a large portion of the sample was firefighters (70 percent), because of the nature of their work, firefighters in reality represent a much larger segment of the work force. Because the firefighters normally work 24 hours on and 72 hours off, most have second occupations. An informal poll taken of the largest single group (Oklahoma City) indicated 81 percent worked at a second job. It is therefore felt this sample does in fact represent a good cross-section of the population of interest.

Value

So what? The final issue addresses the question of what value to

society, or the discipline, is this research. What is the contribution of these analyses? It would seem the contribution lies in four areas. First is the additional empirical research conducted using the moderated regression technique. While the specific hypothesis of interest was not supported, none-the-less in several instances interaction terms in the moderated regression equations were significant when they had not been significant in the basic equations. So, perhaps the philosophy of "moderation" is sound; it is only the statistical techniques that are lacking. As can be seen in other analyses (sub-group), it is obvious the locus of control orientation is associated with differences in many employee attitudes.

Secondly, a tremendous amount of research has been directed toward the investigation of the locus of control construct, some of which has been discussed. The results of the present research have been somewhat supportive of that research. Of particular significance for further research is the situation involving Hispanic employees. Very little locus of control research has been directed toward these employees.

Thirdly, the investigation of employee attitudes as they relate to the various aspects of unionism, is beneficial. The reasons why a person joins a union are still not totally understood. And while it would appear that support was indicated for the "bread and butter" issues, it is nowhere near that clear. Again, there were numerous instances in which the employees attitudes were significantly different when examined through the internal-external perspective. But to say that locus of control can be used as a predictor of employee union attitudes and membership was not supported. It is, however, certainly

true that most employees join unions for self-serving reasons. Locus of control may be one more tool to facilitate the examination of these reasons.

And lastly, but certainly not least, this research served to focus the academic efforts of the researcher on a "real-life" problem. It provided the opportunity to practice many of the theoretical skills developed in the classroom, and also to get some appreciation for the realities of research. The attitude of so many firms toward unionism came as a surprise. While trying to solicit firms to participate in the survey many were unwilling due to the issue of unionism. However, the knowledge learned in the analysis and interpretation of data are of long term benefit.

Other

As is true of most research, it is not the end but only the beginning. Certainly several additional uses for the locus of control construct were identified, and warrant additional examination. The attitudes of the Hispanic as a group certainly deserves increased attention, as they are in fact the fastest growing segment of the U.S. work force. And certainly the wealth of data collected on firefighters as a group deserves some additional examination. In conclusion then, this research is completed, but it has spawned ideas for future research.

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APPENDIXES

APPENDIX A

THE ROTTER INTERNAL-EXTERNAL CONTROL SCALE

The Rotter Internal-External Control Scale[1]

*1. a. Children get into trouble because their parents punish them too much.
b. The trouble with most children nowadays is that their parents are too easy with them.

2. *a.* Many of the unhappy things in people's lives are partly due to bad luck.
b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. *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.

7. *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.

*8. a. Heredity plays the major role in determining one's personality.
b. It is one's experiences in life which determine what they're like.

9. *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.

10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. 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.

12. a. The average citizen can have an influence in government decisions.
b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. 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 anyway.
*14. a. There are certain people who are just no good.
    b. There is some good in everybody.
15. a. In my case getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.
16. *a.* Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability; luck has little to do with it.
17. *a.* As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
    b. By taking an active part in political and social affairs the people can control world events.
18. *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."
*19. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.
20. *a.* It is hard to know whether or not a person really likes you.
    b. How many friends you have depends upon how nice a person you are.
21. *a.* In the long run the bad things that happen to us are balanced by the good ones.
    b. Most misfortuntes are the result of lack of ability, ignorance, laziness, or all three.
22. a. With enough effort we can wipe out political corruption.
    b. It is difficult for people to have much control over the things politicians do in office.
23. *a.* Sometimes I can't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grades I get.
*24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.
25. *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.
26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.
*27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.
28. 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.

29. *a.* Most of the time I can't understand why politicians behave the way they do.
    b. In the long run the people are responsible for bad government on a national as well as on a local level.

Note: Items with an asterisk preceding them are filler items. Score is the number of italicized alternatives chosen.

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APPENDIX B

THE DIFFERENT SITUATIONS INVENTORY (DSI)

In buying new shoes, I would be more influenced by:
a. current fashions
b. personal preferences

If I received an unexpected bonus, I might say:
a. "This is my lucky day!"
b. "Hard work pays off!"

