

DETERMINANTS OF UNION MEMBER ATTITUDES TOWARDS
EMPLOYEE INVOLVEMENT PROGRAMS

by

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ABSTRACT

This study investigates the role social information and personal dispositions play in the development of attitudes of unionized employees towards employee involvement programs. A theoretical model was developed in order to understand how social information and dispositions form union member attitudes towards employee involvement programs. This was designed from models of employee involvement and attitude formation.

Data were collected from employees at electrical power generation facilities. Measures of organizational and union commitment, locus of control, participativeness, social information provided by the company, social information provided by the union, and employee involvement attitudes were gathered through a survey distributed at the facilities. General affect and satisfaction towards four types of employee involvement programs union members are most likely to encounter were measured.

Specific hypotheses were developed in order to test and analyze parts of the theoretical model. While the results were at times contrary to the hypothesized relationships within the model, the data fit with the theorized model well enough to provide support for it. This model effectively demonstrated how employee involvement attitudes are formed from such data, and the relationships between the variables measured.

DEDICATION

I dedicate this work to those who spend their lives and substance toiling, often unrecognized, overworked, and underpaid. They are the working men, women, and children of the world who need as much as society can provide them, whether it be the right to self-organize, or assistance programs, or simply a better standard of living. It has been their efforts that have created the world and the society in which we all live. Thank You.

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For Grandpa, who always wanted to know if I was getting ahead, and for my dog Ginny, who kept my feet warm while I was writing this, I wish you both could have seen me finish it, but such was not to be. Instead, your memories alone must suffice and I take comfort in the fact that wherever you may be, you will know that I am done.

I think Grandpa would be pleased with the job I got, and the type of work I now do. He was always concerned that I work hard and progress upwards. Well, Grandpa, I think I'm almost there.

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Rest in peace, my friends...

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INTRODUCTION

It is often hard to read far into today's management literature without stumbling across some new, innovative way to enhance the working relationship of employer and employee. One of the most common topics for discussion today revolves around what role the employee plays in a firm's decision-making structure. This topic often has the term "involvement" or "participation" in its title, and reflects a wide variety of attempts to more effectively use a firm's human resources. Often referred to as "Employee Involvement Programs" these programs come in many shapes and sizes, but all seem to center around the key principle of participation by employees in various aspects of the business, helping with decisions by using their detailed knowledge of their jobs.

In unionized settings, factors specific to the labor relations process must be taken into consideration when discussing or investigating involvement programs. How does a company's relationship with its union affect its employee involvement programs? What influence does the union hold over the company and its processes, and vice versa? Which party is able to exert influence on the employee? The simple bi-lateral employment relationship between employee and employer is now moderated by another force, the employees' agent for representation purposes, their union. Understanding how the employees' attitudes can be affected can go a long way in understanding employee involvement programs in such settings.

Introduction to the Problem and its Setting

When it comes to employee involvement programs, there seems to be no general consensus as to what these programs entail. Not only is there no clear definition of what an employee involvement program is, there seems to be no continuity as to labor's response to such programs (see, for example, U.S. Department of Labor report, Labor-Management Cooperation: Perspectives from the Labor Movement, 1984). The union perspective on employee involvement is as varied as the unions themselves. A variety of platforms concerning these programs have been adopted by unions, from open hostility to guarded acceptance to outright admiration. Such disparate views from within the labor movement indicate that there are certainly differences of opinion concerning such programs. The position adopted by a member's local union might even be different from the stance taken by the national union, or even the individual member's own attitudes towards such programs.

Faced with such possible variety of opinions about Employee Involvement, how do union members form their own attitudes towards the programs? The role of the employer must be considered in conjunction with that of the union. Information about intended programs, or existing programs, is being communicated to the employees, either directly or through informal channels. Union members are faced with various pressures concerning the programs, and receive that information from many sources, including fellow workers and union members, supervisors and other management officials, local union leaders, the international union, and others outside of the workplace. Friends and family provide their opinions about the programs, as does society overall. It would appear that there is no single, definable external source for the attitudes of the union members. In addition, it is expected that some individuals might be more predisposed to such programs, and some more averse. Identifying the

influence of both internal and external factors leading to the formation of the attitudes is not as simple a proposition as reviewing the company's intended or actual programs, or reviewing the information published by unions.

In the unionized workplace, some employee involvement programs are subsumed under the all encompassing title of "union-management cooperation". It is usually necessary for union and management to reach a joint decision on these programs, especially when the programs will affect the terms and conditions of employment. Also, it is frequently assumed that the parties to these programs are moving from an adversarial relationship to one of common problem solving (Perline & Poynter, 1990).

This change in relationship is supported by a wide range of advocates, most recently by the commission developed by President Clinton and chaired by John T. Dunlop (United States. Commission on the Future of Worker-Management Relations, 1995). The commission's report addresses the charge of "What new methods or institutions should be encouraged, or required, to enhance work-place productivity through labor-management cooperation and employee participation?" by investigating the current roadblocks in the way of such movement. While the commission limits its advice predominantly to labor law reform, it emphasizes that legal changes will remove the fear of prosecution, allowing for greater cooperation between the parties. The commission takes the stance that a removal of the barriers will allow for an environment in which such efforts can at least survive, if not grow.

While some unions are strongly against any form of union-management cooperative programs and vehemently fight employee involvement programs, other unions are embracing them as solutions to a wide variety of problems. One union that has been at the forefront of union-management cooperation has been the United Steelworkers of America. Comments made by their former President, Lynn Williams, would have at one time sounded heretical, if not the ramblings of a futurist (Noble, 1993). Mr. Williams' interest in cooperation spans four decades and began to come to fruition in the 1980s. The premise of his desires was simple: in discussions with union members it became obvious that they were able to understand the day-to-day situation on the shopfloor better than management. In addition, William's believes that the employees should also have some idea as to what the company is attempting to achieve. However, Williams remains pragmatic about the role of unions in representing the interests of the workers. Mr. Williams sees the traditional collective bargaining process as the appropriate model with which to achieve cooperation. This position advocates the participation of the USWA in both cooperation and employee representation.

Others argue the point differently. The Bluestones see unions emerging as full partners with management, eventually becoming involved in all aspects of strategic business decisions (Bluestone & Bluestone, 1992). In their conceptualization, the collective bargaining system would need to be modified to allow for this larger role to be played by unions. Another variant finds unions becoming so involved with management that a system of joint governance develops, removing the need for collective bargaining (Verma & Cutcher-Gershenfeld, 1993). On a spectrum of relationships, from outright war to full partnership, Williams' views would lie somewhere near the center. With an

emphasis on cooperation, but a strong underlying dependence on the traditional union-management relationship, the USWA would be prepared for any possible eventuality.

There are, of course, some in the union movement that strongly rail against employee involvement programs. Their viewpoint is presented in publications such as Labor Notes, published by the Labor Education and Research Project. Besides a monthly newspaper, this organization publishes a series of manuals and guides for unions, presenting strategies for defeating employers' involvement programs. The perspective on this side of the debate is that involvement programs are solely designed to drive workers to greater productivity. As noted in one manual, what the employer means by "working smarter" is not the same as what the employee considers it to be (Parker & Slaughter, 1994). These contradictions are at the heart of the disagreement that some have with the implementation of employee involvement programs. Since those people holding this definition of what the programs are and what they should achieve are in conflict with what the employer is considering, or even what they perceive the employer's motives to be, a negative attitude towards such programs is developed. Accordingly, effort is undertaken to attack such programs and to refuse to participate.

It quickly becomes obvious that a wide range of opinions on the subject of employee involvement programs exist. Perhaps the question to ask is just how these opinions are developed, and to what extent employees form and hold attitudes towards such programs. Understanding these attitudes, and where they come from, can play an important role in the development and application of employee involvement programs.

The statement of the problem

Employee involvement itself is usually studied through its role as a pre-cursor to desired organizational outcomes. For instance, a commonly held belief is that the installation of an employee involvement program will lead to some form of increased productivity (Cotton, 1993). While much of that side of the equation is still under investigation, it seems to be generally accepted that employee involvement can lead to increased job satisfaction, which in turn can lead to decreased absenteeism and tardiness (Glew, Griffin & Van Fleet, 1995); (Cotton, Vollrath, Froggatt, Lengnick-Hall & Jennings, 1988). But perhaps a more relevant issue is how employees develop attitudes towards such programs. Following the established attitudinal theories, it becomes evident that attitudes can influence, if not directly lead to, actual employee behaviors (Fishbein & Ajzen, 1975). Employees with more positive attitudes towards employee involvement programs would be more likely to participate in such programs, hopefully leading to outcomes desired by their organizations.

Introductory work in this area has examined both situational and dispositional variables in a model of affect towards employee participation programs (Graham & Verma, 1991). The authors noted that the inclusion of the influence of labor unions would further the understanding of how employees arrive at positive or negative affect towards the programs. However, the study did not include unions and their role in the attitude formation process as variables in the model they developed.

Another recent study that examined many of the same issues as those proposed here, but through different theoretical frameworks, also attempted to ascertain what drives the formation of employee attitudes. In a study of a single site in which approximately 25% of the employees were active in a participation group, the author

found that certain situational and personality factors were significant in their relationship with attitudes towards participation (Kaminski, 1993). It was established that no specific personality types were more pre-disposed to hold positive or negative attitudes yet such factors were significant in explaining the attitudes developed. In addition, it was concluded that situational factors matter greatly in the determination of those attitudes.

From an organizational perspective, the question becomes one of how an employee's attitudes towards employee involvement programs are influenced. If dispositional theories of attitudes are followed, the personality factors are most relevant in understanding how individuals form their attitudes. In this view, external information is almost non-existent, suggesting that organizations are unable to influence the attitudes of their members. This has been referred to as the 'traditional' viewpoint of attitude formation (Pinder, 1984). The counterpart to this view is the social information processing view of attitude formation, where the focus is strongly on external factors, forsaking the individual's personality factors (Salancik & Pfeffer, 1978). The assumptions underlying this theoretical perspective see external sources of information as the cause of individuals' attitudes.

These views substantiate the need to examine how both internal and external forces shape union member attitudes towards employee involvement programs. The implications of the assumptions of both theories are far reaching. Employers, unions, or others can influence opinions and beliefs, and, ultimately, employee attitudes. How and to what degree becomes a concern when firms decide that such involvement programs must begin, and wish them to be successful. In addition, personal dispositions also play a role in dictating which attitudes are formed. Understanding how the two areas interact can provide clues as to the intricacies of initiating such programs. Practical applications would include tailoring programs and their introduction to the attitudes of employees, or planning introductory campaigns so as to influence the formation of attitudes in support of such programs, or the selection of those employees predisposed to participate in them.

The study conducted here investigates the role social information and personal dispositions play in the development of attitudes of unionized employees towards employee involvement programs. The question, then, is what factors affect the formation of these attitudes? Many issues play into the formation of an attitude, and it is expected that this research will uncover those internal and external factors most salient in the formation process of union member attitudes towards such programs. The purpose is to identify the role that different factors, such as personal experience, work-related attitudes, the commitment of the employee, and other issues, play in the determination of an individual's attitude towards employee involvement programs.

In order to answer the main question, a series of other problems must first be addressed. For instance, what sources of social information are relevant to the formation of attitudes about employee involvement programs? What is the degree of causality each is likely to exhibit? Are there specific psychological traits that would predispose an individual towards participation? Specific hypotheses can then be developed, allowing the data analysis to test the main research question.

Limitations of the study

A possible limitation is the use of the term "employee involvement program". While an operational definition has been arrived at for this study, the term has no clear-

cut definition. In addition, its common usage in the business vernacular may have rendered it imprecise in the minds of many employees. Accordingly, what is being studied here might be affected in some way by the interpretation of the term at the time of the study. As a buzzword, everyone seems to know what it is, but once a definition is given, many realize that what they thought they each knew, and agreed upon, is in actuality a closely held personal belief of what the term should mean. There may be problems with comparing this study with others on employee involvement, especially if the term is operationalized differently or has a different meaning in the future. Also, it is likely that the term will mean different things to different people. While the term will be clearly defined for this study, as an attempt to overcome this limitation, there is still an inherent risk with using a term that has entered into the common vocabulary as a catch-all for many different, and at times, contrary, terms.

The importance of the study

The study begins to answer the call for research on what causes employees to participate in employee involvement programs (Glew, et al., 1995). Focusing on the front end of the formation process, it becomes possible to identify those inputs most relevant in explaining which attitudes arise. By understanding how these attitudes develop, it is possible to further the knowledge of these programs, and the participation of employees in them.

Successful employee involvement programs must have the support and acceptance of employees (Miller & Prichard, 1992). Failure to have the acceptance of the majority of the employees, even those not directly involved in the programs, could cause the failure of the program, or at least a lessening of its effectiveness. The implications here are that overall workplace views of the programs affect the decision of individuals to participate, or at least their views of such programs. Therefore, understanding how employees develop attitudes towards the programs becomes vital to the successful implementation of the programs.

The application of the findings are mainly for the design and implementation of employee involvement programs in unionized settings. However, it is hoped that the key ideas can be transported to any workplace wishing to install, or enhance, an employee involvement program. The focus of the study is to understand how employees can form positive or negative attitudes towards such programs. With that knowledge it may be possible to “adjust” those external sources of information in order to bring the individual’s attitude in alignment with the direction desired, or to develop selection procedures that utilize predispositions towards such programs.