After doing a very good job, I would feel:
a. proud that it was such good work
b. proud that someone praised the work

I tend to believe that an ideal future career depends most on:
a. hard work toward the goal, more than luck
b. good luck along with the work

Asked to volunteer for a community service job, I would want to know:
a. how much time and effort would be required
b. if significant peers had already agreed to help

When confronted by another person's disagreement, I would
a. withdraw gracefully
b. try to clarify the issue

Given a complex task, I would probably:
a. try to complete the task without help
b. seek consultation at each stage

If asked to estimate time required to bicycle five kilometers, I would:
a. tend to approximate the estimates of peers
b. hold to own estimates even if it differs from those of peers

My reaction to learning that a radio just purchased had poor tone:
a. "That clerk sold me a bill of goods!"
b. "Next time I'll know not to buy the cheapest one!"

I would prefer a TV detective show in which:
a. the hero works alone
b. the police consult a famous detective

After failure on a test, I might attribute blame to:
a. the test itself
b. lack of preparation

When somebody gets angry at me, I might feel:
a. maybe he'll get over it after a while
b. a nice letter of explanation might clear the air

I might attribute difficulty in learning to improve at tennis to:
a. poor teaching by the coach
b. not enough practice

In studying for an exam, I would prefer:
a. studying with another student
b. studying in private

If another person says critical things about me, my most likely reaction might be to think:
a. "I wonder if others think the same thing about me."
b. "Well, I'm not so sure I agree with that opinion."

Type of game I prefer:
a. a game of chance
b. a game of skill

I would feel that to reach my goal in my life, it's important to know:
a. the right people
b. what I really want from life

When people are mean to me, I might feel:
a. very concerned because it is important to have lots of friends
b. very concerned, but that it is possible to get along without such people

In a baseball game, I might attribute my excellent performance to:
a. having a "good day"
b. rigorous practice

Not finding a personal item in an expected place, I might say:
a. "I wonder if I left it somewhere else!"
b. "I wonder if somebody took it by mistake!"

APPENDIX C

RESEARCH INSTRUMENT (VERSION A)

OPINION SURVEY

This questionnaire is designed to investigate your opinions and attitudes about a variety of aspects of yourself and your job. It will allow for comparisons between different groups of employees, occupations, and interests.

Your responses are strictly confidential and will be seen only by the two people involved in the study. They will not be shown to your employer or anyone else. DO NOT put your name on this questionnaire.

It will take no more than 20 minutes to complete this questionnaire. Please answer every question frankly and honestly. There is no "correct" answer.

Thank you for your help in supporting this research. It is hoped that the results will improve the environment in which we work.

This research is supported totally by the researcher, and does not reflect the opinions or attitudes of any organization or group.

GENERAL INSTRUCTIONS

Most of the questions ask that you check one of several spaces that appear to the right of the item. You are to choose the one that best matches the description of how you feel about that item. For example, if you were asked how much you agree with the statement, "I enjoy watching TV in the evening," and you feel that you do agree, you would check the space under "agree", like this:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I enjoy watching TV in the evening	_____	X	_____	_____	_____

Section 1

This section is designed to get some idea how you feel about your work. Read each item carefully, then quickly mark the box that best expresses your feelings about that particular statement. Let your personal experiences determine your answer. WORK RAPIDLY, but please answer every item.

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1.	I'm really a perfectionist about my work.	___	___	___	___	___
2.	In my opinion, the pay here is lower than other companies.	___	___	___	___	___
3.	My boss insists that everything be done his way.	___	___	___	___	___
4.	I'm paid fairly compared with other employees.	___	___	___	___	___
5.	Management gives me recognition when I produce high quality work.	___	___	___	___	___
6.	My boss really tries to get our ideas about things.	___	___	___	___	___
7.	My boss tells me where I stand.	___	___	___	___	___
8.	I'm really doing something worthwhile in my job.	___	___	___	___	___
9.	I have to ask my boss before I do almost anything.	___	___	___	___	___
10.	A person who wants to make his own decisions would be discouraged here.	___	___	___	___	___
11.	The benefit program here provides well for my needs.	___	___	___	___	___
12.	I often see projects or jobs through to completion	___	___	___	___	___
13.	I often have the opportunity for independent thought and actions.	___	___	___	___	___
14.	I often have the opportunity to do a job from beginning to end.	___	___	___	___	___
15.	I find real enjoyment in my work.	___	___	___	___	___
16.	You always know where you stand with this company.	___	___	___	___	___
17.	Most things in life are more important than work.	___	___	___	___	___

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
18.	Producing high quality work is rewarded with higher pay here.	___	___	___	___	___
19.	Sometimes I have the feeling other people are using me.	___	___	___	___	___
20.	I frequently participate in decisions to hire new personnel.	___	___	___	___	___
21.	I often do things here that I wouldn't otherwise do if it were up to me.	___	___	___	___	___
22.	My boss knows very little about his job.	___	___	___	___	___
23.	People like myself often have alot of say on the way things are done here.	___	___	___	___	___
24.	Employees in my job classification would benefit from a union.	___	___	___	___	___
25.	My boss emphasizes the quality of work.	___	___	___	___	___
26.	Management is really interested in the welfare of employees.	___	___	___	___	___
27.	I am often able to do my job independently of others.	___	___	___	___	___
28.	Even small matters have to be referred to someone else for a final decision.	___	___	___	___	___
29.	A union is an effective means to gain influence.	___	___	___	___	___
30.	I feel I am adequately paid for what I do.	___	___	___	___	___

Section 2

Because unions are a significant part of the work environment, we would like to determine your feelings about unions. In the following ten questions please indicate how much you agree or disagree THAT UNIONS IN THIS COUNTRY---

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
31.	--have a lot to say about who gets elected to public office.	___	___	___	___	___
32.	--protect workers from unfair actions by employers.	___	___	___	___	___
33.	--improve the job security of workers.	___	___	___	___	___

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
34.	—have a lot of influence over what laws are passed.	___	___	___	___	___
35.	—are more powerful than employers.	___	___	___	___	___
36.	—improve the wages and working conditions of workers.	___	___	___	___	___
37.	—give members their money's worth for the dues they pay.	___	___	___	___	___
38.	—have a lot to say in how the country is run.	___	___	___	___	___
39.	—have leaders who do what is best for themselves rather than what is best for their members.	___	___	___	___	___
40.	—require members to go along with decisions they don't like.	___	___	___	___	___

Section 3

Please consider your own behavior in the past, and indicate how you would respond in the different situations described below. Even though both alternatives may seem appropriate to you, please choose the one you think the most likely for you. If you are uncertain, please guess.

41. In buying new shoes, I would be more influenced by:
    a. current fashions
    b. personal preferences

42. If I received an unexpected bonus, I might say:
    a. "This is my lucky day!"
    b. "Hard work pays off!"

43. After doing a very good job, I would feel:
    a. proud that it was such good work.
    b. proud that someone praised the work.

44. I tend to believe that an ideal future career depends most on:
    a. hard work toward the goal, more than luck
    b. good luck along with the work

45. Asked to volunteer for a community service job, I would want to know:
    a. how much time and effort would be required
    b. how many of my coworkers had agreed to help

46. When confronted by another person's disagreement, I would
    a. withdraw gracefully
    b. try to clarify the issue

47. Given a complex task, I would probably:
    a. try to complete the task without help
    b. seek consultation at each stage

48. If asked to estimate the time required to ride a bicycle five miles, I would:
    a. tend to agree with my coworkers
    b. hold to own estimates even if it differs from those of my coworkers

49. My reaction to learning that a radio just purchased had poor tone:
    a. "That clerk sold me a bill of goods!"
    b. "Next time I'll know not to buy the cheapest one!"

50. I would prefer a TV detective show in which:
    a. the hero works alone
    b. the police consult a famous detective

51. After failure on a test, I might attribute blame to:
    a. the test itself
    b. lack of preparation

52. When somebody gets angry at me, I might feel:
    a. maybe he'll get over it after a while
    b. a nice letter of explanation might clear the air

53. I might attribute difficulty in learning to improve at my favorite sport to:
    a. poor teaching by the coach
    b. not enough practice

54. In studying for an exam, I would prefer:
    a. studying with another student
    b. studying in private

55. If another person says critical things about me, my most likely reaction might be to think:
    a. "I wonder if others think the same thing about me."
    b. "Well, I am not so sure I agree with that opinion."

56. Type of game I prefer:
    a. a game of chance
    b. a game of skill

57. I would feel that to reach my goal in my life, it's important to know:
    a. the right people
    b. what I really want from life

58. When people are mean to me, I might feel:
    a. very concerned because it is important to have lots of friends
    b. very concerned, but that it is possible to get along without such people.

59. In my favorite sport, I might attribute my excellent performance to:
    a. having a "good day"
    b. rigorous practice

60. Not finding a personal item in an expected place, I might say:
    a. "I wonder if I left it somewhere else!"
    b. "I wonder if somebody took it by mistake!"

PERSONAL AND ORGANIZATIONAL DATA

This section is designed to learn something about your personal background and work history. It will be used to evaluate other sections of the questionnaire.

Occupation (what do you do): _____

Education (circle the number corresponding to the highest grade completed):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Age: ____years Sex: ____Male; ____Female

Ethnic Background (circle one): Hispanic Black Caucasian Indian Oriental Other

Are you married: ____yes; ____no

Are you a union member? _____ Have you ever been? _____ How long? _____

Please indicate the number of employees in your company: _____

Do you smoke? _____ Have you ever smoked? _____ Why did you quit? _____

Indicate your annual income: Under $5000 _____

$5000-$8000 _____

$8000-$11000 _____

$11000-$14000 _____

$14000-$17000 _____

$17000-$20000 _____

$20000 or more _____

APPENDIX D

RESEARCH INSTRUMENT (VERSION B)

OPINION SURVEY

This questionnaire is designed to investigate your opinions and attitudes about a variety of aspects of yourself and your job. It will allow for comparisons between different groups of employees, occupations, and interests.