The study is informative for unions, as a way to build appropriate attitudes, reactions and behaviors in their members, with respect to the union’s position on such programs. Various literature points out that unions must be prepared to play new roles in business settings with employee involvement programs. It has been suggested that the role of local union leaders will expand in order to better facilitate joint decision making and problem solving (Cutcher-Gershenfeld, Kochan & Verma, 1991). In addition, labor leaders must be prepared to factor these new roles and the effect of the programs themselves into their overall strategies, and more specifically, their actions at the bargaining table (Kochan, Katz & Mower, 1984). Employee involvement, while not necessarily new in concept, is causing unions to look at labor relations and the

employment relationship in a new way. Understanding the attitudes of their members may prove to be a valuable tool to unions, as well as to management.

REVIEW OF LITERATURE

The literature reviewed focuses on the theoretical constructs and conceptualizations of attitudes, attitude formation, attitude function, employee involvement, and the dispositional and informational areas relevant to the formation of employee involvement attitudes. By asking how union members form attitudes about employee involvement programs, the basic premise of the literature review is established.

The first body of literature reviewed is the area of attitudes. The review of the attitudinal literature begins by examining the nature of attitudes through their historical development and the evolution of their definition. The importance in defining and understanding attitudes is that the study examines a specific, work-related attitude: that being the attitude towards employee involvement programs. The positive affect or negative affect an individual holds towards the idea of employee involvement, and their satisfaction with such programs, becomes relevant when the linkage between attitudes and behavior is explored. The review then turns to the present status of the theory, which seems to lie in two “camps”, or groups of theoretical assumptions.

The second area in the review focuses on the concept of employee involvement. Definitions are the main focus of this area, since a clear definition of employee involvement is critical to the study. There is not as much need for an in-depth theoretical treatment of the variable as there is in other work involving employee involvement, since most of the other studies view employee involvement as an independent variable, or as a predictor of some organizational outcome. What is most important for this study is its definition and how it has been conceptualized previously. Also in this area is an examination of how unions have viewed the concept of employee involvement, and how it has been used in the labor-management setting.

The overall purpose of the review is to arrive at an appropriate model of attitudes towards employee involvement programs. Integrating knowledge from the two areas (attitudes and employee involvement) and relying upon previously established empirical relationships allows for the construction of a model of how union members form attitudes about employee involvement programs. By reviewing previous theoretical and empirical work, it is possible to narrow the focus of this study to those topics and questions most applicable to the overall research question.

Attitudes

The study of attitudes has been undertaken for centuries, and spans a vast array of fields. Attitudes have been defined in many different ways and at many different times. It has been noted that the idea of attitudes can be traced to Empedocles, a fifth century BC Greek philosopher (Allport, 1935). While such detail is helpful in understanding the length and nature of debate about this basic human psychological process, a detailed review covering thousands of years is beyond the scope of this project. Instead, the basic nature of attitudes will be evaluated by examining its recent relevant definitions, theories, and applications.

Understanding how individuals form attitudes has been examined in the psychological literature in conjunction with understanding the nature and function of attitudes. Applications to the realm of business focus more closely on the formation of

work-related attitudes, or attitudes about issues in the workplace. Precisely how such attitudes form or develop is a question that has been hotly debated for decades. At present, two distinct “camps” have developed regarding possible solutions to the question. In the first camp are those who feel attitudes are dispositional in nature and are inherent within the individual. In the second are those who feel attitudes are socially constructed and are obtained by the individual as a result of their social situations. Analysis of these schools of thought on attitude formation and development will be undertaken in order to develop a model applicable to union members.

Definitions of Attitudes

An attitude is a theoretical construct, often operationalized as an individual’s preference for or aversion to an item, issue or idea. This definition is a conglomeration of many other conceptualizations and operationalizations of the construct of attitude. Gordon Allport, in his 1935 review of attitudinal literature, analyzed the earlier literature to arrive at a conclusive definition of the term. Many of the earlier definitions made reference to states of readiness, preparation for action, and the stance of individuals for or against objects. Allport, in considering these earlier definitions, constructed the following definition:

"An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." (Allport 1935, pg. 8)

Allport went on to consider the role of positive and negative attitudes, and how they affect behavior. He concluded by noting that attitudes are susceptible to change, that individuals may hold contradictory attitudes, and that the accurate measurement of attitudes can be problematic.

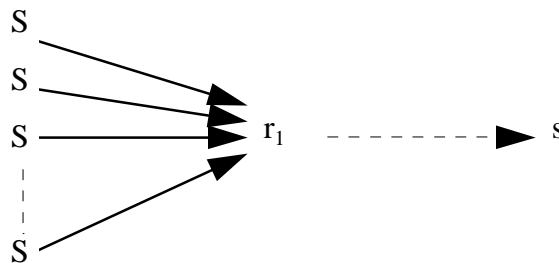
Allport’s definition holds some key points that are relevant to this study and are still relevant today. “Organized through Experience” gives precedent for the inclusion of social information and previous workplace experiences in the formation of attitudes. “Exerting a directive or dynamic influence” explains why it is important to understand how these attitudes are formed, since they will affect, in some way or form, behavior with respect to employee involvement. The final part, “response to all objects and situations with which it is related” is significant since the concept of employee involvement includes many different types of programs and situations. By developing an attitude to the overarching idea of employee involvement, it follows that the same attitude will be held for all the specifics of various employee involvement programs, whatever they may be.

Thurstone’s contribution to the study of attitudes should not be overlooked. One operationalization in his work defined attitude as the summation of an individual’s feelings and inclinations towards a topic (Thurstone, 1928). In addition to this definition, it was also noted that attitudes are subjective in nature. Other work by Thurstone on the measurement of social attitudes defines attitudes as “the affect for or against a psychological object.” (Thurstone, 1931). This raises the issue of how attitudes can affect behavior. Attitudes toward an object can be positive or negative, as defined by the summation of an individual’s subjective perceptions, and thus has consequence with respect to potential action towards the object.

Another key distinction was made in the work of Fishbein and Raven. In their seminal 1962 article, the authors empirically differentiated the hypothetical constructs of belief and attitude (Fishbein & Raven, 1962). Through the use of 'AB Scales' the authors gave credence to the idea that the two are separate ideas, able to be measured independently. In their study, attitudes were defined as having affective and motivational aspects, whereas beliefs were cognitive in nature. The distinction is made when concepts are evaluated in terms of existence and value. Concepts that can be thought of as existing, such as the concept of sadness, illustrate a belief and its cognitive aspect. To think of sadness as bad, which is a value, exemplifies the formation of an attitude, and its affective nature, which in this case would be negative.

Attitude Formation

How an individual acquires an attitude has also been the topic of investigation throughout the literature. In reviewing the early work in this area, the little progress made in understanding how an individual forms attitudes about objects was overshadowed by the amount of work done on the link between attitudes and behavior (Rhine, 1958). Rhine saw attitudes as arising from concepts, which are formed through experience. These experiences, or stimuli, become, over time and through repetition, concepts within the individual that allow for the classification of stimuli into various categories. Concepts become attitudes when an evaluative aspect is added to them. Models, utilizing the classical stimulus and response patterns, were developed as a way to understand how various experiences combine with mediating responses to form attitudes.



From "A Concept-Formation Approach to Attitude Acquisition" by Ramon J. Rhine, 1958

Figure 1 - Rhine's stimulus-response explanation of concepts and attitude.

These models, developed by Rhine, were additive in nature. The figure above depicts a first-order concept, in which S is the evaluative stimuli, r_1 is the first-order mediator, and s is the stimulus produced by the mediator. It is possible to combine this model with another, in order to arrive at a model of a second-order concept. When viewed, these combinations are very similar to path diagrams, as illustrated below:

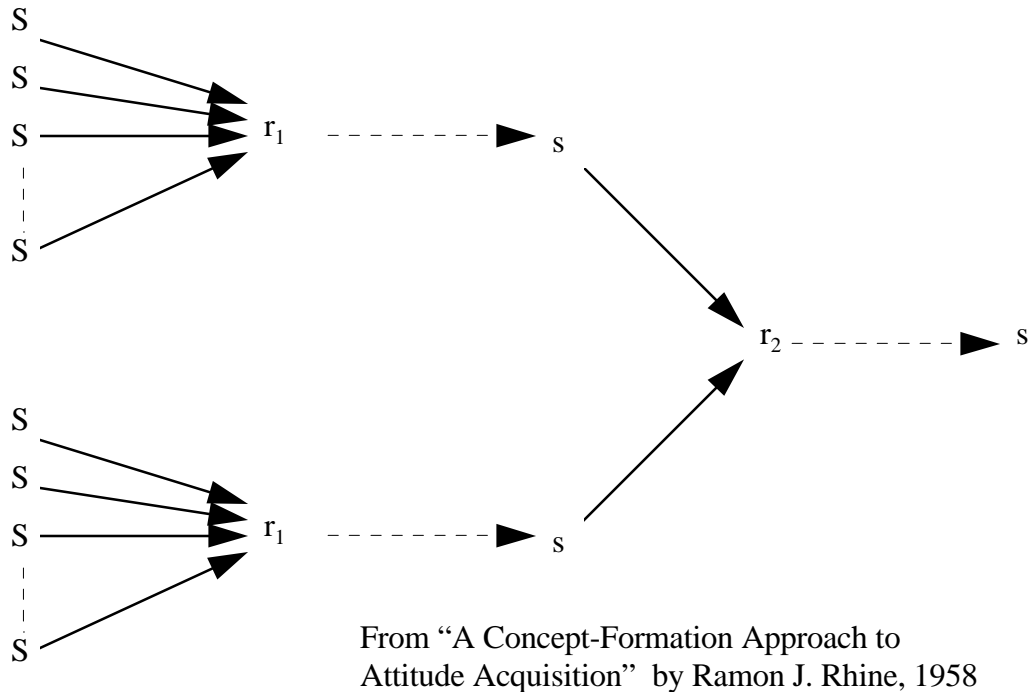


Figure 2 - Rhine's second-order concept.

Fishbein extended the work of Rhine by including the aspect of belief into the models (Fishbein, 1967). In the new models, beliefs fill the role of mediated responses, allowing a fuller model in which beliefs and attitudes become linked in a continuous relationship. It is important to realize that Fishbein was developing the distinction between beliefs *about* an object and the attitude *towards* that object. In this relationship, individuals can learn a concept, as proposed by Rhine, but can change their attitude as new beliefs are gained and others are changed. A key issue is the inclusion of beliefs, as opposed to stimuli, in the model, which allows for the dynamic of change to be added to the idea of attitude. That is, attitudes can change as beliefs change. New beliefs can be incorporated within the model of an attitude, existent beliefs can become stronger, and some beliefs may no longer be held by an individual. As the existence and strength of beliefs about an object change, so does the attitude towards that object. Fishbein's models account for this new, dynamic relationship between belief and attitude.

Arthur Staats makes note of the distinction between the relevance of attitude formation and the function of attitudes (Staats, 1967). He indicates that the research on how attitudes develop must also be balanced with a complete model that also includes the role of attitudes in motivation and behavior. Staats sees the outcomes of social learning as the attitudes an individual develops. In turn, social learning theory is able to influence behavior by driving the formation of attitudes that would, in turn, drive specific behaviors consistent with the goals of the social information. It is through this "path" that Staats links attitude formation and function, highlighting the interplay between the two areas.

An empirical study attempted to shed additional light on the relationship of beliefs and attitudes, and their predictive ability (Anderson & Fishbein, 1965). In this study the theory that attitudes are a result of the weight and strength of individuals' beliefs was found to have stronger predictive abilities than were other theories. The other theories, as expressed in the work of Osgood and others, held that attitudes were a result of the overall congruency of the beliefs an individual had (see, for example, (Osgood & Tannenbaum, 1955)). By weighting the beliefs, rather than a straight summation, attitudes were more accurately predicted.

Furthering the development of the idea of beliefs leading to attitudes was an article by Daniel Katz, in which he attempted to reconcile the inherent disagreement between attitudinal models utilizing an irrational model of man and those using rational elements (Katz, 1960). Katz extended the definition of attitudes to include two elements: the affective aspect that leads to liking or disliking an object , and the belief aspect, which uses cognitive processes to describe the object and its relation to other objects. Katz found the assumptions underlying the irrational man model in conflict with rational models, but also noted that there is no clear distinction as to which model would hold true in any given circumstance. Instead, he proposed a functional approach in which the situation and its environment influence the individual's attitude formation and function.

Probably one of the most accepted conceptualizations of the role of attitudes in behavior is that put forth by Fishbein and Ajzen in 1975. In their work, they were able to summarize much of the earlier development of the ties between attitude and behavior. Their work finds the beliefs an individual has about an object acting to form an attitude towards that object. Those beliefs can be positive or negative, and it is the summation of that set of beliefs that yields the attitude. In addition, that attitude is related to the individual's intention to perform behaviors relative to the object. And, in turn, that intention is linked to the actual behaviors performed. This model is shown in the figure below.