Your responses are strictly confidential and will be seen only by the two people involved in the study. They will not be shown to your employer or anyone else. DO NOT put your name on this questionnaire.

It will take no more than 20 minutes to complete this questionnaire. Please answer every question frankly and honestly. There is no "correct" answer.

Thank you for your help in supporting this research. It is hoped that the results will improve the environment in which we work.

This research is supported totally by the researcher, and does not reflect the opinions or attitudes of any organization or group.

GENERAL INSTRUCTIONS

Most of the questions ask that you check one of several spaces that appear to the right of the item. You are to choose the one that best matches the description of how you feel about that item. For example, if you were asked how much you agree with the statement, "I enjoy watching TV in the evening," and you feel that you do agree, you would check the space under "agree", like this:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I enjoy watching TV in the evening		X			

Section 1

Please consider your own behavior in the past, and indicate how you would respond in the different situations described below. Even though both alternatives may seem appropriate to you, please choose the one you think the most likely for you. If you are uncertain, please guess.

1. I tend to believe that an ideal future career depends most on:
   a. hard work toward the goal, more than luck
   b. good luck along with the work

2. I might attribute difficulty in learning to improve at my favorite sport to:
   a. poor teaching by the coach.
   b. not enough practice.

3. If asked to estimate the time required to ride a bicycle five miles, I would:
   a. tend to agree with my coworkers.
   b. hold to own estimates even if it differs from those of my coworkers.

4. Not finding a personal item in an expected place, I might say:
   a. "I wonder if I left it somewhere else!"
   b. "I wonder if somebody took it by mistake!"

5. I would prefer a TV detective show in which:
   a. the hero works alone
   b. the police consult a famous detective

6. Asked to volunteer for a community service job, I would want to know:
   a. how much time and effort would be required
   b. how many of my coworkers had agreed to help

7. If another person says critical things about me, my most likely reaction might be to think:
   a. "I wonder if others think the same thing about me."
   b. "Well, I'm not so sure I agree with that opinion."

8. If I received an unexpected bonus, I might say:
   a. "This is my lucky day!"
   b. "Hard work pays off!"

9. In my favorite sport, I might attribute my excellent performance to:
   a. having a "good day"
   b. rigorous practice

10. My reaction to learning that a radio just purchased had poor tone:
    a. "That clerk sold me a bill of goods!"
    b. "Next time I'll know not to buy the cheapest one!"

11. When somebody gets angry at me, I might feel:
    a. maybe he'll get over it after a while.
    b. a nice letter of explanation might clear the air.

12. When people are mean to me, I might feel:
    a. very concerned because it is important to have lots of friends
    b. very concerned, but that it is possible to get along without such people.

13. In studying for an exam, I would prefer:
    a. studying with another student
    b. studying in private

14. Type of game I prefer:
    a. a game of chance
    b. a game of skill

15. Given a complex task, I would probably:
    a. try to complete the task without help
    b. seek consultation at each stage

16. After failure on a test, I might attribute blame to:
    a. the test itself
    b. lack of preparation

17. When confronted by another person's disagreement, I would
    a. withdraw gracefully
    b. try to clarify the issue

18. In buying new shoes, I would be more influenced by:
    a. current fashions
    b. personal preferences

19. I would feel that to reach my goal in my life, it's important to know:
    a. the right people
    b. what I really want from life

20. After doing a very good job, I would feel:
    a. proud that it was such good work
    b. proud that someone praised the work

Section 2

This section is designed to get some idea how you feel about your work. Read each item carefully, then quickly mark the box that best expresses your feelings about that particular statement. Let your personal experience determine your answer. WORK RAPIDLY, but please answer every item.

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
21.	My boss tells me where I stand.	___	___	___	___	___
22.	The benefit program here provides well for my needs.	___	___	___	___	___
23.	I often have the opportunity for independent thought and actions.	___	___	___	___	___
24.	My boss really tries to get our ideas about things.	___	___	___	___	___
25.	Management is really interested in the welfare of employees.	___	___	___	___	___
26.	I'm really doing something worthwhile in my job.	___	___	___	___	___
27.	Most things in life are more important than work.	___	___	___	___	___

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
28.	I am often able to do my job independently of others.	___	___	___	___	___
29.	Management gives me recognition when I produce high quality work.	___	___	___	___	___
30.	People like myself often have alot of say or influence on the way things are run.	___	___	___	___	___
31.	I have to ask my boss before I do almost anything.	___	___	___	___	___
32.	My boss knows very little about his job.	___	___	___	___	___
33.	You always know where you stand with this company.	___	___	___	___	___
34.	A union is an effective means to gain influence.	___	___	___	___	___
35.	I'm paid fairly compared with other employees.	___	___	___	___	___
36.	I feel I am adequately paid for what I do.	___	___	___	___	___
37.	Even small matters have to be referred to someone higher up for a final decision.	___	___	___	___	___
38.	I frequently participate in decisions to hire new personnel.	___	___	___	___	___
39.	Employees in my job classification would benefit from a union.	___	___	___	___	___
40.	A person who wants to make his own decisions would be quickly discouraged here.	___	___	___	___	___
41.	Sometimes I have the feeling other people are using me.	___	___	___	___	___
42.	In my opinion, the pay here is lower than other companies.	___	___	___	___	___
43.	I often have the opportunity to do a job from beginning to end.	___	___	___	___	___
44.	I'm really a perfectionist about my work.	___	___	___	___	___

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
45.	My boss emphasizes the quality of work.	___	___	___	___	___
46.	My boss insists that everything be done his way.	___	___	___	___	___
47.	I often do things in my work that I wouldn't otherwise do if it were up to me.	___	___	___	___	___
48.	I often see projects or jobs through to completion.	___	___	___	___	___
49.	Producing high quality work is rewarded with higher pay here.	___	___	___	___	___
50.	I find real enjoyment in my work.	___	___	___	___	___

Section 3

Because unions are a significant part of the work environment, we would like to determine your feelings about unions. In the following ten questions please indicate how much you agree or disagree THAT UNIONS IN THIS COUNTRY—

		Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
51.	--have a lot to say about who gets elected to public office.	___	___	___	___	___
52.	--have a lot to say in how the country is run.	___	___	___	___	___
53.	--improve the wages and working conditions of workers.	___	___	___	___	___
54.	--have a lot of influence over what laws are passed.	___	___	___	___	___
55.	--protect workers from unfair actions by employers.	___	___	___	___	___
56.	--improve the job security of workers.	___	___	___	___	___
57.	--are more powerful than employers.	___	___	___	___	___
58.	--give members their money's worth for the dues they pay.	___	___	___	___	___
59.	--require members to go along with decisions they don't like.	___	___	___	___	___
60.	--have leaders who do what is best for themselves rather than what is best for their members.	___	___	___	___	___

PERSONAL AND ORGANIZATIONAL DATA

This section is designed to learn something about your personal background and work history. It will be used to evaluate other sections of the questionnaire.

Occupation (what do you do): _____

Education (circle the number corresponding to the highest grade completed):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Age: ____years Sex: ____Male; ____Female

Ethnic Background (circle one): Hispanic Black Caucasian Indian Oriental Other

Are you married: _____yes; _____no

Are you a union member? _____ Have you ever been? _____ How long? _____

Please indicate the number of employees in your company: _____

Do you smoke? _____ Have you ever smoked? _____ Why did you quit? _____

Indicate your annual income: Under $5000 _____

$5000-$8000 _____

$8000-$11000 _____

$11000-$14000 _____

$14000-$17000 _____

$17000-$20000 _____

$20000 or more _____

APPENDIX E

RESEARCH INSTRUMENT (SPANISH VERSION)

ENCUESTAS DE OPINION

—

Este cuestionario es designado para investigar sus opiniónes y actitudes de los aspectos variados de Usted y su ocupación. Esto va a permitir comparaciones entre diferentes grupos de empleados, ocupaciónes, y intereses.

Sus respuestas son en rigor confianza y nomas dos personas envolvidas en este estudio van a ver estas respuestas. No seran enseñadas a su patrón, ni a nadie. NO PONGA su nombre en este cuestionario.

No se tomara mas que 20 minutos para completar este cuestionario. Por favor responda cada pregunta francamente y sinceramente. No hay ninguna "exacta" respuesta.

Muchas gracias por su apoyo en esta investigación. Tenemos esperanza que los resultados aumenten el valor del ambiente en que trabajamos.

Esta investigación esta apoyada completamente por el investigador y no refleja los opiniones y actitudes de ninguna organización o grupo.

INSTRUCCIÓNES GENERAL

Casi todas las preguntas piden que Usted examine uno de los varios espacios que aparecen a la derecha del artículo. Tiene que escojer el que Usted piense que mejor compara con la descripción de ese artículo. Por ejemplo, si le preguntan cuanto le conviene la declaración, "Yo gozo de ver TV en la noche," y Usted piensa que le conviene, marqué el espacio debajo de "convenir", semejante así:

	Fuertemente Convenir	Convenir	Ni Siquiera Convenir ni Desconvenir	Desconvenir	Fuertemente Desconvenir
Yo gozo de ver TV en la noche	_____	X	_____	_____	_____

Sección 1

Por favor considere su comportamiento en el pasado, y indiqué como va a responder las diferente situaciones describidas debajo. Aunque los dos alternativos parecen ser apropiados, por favor escoja el que Usted piense que es mas probable. Si no esta seguro, por favor adivine.