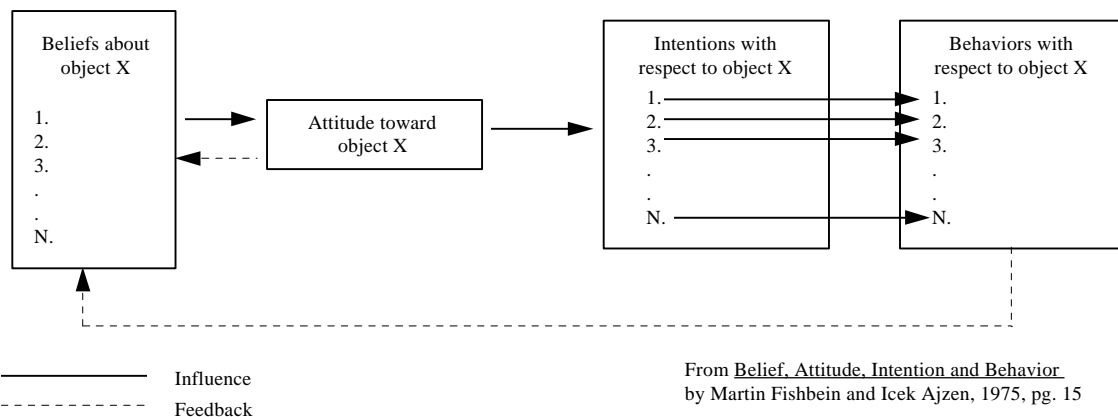


Figure 3 - Fishbein and Ajzen Model

This model has direct implications for employee involvement programs. If the beliefs an employee holds towards such programs lead to a negative attitude, their intentions to perform the behaviors required by the programs will lessen. This highlights

and emphasizes the need to study **attitudes** about employee involvement programs. Through understanding the interaction of the employee's beliefs, and how they can influence the formation of specific attitudes, behaviors can also be better understood. Hence, it is necessary to focus on the formation stage, to best understand the employee and their actual participation in the involvement programs.

The State of Attitudinal Theories

The late 1970s and early 1980s saw a distinct schism in the field of attitudinal theories. This break is best viewed in the 1977 and 1978 volumes of Administrative Science Quarterly. The differentiation in how attitudes are formed continues today, with two major sets of assumptions driving the theories and the research. The distinction between the two points of view becomes more evident when attitudinal theories are viewed with regard to how they address either the stability of an individual's attitudes, or how attitudes change (Pinder, 1984). Generally, attitudes are seen as either dispositional in nature, or situational in nature. The dispositional, or traditional view, sees attitudes as stable dispositions that have evolved within the individual. The situational approach sees attitudes as reactions to social situations, changing as the social context changes.

The two camps provide varying assumptions about how individuals form attitudes. By examining these formation processes and reviewing the theoretical assumptions, it is possible to choose the best aspects of both in order to arrive at the correct theoretical framework for the study of union members and their attitudes towards employee involvement. Accordingly, the dispositional approach and the social information approach are examined and evaluated for their contributions to this study.

Dispositional View

The dispositional view is best thought of as the traditional view of attitudes, stable in nature, and best described as the expected predisposition of individuals towards objects or issues (Pinder, 1984). This view emphasizes the role of personal dispositions and, to an extent, personality, as it relates to the formation of attitudes (Salancik & Pfeffer, 1978). A review of the research on dispositions in the Human Resource area found that, in general, studies using a dispositional approach established significant effects (Judge, 1992). Focusing on the areas of job satisfaction and job behaviors, the review notes that while there were significant findings, there were general conceptual and methodological issues that precluded the generalizability of the results of the various studies. Some of the problems include a lack of longitudinal work on dispositional effects in the human resource field, failure to attempt to explain the underlying psychological reasons for the dispositions, and how and why dispositions act within mechanisms of behavior.

A recent re-analysis of the dispositional approach to behavioral research was conducted in order to substantiate its contribution to the field (House, Shane & Herold, 1996). The authors conclude their reassessment of the theory by stating that while the dispositional approach is still valid, its use must be undertaken carefully. Noting that dispositions are most often considered to be the psychological characteristics of individuals, the authors caution that some of the ties to actual behavioral outcomes have not been firmly established. However, the authors go on to note that many of the

problems with unexplained variance in the situational approach might be understood through the application of a dispositional view.

Social Information View

The social information view was elutriated by the work of Salancik and Pfeffer. They noted that many pieces of research on job attitudes were not in accordance with the assumption of stability found in the dispositional view. They put forward the idea that change was possible when the social context was viewed as the formative factor. Thus, it is the situation, rather than internal processes within the individual, that dictate what attitudes are formed.

Salancik and Pfeffer's ground-breaking article in 1977 discussed the role of social information in explaining the responses of individuals to their jobs. Since the characteristics of both jobs and individuals had previously been considered as stable, it followed that the individual's attitudes should also remain stable. But some researchers were beginning to find that such wasn't the case. In response, Salancik and Pfeffer postulated a new model, that accounted for the variation an individual could show in their job attitudes (Salancik & Pfeffer, 1977).

Following their somewhat "shattering" revelations in 1977, their follow-up article in 1978 set forth a much more specific and detailed explanation of their model. As they state, the social information processing perspective (SIP):

"... proceeds from the fundamental premise that individuals, as adaptive organisms, adapt attitudes, behavior, and beliefs to their social context and to the reality of their own past and present behavior and situation." (Salancik & Pfeffer 1978, pg. 226)

Obviously, the criticisms leveled at them following their first article (see (Alderfer, 1977)) were taken under consideration and a much more detailed and thorough explanation of their position was presented. They provided greater specifics on how the social context affects attitudes, noting that there are both direct and indirect effects. The authors explained that how an individual constructs meaning is directly affected by the social context, through the guides society provides as to what is socially acceptable. Also, the social context provides focus for the individual, with respect to which information is most relevant to expected behaviors. Their model is shown in the figure below:

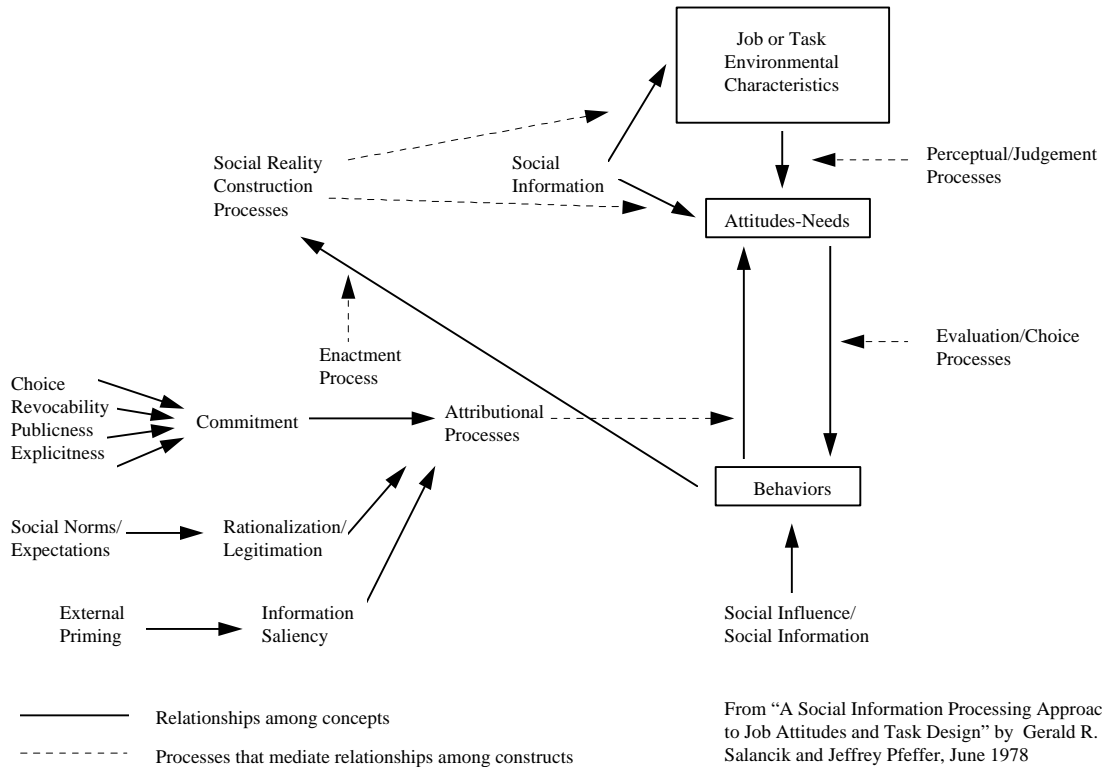


Figure 4 - Salancik and Pfeffer model of the Social Information Processing approach to attitudes, behavior, and job characteristics.

Obviously, Salancik and Pfeffer have included many other relationships and effects within their model, but for attitude formation, the focus is on the role that social information and other social inputs play in the development of attitudes.

Pfeffer went on to test the model by examining the role of social effects on job attitude formation, incorporating the previous behaviors of the individual (Pfeffer, 1980). The model used in the study was a subset developed from the 1978 paper written with Salancik. Shown below, the model focuses on the social information's role in the formation of job attitudes.

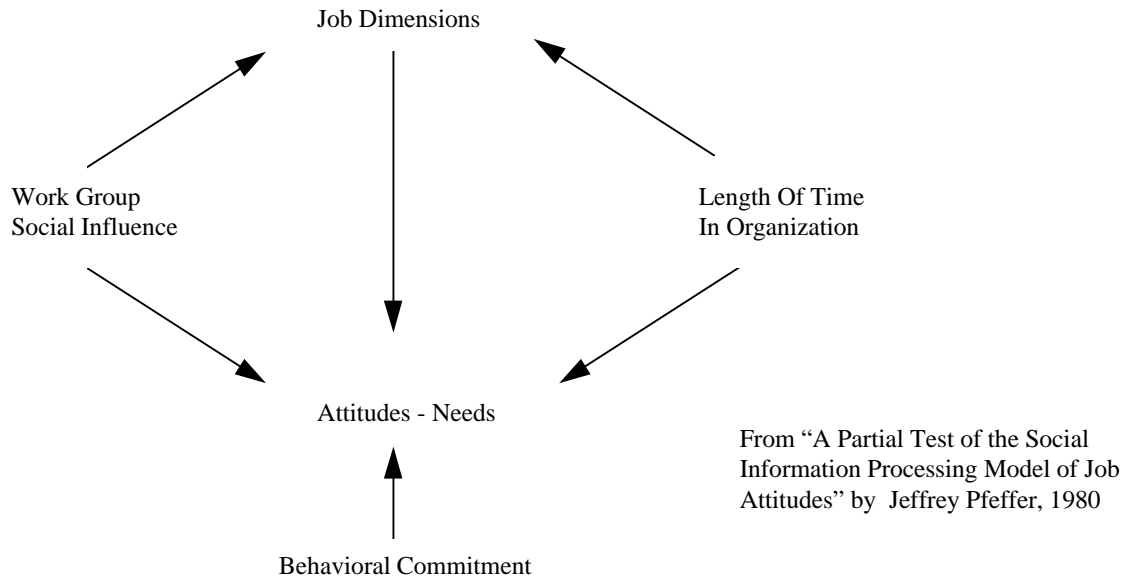


Figure 5 - Pfeffer's Test of the Social Information Processing Model

Pfeffer's model, while admittedly only a partial test of the fuller model developed with Salancik, provides insight into the role of social information. In this model, the focus is on information provided by the individual's work group. The fuller model (see previous Figure 4) did not specify what types of social information were expected to affect the formation of attitudes. In fact, the original model shows input from three different areas in the 'social' realm: social norms, social influence, and social information. In the partial test, Pfeffer was able to more explicitly define which social information was relevant to the formation of job attitudes. What is most relevant, however, is that the model specifies that external social factors can and do influence the formation of attitudes by individuals.

The role of social information, or the situation confronting the individual, has been widely accepted in the literature as an explanation for attitudes, and, in turn, behaviors. In a review of studies utilizing the Salancik and Pfeffer Social Information Processing (SIP) model, the majority found support for the effect of social information (Thomas & Griffin, 1983). While there was some variation between studies for the level and significance of the effect, the studies themselves varied with regards to methodology and variables used. Both field and laboratory studies, and surveys and experiments were reviewed, with no apparent difference in the actual role of social information, only its level of effect. It was concluded that the SIP model was useful in addressing some of the deficiencies in dispositional studies and models that only used individual characteristics.

Job satisfaction is just one of the many attitudes studied through the SIP model. Research using such models often finds that the role of the social context adds greatly to understanding what attitudes individuals develop towards facets of their jobs (O'Reilly & Caldwell, 1985). Besides the issue of job satisfaction, the authors found that social information can have a direct effect on other attitudes. Focusing on social norms within

organizations, the study substantiated their role as social information and the effect they have on employee attitudes.

Other studies have also supported the Salancik and Pfeffer model. Motowidlo (1986) found that the SIP model is appropriate for studying decision making in four different areas of personnel: hiring, performance appraisal, job choice, and turnover. He postulates that the SIP model can be most appropriate when individuals evaluate their job experiences in order to make decisions. This is contrary to the dispositional view, in which decisions, according to Motowidlo, are more of a pure emotional response. A major conclusion drawn from the study is that even though the four areas studied are theoretically distinct, the SIP model is broad enough to be adequately applied in each setting.