1. *Yo tengo la creencia que una carrera ideal en el futuro depende mas en:*
   a. *trabajo duro cerca la meta, mas que suerte.*
   b. *buena suerte junto con trabajo.*

2. *Yo atributo dificultad en aprender como mejorar mi favorito deporte hacia:*
   a. *pobre enseñanza del cochero.*
   b. *no hay bastante práctica.*

3. *Si me preguntan que estime el tiempo necesario para manejar una bicicleta por cinco mias, yo supongo:*
   a. *convenir con mis coadjuntores.*
   b. *sostengo mi propia estimación aunque sea diferente que las de mi coadjuntores.*

4. *Si no encuentro una cosa personal en un lugar donde esta aguardada, yo puedo decir:*
   a. *"Yo considero si la deje en otra parte!"*
   b. *"Yo considero si alguna persona se lo llevo en error!"*

5. *Yo prefiero una pelicula detective en TV en que:*
   a. *el héroe trabaja solo.*
   b. *la policía consulta un famoso detective.*

6. *Si me preguntan que sirva voluntariamente en una tarea de servicio comun, voy a querer saber:*
   a. *cuanto tiempo y esfuerzo va a hacer necesario.*
   b. *cuantos de mis coadjuntores han convenido para ayudar.*

7. *Si otra persona me critica, me probable reacción es pensar lo sigiente:*
   a. *"Yo deseo saber si otros piensan la misma cosa de mi."*
   b. *"Pues bien, no estoy seguro si yo consiento con ese opinión."*

8. *Si recibo una adehala muy de repente, puedo decir:*
   a. *"Tengo buena suerte este dia!"*
   b. *"Trabajo duro de veras que paga!"*

9. *En mi favorito deporte, yo puedo atribuir mi excelente ejecución:*
   a. *teniendo un "buen dia!"*
   b. *practicando con rigor.*

10. *Mi reacción en saber que un radio que apenas compre tiene un sonido pobre:*
    a. *"Ese vendedor me vendio una lista de mercancías!"*
    b. *"En otra vez no voy a comprar el que esta mas barato!"*

11. *Cuando alguen se enoja con migo, yo puedo sentir que:*
    a. *pueda ser que todo pase al rato.*
    b. *una carta de explicación puede aclarar todo.*

12. *Cuando alguen me desprecia, yo me siento:*
    a. *muy inquieto porque es importante tener muchos amigos.*
    b. *muy inquieto, pero es posible medrar sin esas personas.*

13. Cuando estudio para un examen, prefiero:
    a. estudiar con otro estudiante.
    b. estudiar en privado.

14. El tipo de juego que yo prefiero es:
    a. un juego de suerte.
    b. un juego de habilidad.

15. Si me dan una tarea complicada para hacer, probablemente yo:
    a. haría la lucha de completar la tarea sin ayuda.
    b. buscara consulta en cada estado.

16. Despues de fracasar un examen, yo atributo la culpa:
    a. nomas al examen.
    b. mala preparación.

17. Cuando alguen me habla a lo contrario:
    a. me retiro con gracia.
    b. trato de clarificar la impresión.

18. Cuando compro sapatos nuevos, lo que me influeja es:
    a. la moda corriente.
    b. preferencias personal.

19. Yo siento que para alcanzar mi objecto en la vida, es importante:
    a. conocer cierta personas.
    b. saber que es lo que quiero en la vida.

20. Despues que hago una tarea bien hecha, me siento:
    a. orgulloso que la hice bien.
    b. orgulloso que otros me aplaudan la tarea.

Sección 2

Esta sección es designada para tomar una idea como se siente Usted de su trabajo. Debe de leer cada artículo con cuidado y luego marqué la caja que expresa mejor que son sus sentidos de esa declaración particular. Deje que su experiencia personal decida su respuesta. TRABAJE RAPIDAMENTE, pero por favor, conteste cada artículo.

	Fuertemente Convenir	Convenir	Ni Siquiera Convenir ni Desconvenir	Desconvenir	Fuertemente Desconvenir
21. Mi patrón me dice en que paso voy.	___	___	___	___	___
22. Los beneficios son bastante para mis necesidades.	___	___	___	___	___
23. Muchas veces tengo la oportunidad de pensar y hacer cosas libremente.	___	___	___	___	___
24. Mi patrón trata de obtener nuestras ideas en cosas.	___	___	___	___	___

		Fuertemente Convenir	Convenir	Ni Siquiera Convenir ni Desconvenir	Desconvenir	Fuertemente Desconvenir
25.	La administración esta interesada en el bienestar de los empleados.	___	___	___	___	___
26.	Estoy haciendo algo de importancia en mi trabajo.	___	___	___	___	___
27.	Hay cosas en la vida mas importante que el trabajo.	___	___	___	___	___
28.	Muchas veces puedo hacer mi trabajo independiente de otros.	___	___	___	___	___
29.	La administración me da reconocimiento cuando mi trabajo es de alta calidad.	___	___	___	___	___
30.	Personas como yo muchas veces pueden decir o influir en el modo que corren las cosas.	___	___	___	___	___
31.	Tengo que pidir permiso a mi patrón antes de poder hacer caulquier cosa.	___	___	___	___	___
32.	El patrón sabe muy poco de su trabajo.	___	___	___	___	___
33.	Siempre sabemos en que paso vamos en esta compañia.	___	___	___	___	___
34.	Una unión es un modo efectivo para ganar influencia.	___	___	___	___	___
35.	Me pagan justamente comparado a otros empleados.	___	___	___	___	___
36.	Yo siento que me pagan suficiente por lo que hago.	___	___	___	___	___
37.	Hasta la mas pequeña materia tiene que ser refirida a alguien mas alto para una decisión final.	___	___	___	___	___
38.	Participó frecuentemente en hacer decisiónes para alquilar personal nuevo.	___	___	___	___	___
39.	Una unión puede ser de beneficio para empleados en mi clasificación.	___	___	___	___	___
40.	Una persona que quiere hacer sus propias decisiónes aqui, pronto es desanimada.	___	___	___	___	___

		Fuertemente Convenir	Convenir	Ni Siquiera Convenir ni Desconvenir	Desconvenir	Fuertemente Desconvenir
41.	Aveces siento que otras personas se aprovechan de mi.	___	___	___	___	___
42.	En mi opinión, el pago es mas bajo aqui que lo que pagan en otras compañias.	___	___	___	___	___
43.	Muchas veces tengo la oportunidad de hacer una tarea del comienzo hasta el fin.	___	___	___	___	___
44.	Soy un perfeccionista en mi trabajo.	___	___	___	___	___
45.	Mi patrón Enfasis en la cualidad de trabajo.	___	___	___	___	___
46.	Mi patrón insiste que todo se haga a su costumbre.	___	___	___	___	___
47.	Muchas veces hago cosas en mi trabajo que no haría si fuera por mi.	___	___	___	___	___
48.	Muchas veces completo proyectos o tareas.	___	___	___	___	___
49.	Produciendo tareas del alta cualidad son recompensadas con pago mas alto aqui.	___	___	___	___	___
50.	Realmente encuentro disfruto en mi trabajo.	___	___	___	___	___

Sección 3

Porque las uniónes son una parte significante en el ambiente del trabajo, queremos determinar sus sentimientos de las uniónes. En las siguiente diez preguntas, por favor indiqué cuanto conviene o desconviene QUE LAS UNIÓNES EN ESTE PAÍS--

		Fuertemente Convenir	Convenir	Ni Siquiera Convenir ni Desconvenir	Desconvenir	Fuertemente Desconvenir
51.	--tienen mucho que decir quien va hacer elejido para oficio público.	___	___	___	___	___
52.	--tienen mucho que decir como se corre el país.	___	___	___	___	___

		Fuertemente Convenir	Convenir	Ni Siquiera Convenir ni Desconvenir	Desconvenir	Fuertemente Desconvenir
53.	--mejoran el pago y las condiciónes laboriosas de los trabajadores.	___	___	___	___	___
54.	--tienen mucha influencia en cuales leyes se pasan.	___	___	___	___	___
55.	--protegen trabajadores de acciónes injustas de los patrónes.	___	___	___	___	___
56.	--mejoran la seguridad de las ocupaciónes de los trabajadores.	___	___	___	___	___
57.	--son mas poderosas que los patrónes.	___	___	___	___	___
58.	--dan a los miembros lo que merecen por las propias que ellos pagan.	___	___	___	___	___
59.	--requieren que los miembros consientan con decisiónes que no les gustan.	___	___	___	___	___
60.	--tienen guiadores que hacen lo que es mejor para ellos mismos mas de lo que es mejor para los miembros.	___	___	___	___	___

DO NEXT PAGE

DATOS PERSONAL Y DE ORGANIZACIÓN

Esta sección es designada para aprender algo de su fondo personal y su historia de trabajo. Sera usada para evaluar otras secciónes del cuestionario.

Ocupación (que es lo que hace): _____

Educación (circule el numero que se corresponde al mas alto grado completado):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Edad: _____años Sexo: _____Hombre; _____Mujer

Fondo Ético (circule uno): Hispanico Negro Caucásio Indio Oriental Otro

¿Esta casado? _____si; _____no

¿Es miembro de una unión? _____ ¿Ha hacido miembro en alguna vez? _____
¿Por cuanto tiempo? _____

Por favor indiqué el numero de empleados en su compañia: _____

¿Usted huma? _____ ¿Ha humado en alguna vez? ¿Por que lo dejo? _____

Indiqué su salario anual:
Bajo de $ 5000 _____
$ 5000 - $ 8000 _____
$ 8000 - $11000 _____
$11000 - $14000 _____
$14000 - $17000 _____
$17000 - $20000 _____
$20000 o mas _____

APPENDIX F

TEST FOR ORDER BIAS

Test for Order Bias

In this test the hypothesis is that the mean of the responses from the different versions will not be significantly different, that is, there is no apparent effect due to question ordering. The criterion for rejection of the hypothesis (at the .05 level) is if the level of significance (PORB T) is less than .05. As can be seen, Variable V25 did in fact fail the criterion (that is, question ordering was significant for this question).