The results of the study by Zalesny and Ford (1990) support the use of the SIP model. In their review of 27 quantitative studies using the SIP framework, almost all were successful, to some degree, in their use of SIP to explain different attitudes or behaviors. The authors also make reference to the fact that the SIP model focuses most clearly on attitudes, and that the clearest link seems to be between forms of social information and various job attitudes. Zalesny and Ford note that 13 previous studies used individual differences as a moderator for the linkages in the SIP model, which addresses the concerns of the dispositional view of attitudes.

Shetzer (1993) examined the role of the SIP model in explaining employee participation. The author notes that the SIP model provides an understanding of how social information can affect judgment and choice, and in turn affect future decisions. With respect to participation, Shetzer postulates that the source of information about participation comes initially from parents, siblings, and teachers, and later on, from peers and others in the organization and in society. He continues by noting that the information itself is often in the form of rules, norms, symbols, and folk tales. Shetzer concludes with the notion that SIP models are appropriate for understanding employee participation since it integrates the individual with the workplace and the interactions that occur there. The decision to participate is therefore seen as a result of the evaluation of social information the individual has been exposed to.

Employee Involvement

Employee involvement is a concept that is undoubtedly difficult to define. Some aspects of it can be traced all the way back to some of the early writings of Hugo Munsterberg in 1913. As one author notes, the term and the process it describes is “fuzzy” (Cotton, 1993). Others have noted that it is a reincarnation of earlier programs, yet at the same time encompasses something more than traditional participatory programs do (Ackers, Marchington, Wilkinson & Goodman, 1992). Lack of a clear framework for analyzing the concept has resulted in many different interpretations of the phrase, preventing adequate progress in its study (Dachler & Wilpert, 1978).

Generally, the term refers to the idea that when employees play an active role in decisions in their organization, certain desired organizational outcomes can be achieved. Cotton defines the term, in order to begin to analyze it and review other literature related to it, as “a participative process [using] the entire process of workers, designed to encourage employee commitment to organizational success” (Cotton, 1993, pg. 3). This process is achieved by giving employees the necessary information, influence, and incentives, through various organizational programs and structures.

For this research, it is those programs and structures that must be understood, in order to correctly assess union member attitudes towards the programs. How the employee involvement is achieved is the focus of this part of the review. The actual mechanisms or parts of employee involvement programs must be examined. Many other theoretical constructs underlie employee involvement, including such things as organizational citizenship behavior and participation propensity (Graham & Verma, 1991). But the underlying processes of involvement and how they achieve organizationally desired outcomes are not the focus of this research. Instead, it is the attitude *toward* such programs that is the relevant variable, not the effect the programs have with respect to organizational outcomes or the actual involvement behaviors. Therefore, it is necessary to explore the types of programs, or the program elements and mechanisms, that organizations use to develop and achieve employee involvement.

Categorizations and Definitions of Employee Involvement Programs

Cotton's 1993 comprehensive analysis provides examples of the types of programs, or program mechanisms, used to bring about employee involvement. The book has seven chapters that describe the types of employee involvement programs typically found: Quality of Work Life Programs, Quality Circles, Scanlon Plans and other Gainsharing Plans, Representative Participation, Job Enrichment, Self-Directed Work Teams, and forms of Employee Ownership. While some of Cotton's titles encompass more than one program, they are illustrative of the variety and diversity of the programs falling beneath the employee involvement rubric.

Other authors have also tried to identify employee involvement programs. Many avoid listing specific types of programs and instead list aspects of programs that would cause them to fall under the all-encompassing title of employee involvement. For instance, one study considers any intentional program or practice by an organization that expands the roles of employees and has a conscious and visible interaction between two individuals at different levels of the organization as a form of employee involvement (Glew, et al., 1995). This, however, would preclude such things as suggestion box programs, since the interaction might not be visible, but would include such diverse things as charitable fund drives or company softball teams, since the criteria would be met.

Another article distinguished among the programs by the scope of the decisions made by the employees (Leana & Florkowski, 1992). Shop-floor or job-specific decisions differ markedly from decisions at the organizational or even industry level, although the latter are most often found in European models of codetermination rather than in the American workplace. Some of the specific programs identified by the authors in their review of the literature include participative goal setting, autonomous work groups, quality circles, labor-management committees, Scanlon Plans, Rucker Plans, Improshare Plans, Profit sharing, and Employee Stock Ownership plans. The majority of these fell within the shop-floor or job-specific level of decision making, with the exception of some ESOP's, some gainsharing programs like the Scanlon plan, and most of the profit sharing programs. The authors also indicate that employee involvement is simply a new name for an old idea. They note that it has been termed many things, including participation, quality of work life, labor-management cooperation, and teamwork.

Others have looked at aspects of involvement in order to craft a definition. Lawler, Mohrman, and Ledford (1989) suggest that “true” involvement must provide four things to employees: power, information, knowledge and rewards. In an earlier study, the same authors found that quality circles, gain sharing plans, and self-managing teams were key examples of programs that matched these criteria. Several “power-sharing” programs were also identified as employee involvement programs, including survey feedback, job enrichment or redesign, and mini-enterprise units. The study in which these were identified, along with the more traditional employee involvement programs of quality circles, quality of worklife, and teams, focused on those programs where the four key features are transmitted downward in the organization to all levels, so that all employees can become involved.

Authors have also distinguished how employee involvement is implemented in organizations (Cutcher-Gershenfeld, et al., 1991). In some instances, it is more of an add-on program. In these cases there is no change in the structures or processes of the organization. The authors use quality circles as the example for this case. In the second variant, there is a high degree of integration with the involvement technique and the rest of the organization. Autonomous work groups, which require a different organizational structure to support the change in staffing and job requirements, are examples of this variant. The variety in the organizational arrangements necessary for proper implementation reflect the variety of the programs themselves.

There have been a few other program mechanisms defined under the larger umbrella of employee involvement. Total quality management has been included in the list (Martin, Parsons & Bennett, 1995), as has problem-solving teams (Appelbaum & Batt, 1994) and such diverse programs as survey feedback, mini-enterprise units, and job enrichment or redesign (Lawler, et al., 1989). Another mechanism, although more generic in nature, is the concept of strategic participation (Eaton & Voos, 1992). This refers to the use of lower level employees in higher level decision making or strategic planning.

Many of these programs are also considered to be aspects of Labor-Management Cooperation programs. Quality of Work Life programs, Participation in Decision Making, and Gainsharing plans were all mentioned as some of the elements of Labor-Management Cooperative efforts that developed in the 1980s (Plovnick & Chaison, 1985). In addition, others have noted that unions in various countries prefer to term the concept of employee involvement as industrial democracy, but that employers lean towards the terms employee participation or employee involvement (Lansbury & Davis, 1991). Unions see the efforts yielding greater power for them through increased decision-making, and employers like to think of it as greater interest and performance of employees in their jobs. It appears that many of the aspects of employee involvement have been used for periods of time, and that some have been considered aspects of other programs. However, no matter what heading the programs are placed under, they all seem to generally have the same purpose. How unions have seen this purpose, how they have reacted to the programs, and the role they play in such programs, are all explored in the next section.

Unions and Employee Involvement

Much of the literature on employee involvement in the unionized setting is mentioned under the tenets of Labor-Management or Union-Management Cooperative

efforts. As already noted, some of the programmatic elements that have been defined as Employee Involvement programs are also considered to be Union-Management Cooperative Programs (Leana & Florkowski, 1992; Plovnick & Chaison, 1985). In addition, Union-Management Cooperation, like employee involvement, is a deceptive term that can mean almost anything to anyone. A 1989 article noted that the literature to that point had yet to clearly define the concept (Mann, 1989). In response, the author proposed that the term refer to:

"A structured mode incorporating some system of work-force representation designed to ensure widespread worker participation in achieving a common understanding among all concerned and affected parties in a given organization, and its suborganization units, of the purposes for which various work activities and tasks are undertaken, and which seeks to ensure a role for the workers in the decisions relating to how the work will be done." (pg. 233)

So, as in the case of the phrase employee involvement, there is no clear cut definition as to the term. However, given the amount of overlap with the current definitions of employee involvement and those of union-management cooperative efforts, the two can be seen as basically similar. The only clear distinction is the required inclusion of a union in the latter, whereas the former could occur in any setting.

Others have stated that the concept includes such specific techniques as labor-management committees, Quality of Worklife programs [QWL], Quality Control programs [QC], gainsharing, and problem-centered negotiation (Peterson & Tracy, 1988). Quality of Work Life programs tend to center on the communication of information to and from employees, and involving them in decisions (Mohrman & Lawler, 1984; Fields & Thacker, 1992; Deutsch & Schurman, 1993). A key underlying aspect of any of these programs is the need to build trust through an increase of communication (Voos, 1989; Currall, 1992). Through such a process, the parties can share their problems, look for common ground, and begin to build common solutions.

By 1984 certain programs had been established as being common aspects of union-management cooperation (Schuster, 1984). QWL, QC, safety committees and labor-management committees were efforts that had appeared at the plant level. While the goals of the programs overlap, the author notes that they differ with regard to structure and process, allowing them to be distinguished from one another. Schuster goes on to focus on the plant level programs that are similar, since they are the ones that best generate overall employee involvement and interest.

A frequently used diagram to understand the common ground for cooperation is drawn with two overlapping circles (Cohen-Rosenthal & Burton, 1993). In such a picture, employer goals and union goals overlap, with that area considered to be joint goals. It is in this area that union-management cooperation can begin to take place, allowing the parties to arrive at solutions in which both can benefit. This area of overlap allows for mutual gains to be had through cooperative efforts. In research done on the area of overlap it has been found that the parties would face no obstacles in reaching possible agreement on such common items (Perline & Poynter, 1990).

There are organizational gains to be had through these cooperative efforts, just as there are in employee involvement. Research indicates that higher levels of productivity and quality can be obtained through cooperation in the unionized setting, with a correlation between the intensity of cooperative efforts and quality improvements (Cooke, 1989). Other authors indicate that risk of possible legal violations, in the aftermath of the Electromation decision, are far outweighed by the benefits of cooperation (Stickler & Mehler, 1993). But one set of authors preaches caution. In a study of 236 employee involvement programs, very few tangible benefits were gained by employees (Juravich, Harris & Brooks, 1993). Instead, most of the benefits were intangible increases in the working relationship, or other issues best thought of as managerial benefits. And in other research, authors have found that managers use the term union-management cooperation differently than do union officials (Voos, 1989). Managers often use the term to refer to concessions, or other employee actions that simply make the firm more competitive. Further research has indicated that as managers perceive greater cooperative relations with their unions, they see a lessened role for their union in decision-making (Perline & Sexton, 1994). It is obvious that the reciprocity of cooperation is not always taken for granted, at least from a managerial perspective.

Perhaps telling are the reasons why management installs such programs. Union avoidance is often given as a reason for the implementation of such programs (Ackers, et al., 1992). But, in situations where employers are already unionized, they are seen as union "by-passing" programs. A counterpoint to these arguments results from a 1993 article in which the authors found that the presence or absence of a union had no discernible affect on the decision to implement gainsharing programs (Collins, Hatcher & Ross, 1993). Of course, the reasons for implementation will vary, but the reason is often tied in some way to unionization.

There is support for some aspects of labor-management cooperative efforts by labor union leaders. In a survey in Illinois, respondents were generally favorable towards the idea of codetermination and participation in decision making (Fatehi-Sedeh & Safizadeh, 1986). A collection of union positions on the topic indicates that some unions and union leaders are in support of such programs (U.S. Department of Labor, 1984). However, that evidence is mixed with outright rejection of such programs as subversive attempts by management to overthrow unions and with positions best described as "guarded". Unions adopting the "guarded" position have reviewed both the positive and negative aspects of cooperation, but have adopted more of a "wait and see" attitude than their counterparts that are either fully for or against such programs.

The relationship between the company and the union should not be overlooked. Often, that relationship becomes vital to the success of the employee involvement effort. Plovnick and Chaison (1985) found that the better the quality of the labor-management relationship, the higher the incidence of cooperative programs. Their study analyzed the relationship of concessionary bargaining and union-management cooperative efforts. Generally, the labor-management relationship improved when programs were implemented. Although there was no analysis of sites without programs, the relationship between the two is significant, suggesting that the better the relationship, the more successful an implementation might be. These results must be viewed with caution, however, since the study examined programs installed under times of

economic duress, and implementation was often part of concessions made at the bargaining table.

In support of the idea that the labor-management relationship affects employee involvement programs, Schuster uses an earlier model to incorporate the relationship into his study. The 1980 Nadler, Hanlon and Lawler model of QWL finds the success rate of such programs affected by the relationship of the company with its union. Schuster incorporates this idea, noting that there is a reciprocal effect. The relationship is relevant to the success of the programs, as a precondition to the implementation of such programs, but also is affected by the success of such programs. Successful cooperative efforts also act to improve the labor-management relationship (Schuster, 1984).

Belman (1992) found that the climate and the relationship were correlated with economic performance, in addition to other industrial relations outcomes. Specifically, he indicates that in order to expand participative programs companies must consider the climate of their labor relationship. Rising levels of trust between the parties allows for greater cooperative efforts, both in the scope and type of effort. He arrives at this conclusion through a review of nine studies, published between 1983 and 1987, in which labor relations climate was found to affect organizationally desired outcomes, such as productivity.

Cutcher-Gershenfeld and his co-authors (1991) propose that the involvement of unions in employee involvement initiatives is necessary for successful institutionalization of such programs. They indicate that when unions are involved, such programs last longer and have a better chance of success. From the nine field sites studied, the authors conclude that unions will need to be prepared to face changes in the traditional labor-management relations. This is in part due to the organizational changes necessary to implement and support employee involvement initiatives, and as the scope of the initiatives grow, so too will the role of those involved in the programs.

In a study of the occurrence of employee involvement programs, and the differences in their use in unionized and non-unionized settings, the authors tabulated the types of programs (Eaton & Voos, 1994). They identified participative programs, profit sharing, ESOP's, gainsharing, pay for knowledge, flexible job design, information sharing, quality of worklife programs, quality circles, teams, job enrichment, job rotation, employee surveys, and productivity-related group bonuses as elements of employee participation programs. Their study follows a growing line of literature that looks at the growth and implementation of such programs, and differences in their usage in different sectors of the economy. In their 1992 study, they find that unionized companies have higher rates of workplace innovation.

Allen and Van Norman (1996) also examined unions and employee involvement, utilizing aspects of social information processing. In their model of union involvement in employee involvement, they assume that the decision of individuals to participate is affected by their union's stance. This is in agreement with a position put forth earlier by Verma and McKersie (1987), in which the authors found a negative relationship between participation in the employee involvement programs and participation in union activities, in a site in which the union was uninvolved with the implementation of the employee involvement programs. Allen and Van Norman found that the unions that opposed the programs affected the decisions of their members. The degree to which

the union supported the programs, or rejected them, coupled with various workplace situations, also had an effect on the participation decision. They also found that adversarial local labor-management relationships caused members to be unsupportive of employee involvement efforts.

With such an abundance of employee involvement programs, and such a broad definition of the concept, it is necessary to clearly define the term in understandable and measurable ways. One set of authors used a limited definition that is comparable to the one adopted for this study, in which they focused on those programs that allowed for direct employee input through a formal and group structure (Cutcher-Gershenfeld, et al., 1991). They claimed that since other studies have shown that different types of programs have different impacts and since there is no present definition of the term, a parsimonious definition that focuses on one participatory concept is best. Following that logic, and adapting it slightly, the definition of Employee Involvement for this study are those programs that incorporate employee participation in decisions at the shop floor level. In addition, only those programs that unions have traditionally been involved in that allow for direct participation by their members will be included. This effectively limits the definition to include Quality Circles, Quality of Work Life programs, Labor-Management Committees, and Groups or Teams (either Ad Hoc or Permanent).

Dispositions

With employee involvement defined, and a conceptualization of how attitudes are formed, the next stage is to identify those dispositions most relevant to the main research question. Specifically, the literature is analyzed to uncover dispositions most likely to affect the formation of union member attitudes towards employee involvement. It is expected that some individuals will be predisposed favorably towards such programs, and others unfavorably. Finding which dispositions will yield such affect is the purpose of this section of the review.

Dual Commitment

The first area to be examined is that of dual commitment. The idea of commitment by the employee to either their employer, their union, both, or neither, is not a new concept. Dual commitment is often described as having two components: organizational commitment and union commitment. After its early conceptualization, the concept lay dormant until the 1980s, when it reappeared as a topical item. It is the work done during this latter period that established the current state of the theory.

Dual commitment addresses those individuals highly committed to both their employer and their union. Unfortunately, recent research does not support the idea that such a construct exists (Gordon & Ladd, 1990; Iverson & Kuruville, 1990; Deery, Iverson & Erwin, 1994). Instead, it appears as if there are two distinct constructs, one for organizational commitment and one for union commitment, that are independent of each other. Iverson and Kuruville (1990) explored the existence of dual commitment, by examining its existence as an underlying construct of both company commitment and union commitment, but found no empirical support. The “best” model they uncovered suggested that separate constructs existed, with company commitment having one factor and union commitment having four factors.

The early work on organizational commitment defined it as the desire to remain as a member of an organization, to exert high levels of effort for the organization, and to accept the organization's beliefs (Porter & Smith, 1970).

Organizational commitment has been studied with a variety of scales, but it appears as if the most recent scale used consistently has been that developed by Porter, Steers, Mowday and Boulian in 1974 (Gordon & Ladd, 1990). This scale, consisting of 15 items, was developed in order to measure the amount of commitment employees felt towards their organizations (Porter, Steers & Mowday, 1974). The actual items, as published in 1979, were measured with 7-point Likert scales, with scale point anchors of strongly, moderately, slightly, and a midpoint of neither disagree nor agree (Mowday, Steers & Porter, 1979). Six of the items are negatively phrased and are intended to be reverse coded.

Union commitment is a more recent construct, developed predominantly from the organizational commitment research. However, it appears that there are distinctive aspects of the construct, unlike the organization commitment construct which can be reflected in a single scale. A recent study (Sverke & Kuruvilla, 1995) reviewed the prior empirical evidence for union commitment and found that more than half confirmed the presence of four factors within the commitment construct. The majority of these relied upon the 1980 Gordon, et al. study, in which 37 questions were developed. However, in the studies where other scale items were used, the same four factors were also identified. Specifically identified were union loyalty, responsibility to the union, willingness to work for the union, and a belief in unionism. Other studies have also confirmed four factors as the best fit for the concept (Iverson & Kuruvilla, 1995). Again, there seems to be convergence in recent studies to use the scales developed by Gordon, Philpot, Burt, Thompson, and Spiller in 1980 to measure union commitment (Gordon & Ladd, 1990).

Studies have also found that labor relations is often an antecedent to dual commitment, or to the two constructs (Deery, et al., 1994). Co-operative environments allowed employees to have commitment to both, but in situations where the labor relations situation was otherwise, employees often were forced to choose one or the other to be loyal to. In effect, the commitment levels are proxies for the labor relations scenario, since the situation drives the direction and level of the commitment.

Locus of Control

Another key disposition receiving study with regard to employee involvement is locus of control. Originally developed by Rotter in 1966, the concept refers to the perception of an individual as to whether reinforcement was controlled internally or externally. Internal control indicates that the individual sees reinforcement as contingent upon their own behavior and those with an external view of control see reinforcement as controlled by outside forces, meaning the reinforcement might result independently of their own actions.

This view has received considerable study over time. It has been seen in direct and moderated relationships with such things as creativity, satisfaction, perceptions of autonomy and feedback, and issues relating to productivity, absenteeism, and turnover (see, for example, Kimmons & Greenhaus 1976; Lefcourt 1984). In a recent test of the validity of the concept, it was found that self-reports of locus of control were more valid

than behavioral observation, and that locus of control has a larger effect size in cross-sectional research than in longitudinal studies (Renn & Vandenberg, 1991).

Given its relationship with such a range of organizational outcomes and its link with participation and involvement, it is included in this study as a key disposition. It should be noted that the original locus of control scales developed by Rotter have been updated, most noticeably in regards to situational factors. A Work Locus of Control Scale has been developed (Spector, 1988) ; (Spector, 1992) which is more geared towards work-related issues, rather than overall life issues. This has been done in various fields and situations without any apparent loss of descriptive or predictive power (Spector, 1988).

Participativeness

The concept of willingness to participate in activities, referred to as participativeness, is a pre-disposition towards such action by the individual. The desire for participation is a disposition that has become more relevant as business has integrated greater degrees of employee involvement. A recent study that incorporated the concept wanted to examine the general predisposition toward participation (Verma & McKersie, 1987). They found that self-selection for voluntary participation programs was affected by this desire.

The roots of the scale for that study can be found in a 1984 study on worker participation and American unions (Kochan, et al., 1984). Interest in participating in three specific areas of work was examined. Entitled “Quality of Work Life Concerns”, “Bread and Butter Concerns”, and “Strategic Concerns” the scales, across five samples, attempted to capture the participation desires of union members. Respondents varied across the samples and within the scales as to the amount of say they wished on various issues, but in general, most wanted either “a lot of say” or “some say” on the majority of the items.

Earlier work on this concept can be traced back to 1965 when Martin Patchen developed a set of items to examine employee motivation and morale. Included in the study was an area on the respondent’s interest in work innovation. Labeled an “employee characteristic”, this was studied through the use of a six item scale. The focus was on the development of appropriate items for a survey rather than a theoretical treatment of the concept. The only link made was between this characteristic and the constructs of job satisfaction and job involvement, but only in the most cursory sense.

The idea of desire to participate as a disposition has not seen a lot of attention. The Verma and McKersie study is one of the most recent that is directly related to employee involvement. Accordingly, this study will use their work as a standard measure of participation, since no other valid measures seem to be available, and there is no established theoretical development of the concept.

Summary of the Literature Reviewed

Attitudinal theories were reviewed to uncover those best at explaining the formation of attitudes by union members. Social information processing theories incorporate the role of external information, while dispositional theories focus on internal personality traits and characteristics. Elements of both theories are seen as appropriate for this study.

Employee involvement, and union-management cooperation, were examined to arrive at a quantifiable definition of the term. Certain program types have been identified as relevant to unions and the labor relations environment. Also, the level at which the program operates was evaluated to find those programs most relevant to the work experiences of union members.

Dispositions were also examined for their contribution to understanding the attitude formation process. Relevant dispositions included dual commitment, locus of control, and participativeness. The three are all related to employee involvement, and would serve to understand the predisposition of an individual towards such programs.

The next section takes the ideas and theories uncovered during the literature review and combines them into an overall model. This is done through an iterative process, wherein various aspects from previous literature are combined to arrive at a model appropriate for this study. The model developed is descriptive in nature and will be further defined in the third chapter, in order to allow statistical analysis.

The Theoretical Model

It is necessary to craft a unique model for this study, since it is drawing from a variety of theoretical areas. A progression of model development can be used, where previous models are combined and refined with the addition of other models and theories. A model of employee involvement is the starting point, with various ideas from the literature incorporated into it. The Salancik and Pfeffer social information processing model of attitude formation will be incorporated into the foundation of this model. The SIP model seems the best to handle the uniqueness of the unionized workplace and for understanding how union members arrive at their attitudes about employee involvement programs. However, while the dispositional view would rule out the role of the company and the union in how members form attitudes, the predispositions of the individual must also be taken into consideration. The dispositional view assumes union members to have pre-existing preferences for or against such programs, due to underlying psychological processes. Accordingly, a model that incorporates aspects of both must be developed.

There is an inherent uniqueness in the relationship of union members and their union representatives and their employer. Union members receive input on a wide variety of workplace issues not only from their employer, but also from their union. They are confronted with two, possibly conflicting, sources of social information. SIP models capture the uniqueness of the unionized setting, by allowing the different forces to act at the same time and to influence the individual and the formation of their attitudes. The traditional, dispositional attitudinal theories would attribute attitudes to the characteristics of the individual, possibly negating the role of the union and the company in influencing the attitudes of the union members. A full model must be able to adequately explain the interaction of the two.

Model Development

Many recent theories have established Employee Involvement as a predictor of desired organizational outcomes (Glew, et al., 1995; Cotton, et al., 1988). The effects of involvement include such things as increased satisfaction, increased production and product quality, and decreases in unwanted behaviors, such as absenteeism and tardiness (Schwarz, 1990). A model of this is shown in Figure 6.

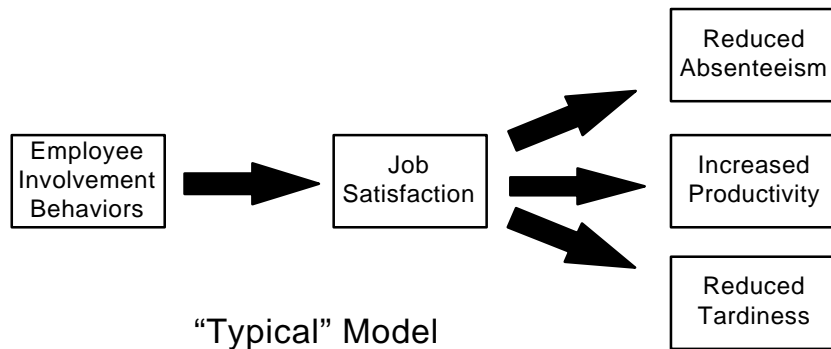


Figure 6 - A Typical Model of Employee Involvement and Organizational Outcomes

As already stated, the focus of this proposed study is how employees develop attitudes towards employee involvement programs. By turning the focus to the front end of this model and by asking the question “How do we even get to the point of deciding whether or not to participate?” the model can be developed further. Incorporating the work of Fishbein and Ajzen, behaviors come about through the interplay of beliefs, attitudes and intentions. If employee involvement is the behavior necessary to achieve the desired outcomes, a larger model can be developed by integrating the two models together. Using attitudinal theory, we can begin to understand how employees form their attitudes about the programs, and then how that may affect their behavioral intentions, and ultimately their actual behaviors. This fuller model is shown below in Figure 7.