TTEST PROCEDURE

VARIABLE: V21

GROUP	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
1	218	2.49082569	0.96118603	0.06509973	1.00000000	5.00000000	UNEQUAL	-1.9422	456.3	0.0527
2	347	2.65129683	0.94777945	0.05087947	1.00000000	5.00000000	EQUAL	-1.9484	563.0	0.0519

FOR HO: VARIANCES ARE EQUAL, F' = 1.03 WITH 217 AND 346 DF PROB > F' = 0.8113

VARIABLE: V22

GROUP	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
1	218	3.00458716	1.14198351	0.07734488	1.00000000	5.00000000	UNEQUAL	1.1927	455.5	0.2336
2	347	2.88760807	1.12334234	0.06030418	1.00000000	5.00000000	EQUAL	1.1872	563.0	0.2317

FOR HO: VARIANCES ARE EQUAL, F' = 1.03 WITH 217 AND 346 DF PROB > F' = 0.7808

VARIABLE: V23

GROUP	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
1	218	3.63302752	0.91238837	0.06179474	1.00000000	5.00000000	UNEQUAL	1.1570	461.2	0.2479
2	347	3.54178674	0.91257131	0.04898939	1.00000000	5.00000000	EQUAL	1.1570	563.0	0.2478

FOR HO: VARIANCES ARE EQUAL, F' = 1.00 WITH 346 AND 217 DF PROB > F' = 1.0000

VARIABLE: V24

GROUP	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
1	218	2.67889908	1.08937672	0.07378190	1.00000000	5.00000000	UNEQUAL	0.0800	448.9	0.9363
2	347	2.67146974	1.05148883	0.05644688	1.00000000	5.00000000	EQUAL	0.0806	563.0	0.9358

FOR HO: VARIANCES ARE EQUAL, F' = 1.07 WITH 217 AND 346 DF PROB > F' = 0.5562

VARIABLE: V25

GROUP	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
1	218	2.98623853	1.12873778	0.07651550	1.00000000	5.00000000	UNEQUAL	3.5764	475.8	0.0004
2	347	2.63112392	1.17878122	0.06328083	1.00000000	5.00000000	EQUAL	3.5419	563.0	0.0004

FOR HO VARIANCES ARE EQUAL, F' = 1.09 WITH 346 AND 217 DF PROB > F' = 0.4953

VITA 2

Joseph Elliott Benson

Candidate for the Degree of

Doctor of Philosophy

THESIS: AN ANALYSIS OF THE RELATIONSHIP BETWEEN INDIVIDUAL LOCUS OF CONTROL, UNION ATTITUDES, AND THE DEMAND FOR UNIONISM

Major Field: Business Administration

Biographical:

Personal: Born in Tulsa, Oklahoma, September 4, 1931, the son of Mr. and Mrs. Forrest M. Benson. Married the former Shirley Ann Johnson, also of Tulsa, Oklahoma, June 30, 1954. There were four children of the marriage: Cynthia Lynn, born January 12, 1956, deceased; Joseph Elliott, Jr., born January 25, 1958, now married and practicing medicine in Greenville, North Carolina; Christina Louise, born August 10, 1959, now married and practicing law in Oklahoma City, Oklahoma; Caryn Leigh, born August 6, 1965, now married and living in Tulsa, Oklahoma.

Education: Graduated from Will Rogers High School, Tulsa, Oklahoma in May, 1949; received Bachelor of Science degree in Mechanical Engineering from Oklahoma Agricultural and Mechanical College in 1954; received Master of Business Administration degree from Alabama Agricultural and Mechanical University in 1974; enrolled in doctoral program at Oklahoma State University, 1978-1981; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in May, 1985.

Professional Experience: Career military officer in the U.S. Army, 1954-1977, retired as Lieutenant Colonel; Plant Manager, Commercial Resins, Inc., Tulsa, Oklahoma, 1977; Systems Analyst, Teledyne-Brown Engineering, Huntsville, Alabana, 1978; Part-Time Teacher, Athens State College, Athens, Alabama, 1975-1977; Graduate Teaching Assistant, College of Business Administration, Oklahoma State University, 1978-1981; Assistant Professor, College of Business Administration, New Mexico State University, 1981-present.

Professional Organizations: Beta Gamma Sigma; Academy of Management; Industrial Relations Research Association; Delta Tau Delta.