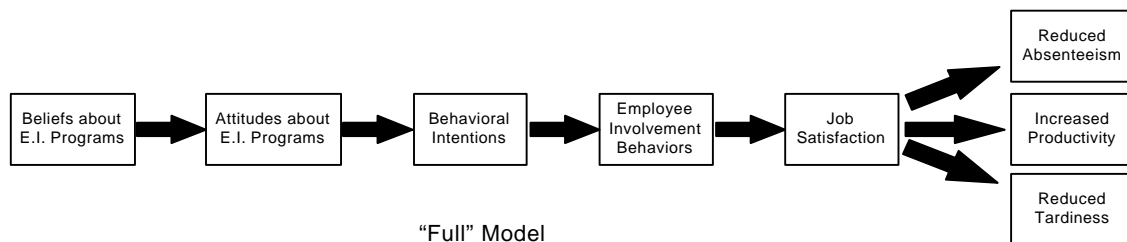
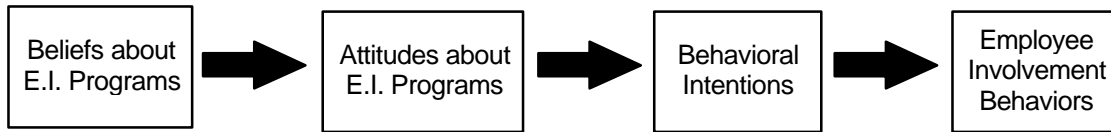


Figure 7 - Employee Involvement combined with Fishbein and Ajzen’s Theory of Belief, Attitudes, Intentions and Behaviors

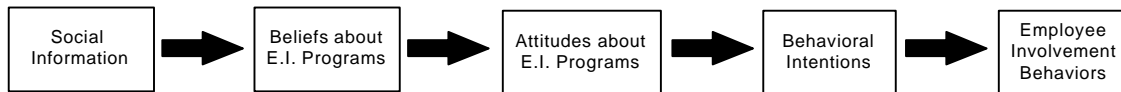
So, by taking the model of employee involvement, combining it with a model of attitudes and behaviors, a somewhat “fuller” model is developed. By focusing on the research question for this study, another model can be drawn. It is, essentially, the front end of the previous model. However, the reduction of the “fuller” model allows for specification of those factors most appropriate to the purpose of the research. The end point for this model is a behavior, as in the models of Fishbein and Ajzen, but it is replaced with the actual behavior, that being Employee Involvement. It is presented here in Figure 8.



“Reduced” Model

Figure 8 - A reduction of the combined Employee Involvement and Fishbein and Ajzen model

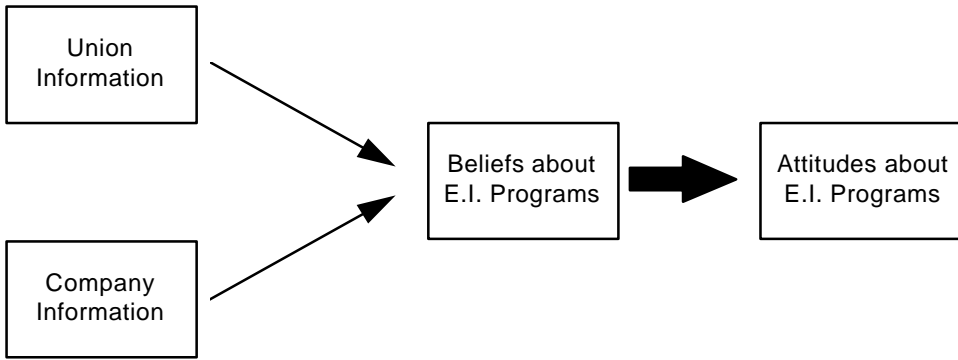
Working with this reduced model, it is possible to incorporate the role of social information. Based on the Salancik and Pfeffer SIP model of attitude formation, another iteration of the model can be developed. This version shows how social information impacts union member beliefs about the programs and how those beliefs lead to attitudes. In addition, following the Fishbein and Ajzen model, those attitudes contribute to the union members’ intentions to participate in employee involvement programs, and culminates in a final behavior, the actual participation. This model is shown below:



Combined Model

Figure 9 - A Model incorporating Social Information

With this “combined” model in mind, further specification becomes necessary. It is now necessary to incorporate those outside sources of social information that might affect or determine an employee’s attitude towards or about Employee Involvement programs. For union members, it is important to consider what information they receive on the job and what information they receive as union members. Given their situation, it is expected that they will receive many sources of social information concerning such programs. They will receive information from both their union, and from their employer. It has also been established that the relationship between management and the union will act as a source of information for the members, affecting employee attitudes. And, the member’s past experiences with such programs will also have an impact on their development of attitudes towards present or future programs (Glew, et al., 1995). With those factors established, it is possible to add additional factors to the model, to arrive at a final model of how union members form their attitudes towards employee involvement programs.



Proposed Model

Figure 10 - The Proposed Model (First Iteration)

This proposed model incorporates many of the elements that may affect union members' attitudes. The model is also designed to focus on those programs that directly affect union members. Using the Leana and Florkowski (1992) distinction, the model is designed to examine those programs that use shop-floor or job-specific elements. The focus is on those things the employee would be actively involved in, on a day-to-day basis. Corporate governance or co-determination are types of programs that are somewhat distant for most workers to really concern themselves about. Also, in the unionized setting, it can be assumed that those members wishing to involve themselves at those higher levels of participation will look to union offices as a way to fulfill those needs. The formal nature of the labor relationship can substitute for some of those programs that are not shop-floor or job-specific in nature, by providing participation in the process of corporate governance through collective bargaining.

Another factor the model does not attempt to address is the feedback loop specified in the 1978 Salancik and Pfeffer model. Their non-recursive element between Attitudes-Needs and Behaviors can be removed by incorporating the element of time. Using the idea of past behavior as an attitude determinant, it is possible to look at previous experiences with such programs rather than present experiences. Since the literature has noted that past experience influences the formation of attitudes, and by specifying that past experience is the relevant behavior affecting the formation of current attitudes, it is possible to remove the feedback loop altogether.

Two remaining issues must be addressed. First, employee involvement has been operationalized as those programs, active at the shop floor level, that unions have "traditionally" been involved with. Shown in Figure 11 below, these elements are included as multiple dependent variables:

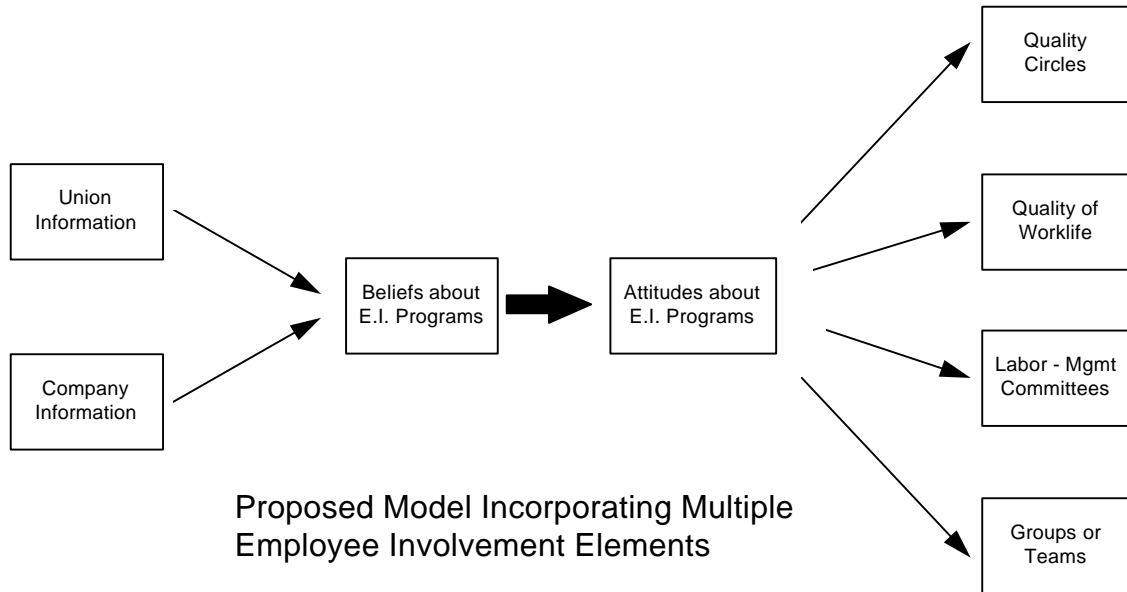


Figure 11 - Proposed Model with Multiple Elements of Employee Involvement (Second Iteration)

This model illustrates the multiple measures of employee involvement already identified as relevant to the experiences of unions and their members. By using multiple programs it is possible to account for a range of workplace experiences with employee involvement.

The final aspect of the model that must be developed is the role of dispositions in the formation of the attitudes. Two dispositions uncovered during the literature review that would support involvement are locus of control and participativeness. Locus of control refers to an individual's perception of their future. Those with an internal locus of control believe they control their destiny, while those with an external locus believe that outside forces shape their future. Participativeness would include pre-dispositions to participate in functions and activities. The two are included in the model below:

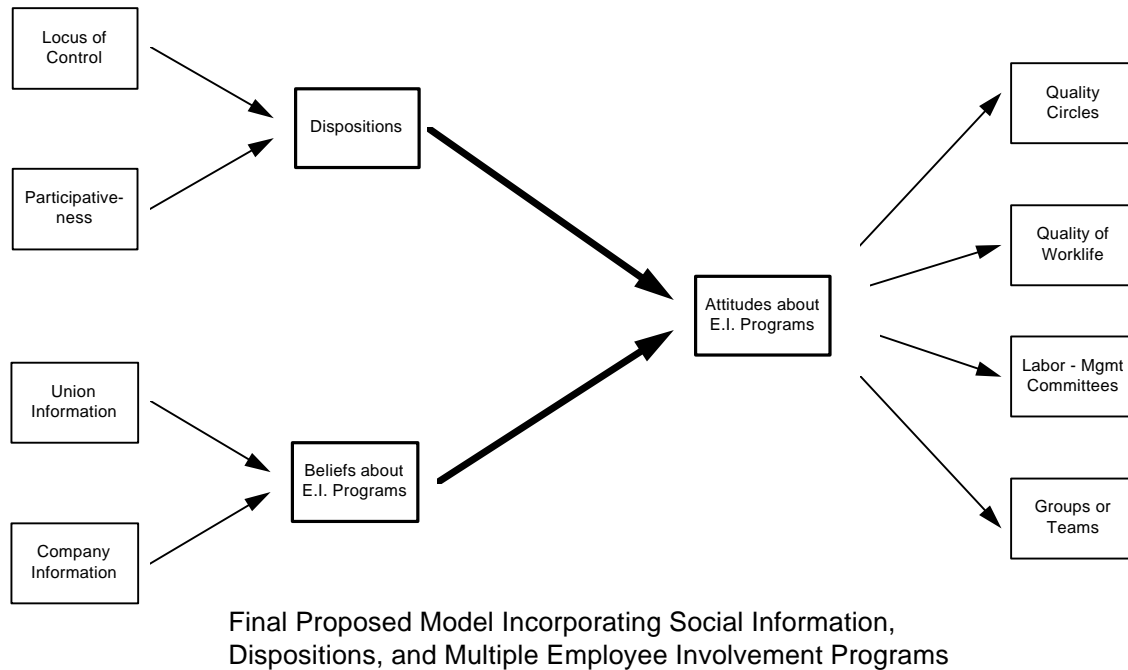


Figure 12 - The Proposed Model (Final Iteration)

This model incorporates all aspects uncovered during the literature review that are relevant to the formation of union member attitudes of employee involvement. The following chapter develops a methodology to test this model, and the relationships within it. With this final iteration, the development of a model for this study is complete.

Summary

The literature reviewed provided the basis for the formation of a model. Various theories of attitude formation were incorporated, along with elements of Employee Involvement. Two theories with different assumptions were utilized, in order to better understand the process of attitude formation. A model was conceptualized from the theories and definitions found in the literature. The next chapter discusses the model and develops it further, along with hypotheses necessary for examination of the overall research question. In addition, the survey instrument will be introduced, as will other methodological considerations.

DESIGN OF THE RESEARCH

In this chapter, the theoretical model previously designed will be tested empirically. Structural Equation Modeling techniques will be utilized, requiring a redefinition, known as “specification”, of the theoretical model. Once the General Model is specified, hypotheses are then developed in order to address specific aspects of the model and the relationships of the variables. A survey instrument is designed in agreement with the model and in order to collect the data necessary to test the hypotheses. The chapter concludes with a discussion of the survey and its administration.

Model

Structural Equation Modeling techniques will be used, since they are best suited for causal models with multiple indicators. This statistical methodology uses theoretically defined variables and examines how matrix equations are able to represent their relationships (Hayduk, 1989). In addition, it is the difference between the measured and predicted covariances that receive attention, rather than differences in measured and predicted individual observations (Bollen, 1989). As Bollen states, the basic premise of structural equation procedures is to examine the covariance matrix formed by the sample in comparison with the population covariance matrix as specified in the theoretical model. The sample provided by the data is compared with the relationships specified in the model, and the degree to which the data fit the model reflects the adequacy of the causal assumptions within the model.

The descriptive theoretical model developed from the literature in the second chapter must be redrawn to facilitate its testing. These redrawn models can be tested with LISREL, version 8.12a, a program designed for the analysis of multivariate causal models (Joreskog & Sorbom, 1993). The following figures (Figure 13, Figure 14, Figure 15) illustrate the models actually tested with LISREL. They are developed from the theoretical model arrived at in chapter 2, but are unique in their presentation of the variables and the relationships within the model.

The first model, presented below in Figure 13 is the proposed structural model. Only the latent variables and their relationships are shown.

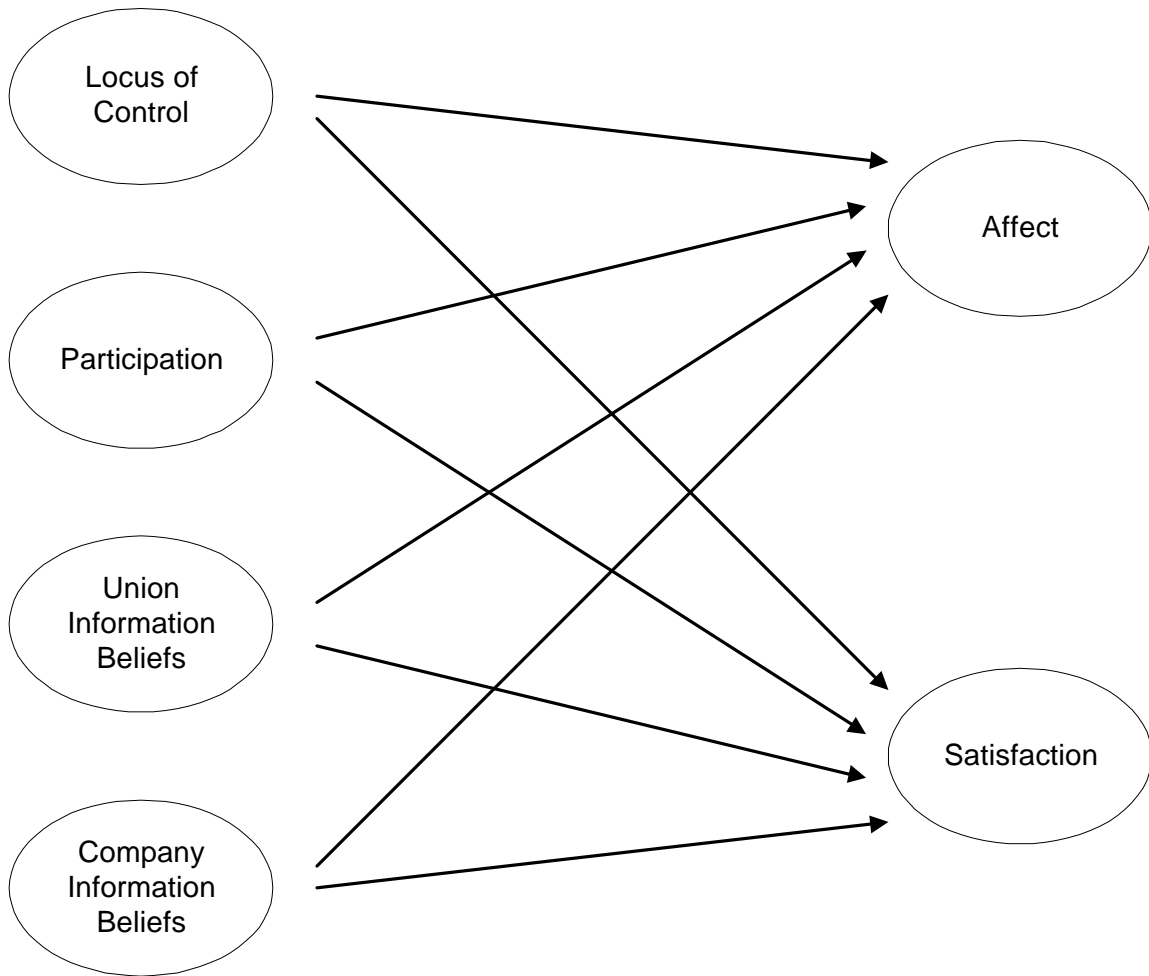


Figure 13 - Proposed Structural Model

Next, the measurement model is specified. This is shown in Figure 14. In this figure, the actual variables used to measure the latent variables are indicated. Some of the latent variables have more than one indicator as shown by the multiple arrows from the latent variable to the measured variables.

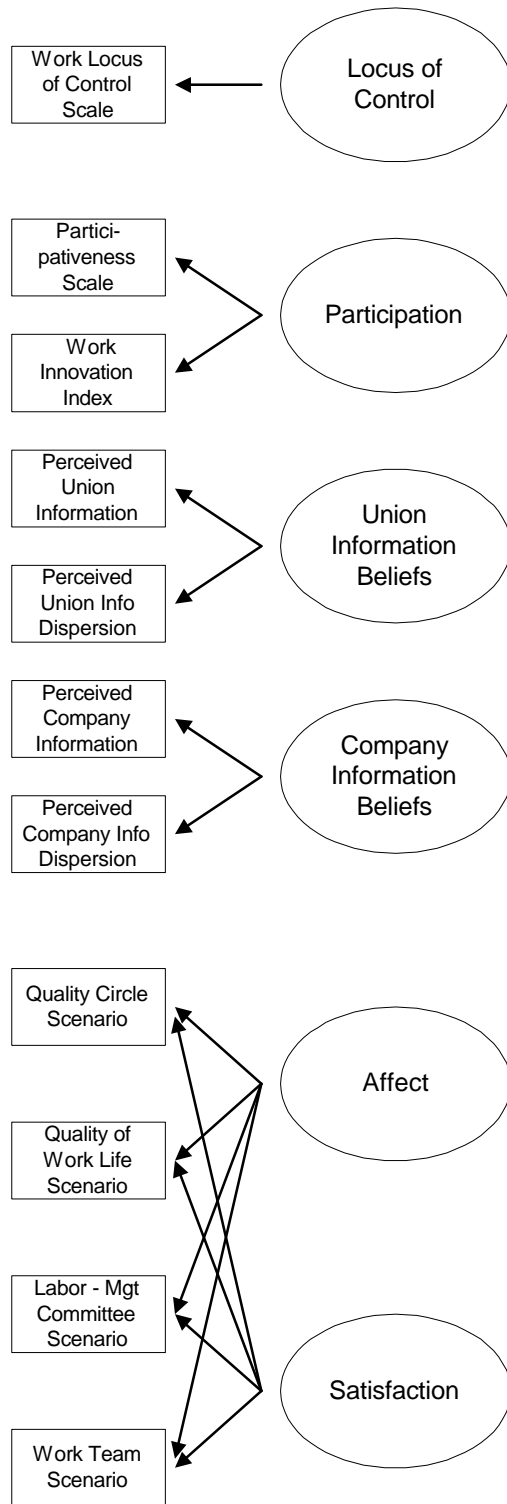


Figure 14 - Proposed Measurement Model

Finally, the two previous figures are combined. Figure 15 shows all of the latent variables and the measured variables together.

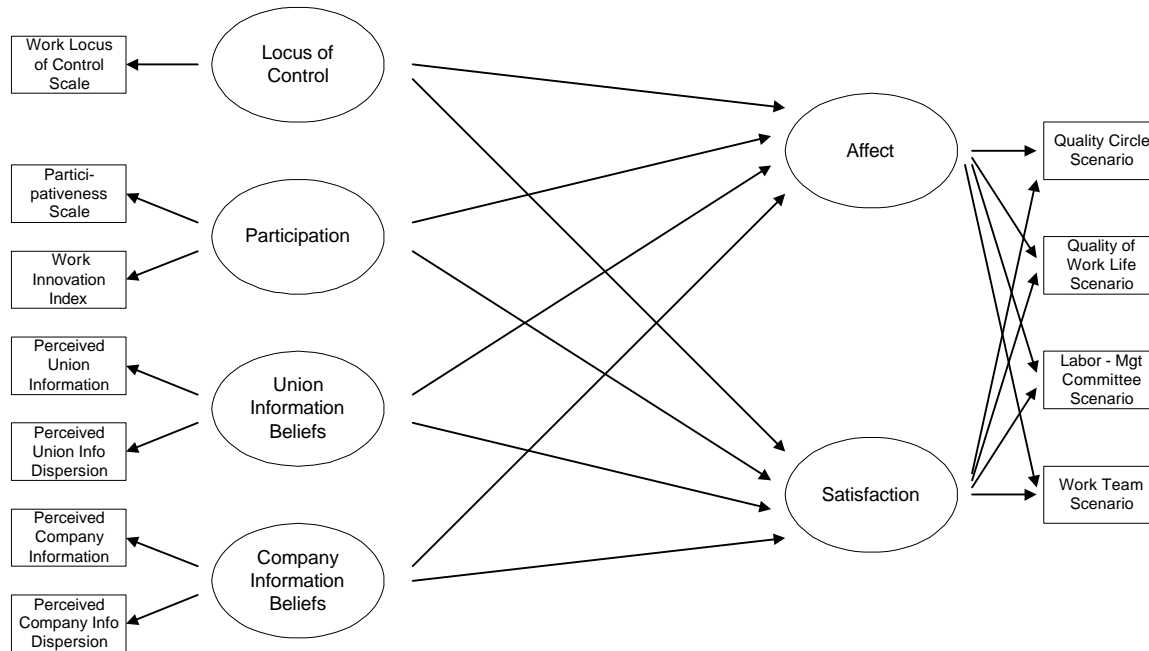


Figure 15 - Proposed Structural Equation Model

These models are presented in a format that is in accordance with that of structural equation modeling techniques. As has been illustrated, the causal relationships between the latent variables, as derived from the theoretical model, are tested through data collected from the measured variables. The degree to which this model is correct depends upon the degree to which it can be represented in the empirical data and the degree to which the proposed theoretical model adequately reflects the relationships of the latent variables. Also, the degree to which the latent variables are adequately measured by the observed variables also affects the fit of the model. The degree of fit indicates that the data collected have a covariance matrix similar to the matrix specified in the model.

Research Hypotheses

The development of testable hypotheses from the theoretical model is the next step in determining how members form their attitudes. Several different hypotheses can be identified in order to further examine and test the model, as well as further investigate the roles of the various forms of social information and dispositions. Each hypothesis is presented and a direction is specified, along with further clarification when appropriate.

The First Hypothesis.

H1: Union Information will be positively related to Employee Involvement Attitudes when Union Commitment is high.

H1a: Union Information will be more strongly related than Company Information to Employee Involvement Attitudes when Union Commitment is high and Company

Commitment is low.

This set of hypotheses addresses the issue of social information, as moderated by the respondent's commitment. It is expected that those respondents with commitment towards their union will develop attitudes in accordance with those they perceive their union to favor. In effect, there should be similar views of the union and the respondent towards employee involvement programs, as seen through the perceptions of the respondent. It is expected that positive information, in support of such programs, would influence employees to develop similar positive attitudes towards such programs.

The second hypothesis in this set is a reflection of the first, but specifically addresses those respondents that are only committed to their union and not the company. In these individuals, it is expected that the path between union information and attitudes towards the programs will be stronger than that of company information and program attitudes. This would indicate that those with commitment towards their union would build attitudes based on that information rather than the information provided by the company. Again, if the union takes a stance in support of the program, the union member should develop positive attitudes towards such programs. If the union stance is against such programs, the union member should develop negative attitudes. This hypothesis tests the overall impact of the union and is not concerned with the actual stance of the local union or the international union's position. The overall perception by the member of their union's position is most relevant to the formation of their own attitudes.

The Second Hypothesis.

H2: Company Information will be positively related to Employee Involvement Attitudes when Company Commitment is high.

H2a: Company Information will be more strongly related than Union Information to Employee Involvement Attitudes when Company Commitment is high and Union Commitment is low.

This set of hypotheses addresses those individuals that are committed to the company. Again, it is expected that the social information from the party the respondents are most committed to will be most salient in the formation of attitudes. As in the first set, these are based upon the perceptions of the individual with regard to the social information they feel that they have received. Again, the second hypothesis in the set addresses those respondents that are only committed to the company and not to the union.

The Third Hypothesis.

H3: Both Company Information and Union Information will be positively related to Employee Involvement Attitudes when both Company Commitment and Union Commitment are high.

This hypothesis addresses those individuals reporting high levels of commitment

to both their union and their company. Often referred to as “dual commitment”, this condition will affect the formation of attitudes through the same perceptual filters as the first two hypotheses. These respondents should form attitudes that are similar to both sources of social information. Since dual commitment is often a proxy for the labor relations scenario, high dual commitment would indicate a positive relationship. It is likely that both the union and the company would have a similar stance in a positive relationship, as evidenced by some of the literature on labor-management cooperation. This would prevent dually committed respondents from having to choose between opposing views by their employer and their union.

The Fourth Hypothesis.

H4: Social Information will be stronger and more strongly related to Employee Information Attitudes than will Dispositions.

This hypothesis tests the saliency of the two underlying assumptions for their role in the formation of attitudes. It is expected that social information will have a greater role in the formation of attitudes. This outcome would provide the highest benefit from an organizational standpoint, since it would indicate that the views and attitudes of individuals can be manipulated through social information sources, rather than being grounded deeply in the roots of individual personality. The hypothesis speaks to the issue of the need for information prior to implementation, rather than selection of individuals based on personality traits. It is assumed that dispositions will have some effect on the types of attitudes formed. Those with a high locus of control would develop more favorable attitudes towards employee involvement, since they perceive the ability to control their own destinies. Those with a need for participation would also form more positive attitudes, since it fulfills their needs. However, social information provides more recent and relevant stimuli concerning the programs which is hypothesized to play a greater role in the formation of attitudes than dispositions.

With the hypotheses specified, it is possible to design an instrument that will gather data appropriate for testing. Using the model developed, and the hypotheses generated, a survey instrument can be developed. A questionnaire for union members to answer is constructed in the next section.

Instrument Development

Various survey instruments were discovered during the literature review, but none was appropriate in its entirety. Accordingly, different aspects from multiple surveys were adapted for use in this study. In some instances, standard scales and their responses were used verbatim. Other scales were uniquely developed for this instrument.

The Independent Variables

Participativeness was measured with a 12 item scale ($\alpha = 0.85$) developed by Verma and McKersie in 1987 (Verma & McKersie, 1987). This scale was designed to measure the desired participation in decision-making and looks at the level of “say” employees want in various organizational decisions. It was adapted from a scale developed to assay union member’s interest in participation (Kochan, et al., 1984).

Participativeness was also measured by the Interest in Work Innovation Index, developed in 1965 by Martin Patchen. This is a six item scale with reported test-retest reliabilities ranging from .87 to .92. The scale measures the degree to which respondents are interested in finding new ways of doing things at their job. For both scales, the original response items were kept intact.

Locus of control was first measured with scales by J.B. Rotter (1966, 1971). Cronbach's Alpha for the original 1966 Rotter scale is not available, due to the dichotomous nature of the variables, and a Kuder-Richardson 20 was not reported. A second locus of control scale, developed by Spector in 1988, attempts to overcome the limitations of the original scale developed by Rotter in 1966. Entitled the Work Locus of Control Scale, it uses concepts and beliefs found in work settings, as opposed to the more general items Rotter used (Spector, 1992). This follows a development in the literature, in which a call was made in 1976 by Phares for researchers to develop context-specific scales (Phares, 1976) , (Spector, 1988).

The organizational commitment scale, taken from the Organizational Commitment Questionnaire (Porter, et al., 1974; Mowday, et al., 1979) is intended to be measured with seven point scales, with the anchors labeled as "strongly disagree", "moderately disagree", "slightly disagree", "neither disagree nor agree", "slightly agree", "moderately agree", and "strongly agree". The 15 items in the scale show internal reliabilities ranging from .82 to .93, depending upon the sample used (Mowday, et al., 1979). The scale has also been cross-validated and seems adequate with regard to other validity issues.

Union commitment was originally defined with a set of 48 items (Gordon, Philpot, Burt, Thompson & Spiller, 1980). 30 of the items have been identified as most salient in capturing aspects of commitment. Four different factors within the scale have been identified: Union Loyalty, Responsibility to the Union, Willingness to Work for the Union, and Belief in Unionism. Reliabilities for the scale were not reported in the original article, but additional research using subsets of the original scale has shown alpha values generally stable: 0.83 (Iverson & Kuruvilla, 1995), 0.85 (Martin, Magenau & Peterson, 1982), and 0.88 (Sherer & Morishima, 1989). Fields and Thacker reported alphas on each of the factors within the overall scale: 0.89 for Loyalty to the Union, 0.72 for Responsibility to the Union, 0.80 for Willingness to Work for the Union, and 0.82 for Belief in Unionism (Fields & Thacker, 1992).

No standard measures were found that captured the perceptions of union members about the information they receive from their union and from management. Accordingly, a set of questions was developed for this area. Some concepts from other scales about the perceived roles and actions of union officials were incorporated (see, for example, (Eaton, Gordon & Keefe, 1992)), but most of the items are newly constructed. It is expected that two factors will be found within the scale, one relating to the beliefs about the union or company's stand on certain issues, and the other relating to the perception of how widely dispersed that information is among co-workers and peers. A relevant issue for this scale is that the data gathered are the respondents' perceptions about what information they have received, rather than what the actual information might be. Respondents might believe they have heard a point that is truly counter to the position held by the source of the information, but it is those perceptions that act as beliefs in the attitude formation process.

The Dependent Variables

The dependent variables, affect towards employee involvement and satisfaction with proposed employee involvement programs, are measured through a set of scenarios and questions about the scenarios. The scenarios developed for this survey were based upon standard definitions found in the literature on employee involvement. Each scenario underwent analysis by several subject matter experts who examined the distinctness and completeness of the scenarios and the type of employee involvement they were intended to present.

The four scenarios were developed in which Quality Circles, Quality of Worklife Programs, Labor-Management Committees, and Work Teams were presented without specifically naming the programs as such. This was done to prevent respondents from comparing them with programs they may have encountered that had similar names but different purposes. As has been noted there is no commonality regarding the definition of such programs or their application. With this in mind, the scenarios were developed in such a manner so that all the elements of the programs are presented within the scenario yet it is not given a specific name. This allowed the respondents to respond to the programmatic elements rather than to a preconceived notion based on a nominal designation. The actual scenarios are contained in the survey shown in Appendix A, as questions A, B, C, and D.

Following each scenario were two questions regarding the respondent's degree of affect and satisfaction with the scenario. For some, their previous work experiences with similar programs obviously affected their responses to the scenarios. This is acceptable, since previous work experience is simply another form of social information. For those that had not directly experienced the program, their responses were likely based upon their dispositions and the social information that they had experienced. In either case, the respondents were asked to express two attitudes, affect and satisfaction, to each of the four scenarios.

The Groups Within the Sample

The sample was split based upon the commitment of the respondents. As shown in the dual commitment literature, it is possible to fall into one of the four categories shown in the table below.

Table 1 - Dual Commitment Groups

		Union Commitment	
		Low	High
Company Commitment	Low	A group	B group
	High	C group	D group

Given the recent situation at the plants used for the study, it was expected that the vast majority of respondents will be on the C - B diagonal, and that the other diagonal should see lower responses. It was hoped, however, that enough responses would fall within group D to allow for testing of hypothesis 4.

Methodology

The questionnaire was distributed to a sample of union members employed in power generation facilities located in Virginia, West Virginia, Kentucky and Ohio. They were asked to complete and return the questionnaire in a timely fashion. A single "window" of access was provided during the summer of 1997.

Design and Administration of the Full Study

Once final approval from both the company and the unions involved was granted, surveys were mailed in batches to the individual power generation facilities. These were then distributed by company officials to the bargaining unit members. Enough surveys were included for each plant for all bargaining unit members, on all shifts. Following the initial distribution, the facilities were again contacted and asked to remind their employees to fill out and return the survey forms.

The surveys were printed in such a fashion so as to allow ease of completion and return. A double column format, with a visual separation device, was used for the questions. The inside front cover was a letter stating the purpose of the research and the approval granted by the Human Subjects Committee at Virginia Tech, the Company itself, and the Unions involved (Appendix A contains the actual survey). In addition, phone numbers were provided for respondents to contact in case of problems with the survey.

The inside rear cover contained questions of a basic demographic nature, and the rear cover was printed with a business reply label. This allowed the respondents to simply fill out the questionnaire, fold it in half, tape or staple it shut, and then drop it in the mail, without incurring any postage or other cost.

Summary

Using the material uncovered in the review of the literature, it was possible to build a model of how union members form attitudes towards employee involvement programs. That model was built upon other models, through a sequence of steps. Those steps involved combining other models, narrowing the focus to that of the research question for this study, and then arriving at a final model.

Next, hypotheses were developed to test the model. An instrument to collect data in order to test the hypotheses was also designed. The methodology of the study was introduced, as were the assumptions and delimitations of the research. Technical aspects of the survey instrument and its design were discussed. Finally, the actual administration of the study, and some of the specific steps involved, were presented.

RESULTS

Introduction

Data were gathered from 229 employees represented by the International Brotherhood of Electrical Workers (IBEW) at electrical power generation facilities in Kentucky, Ohio, Virginia (2 sites), and West Virginia (also 2 sites). The survey instrument, a self-report questionnaire, was distributed by company officials at each facility. The majority of responses were received within 2 weeks of distribution.

The Characteristics of the Sample

The sampling method was limited to facilities the corporation felt were appropriate for the information the instrument was gathering, and where the corresponding unions agreed to participate. Since the survey was anonymous, no direct non-response reduction technique could be employed. However, employees were reminded by their supervisors to complete the survey instrument, and additional forms were often returned following this admonition. As shown below, the response rate varied by plant, but the overall rate was adequate.

Response Rate

229 usable responses were returned. One completed questionnaire was rejected due to a printing error (every other page was blank) and 1 was severely damaged and unusable. Response rates varied from a low of 9% to a high of 45%. Distribution methods at each plant were similar, but uncontrolled. In most instances the questionnaire was distributed along with employee paychecks, and the employees were free to take the instrument home for completion.

Table 2 - Survey Response Rates

Site	Surveys Sent	Surveys Returned	Response Rate
Kentucky	126	47	37.302%
Ohio	276	73	26.449%
Virginia 1	113	21	18.584%
Virginia 2	79	36	45.570%
West Virginia 1	288	48	16.667%
West Virginia 2	42	4	9.524%
Overall	924	229	24.784%

Contrary to the standard distribution method for most facilities, written comments received from the Ohio plant seem to indicate that employees filled out the surveys during their working hours. In addition, questionnaires at the Ohio site were distributed through the use of mailing labels affixed to the outside cover of the instrument. This may have compromised aspects of anonymity, since many instruments were returned with the labels intact. However, given the response rate at the facility (26.449%), this

does not seem to have impinged upon the employees' willingness to complete and return the questionnaire.

Demographic Results

The results show that the respondents are varied with regards to their ages, education, race, and gender. Since complete data on all employees was unavailable, it is impossible to tell if the sample is representative of the organization's workforce. However, it appears as if there is enough diversity on key variables within the sample to allow further analysis and complete hypothesis testing.

Of the respondents providing demographic information, 199 were male (95.215%) and 10 were female (4.785%). Ages ranged from 26 to 60 years, with a mean of 43.7090. Ethnicity and education are shown in the table below:

Table 3 - Demographic Results

Education		Ethnicity	
Some High School	3	White	202
GED / Equivalency Degree	3	Black (Not Hispanic)	4
Technical Training	13	American Indian or Alaskan Native	2
High School Degree	97	Hispanic	1
Some College	59	Asian or Pacific Island	1
Associate Degree	21	Other	3
Bachelor Degree	8		
Some Graduate Work	1		
Masters Degree	1		

As the table indicates, the majority of employees were white with at least a high school education, if not some college experience.

As already noted, data were collected from six different locations. The following table provides demographic data on a plant by plant basis. While no specific differences between plants was hypothesized, such information can be useful by providing insight into some of the basic differences between the sites.

Table 4 - Demographic Information by Plant Location

		PLANT LOCATION					
		KY	OH	VA 1	VA 2	WV 1	WV 2
Age	n	39	65	19	26	36	4
	\bar{x}	43.513	45.754	40.789	41.846	43.417	41
	sd	6.472	6.114	6.294	6.595	6.682	6.053
	rg	30 – 57	34 – 60	30 – 51	31 – 55	26 – 55	37 – 50
Education	n	38	70	19	30	45	4
	\bar{x}	4.526	4.543	4.632	4.300	4.489	5.25
	sd	1.202	1.224	1.112	1.055	.895	.957
	rg	3 – 9	1 – 8	2 – 6	1 – 6	3 – 7	4 – 6
Ethnicity	n	42	69	20	32	46	4
	\bar{x}	1.024	1.101	1.05	1.344	1.217	1
	sd	.1543	.645	.224	1.066	.940	0
	rg	1 – 2	1 – 6	1 – 2	1 – 6	1 – 6	1
Sex	n	42	69	19	30	45	4
	\bar{x}	.007	.007	.005	.003	0	0
	sd	.2607	.261	.229	.183	0	0
	rg	0 - 1	0 – 1	0 - 1	0 – 1	0	0

n = number responding, \bar{x} = mean, sd = standard deviation, rg = range of values

Instrument Validation

The majority of items on the survey instrument were either taken directly or adapted for use from existing measures. However, two areas of inquiry were developed specifically for this instrument. Those two areas need to be examined, in order to assess their ability to correctly gather needed data.

Union and Company Information Scales

A factor analysis was conducted to develop separate scales within the social information provided by the company and the union. A principal components analysis, with varimax rotation, was used for this process. Factor loadings show each group of 6 variables loading on 2 factors. However, there is only similarity as to which factors the variables load on for 4 of the variables, across the company and union social information scales. This is unusual since the questions were intended to be mirror images of each other and it was expected that the variables would load in similar groups, even across the two areas. The factor loadings are shown in the tables below:

Table 5 - Factor Analysis Results for Company Information Scales

Rotated Factor Matrix – Company Information		
	Factor 1	Factor 2
Q1	.71021	.36084
Q2	.10989	.63953
Q3	-.14512	.73914
Q4	.45642	.64767
Q5	.64853	.06044
Q6	.77881	-.12252

Table 6 - Factor Analysis Results for Union Information Scales

Rotated Factor Matrix – Union Information		
	Factor 1	Factor 2
Q37	.73839	.42742
Q38	.83153	.19874
Q39	.26608	.76735
Q40	.77283	-.04217
Q41	-.10791	.81152
Q42	.31461	.63130

The questions were written to reflect the perceived general beliefs of the respondent’s company and union, along with the perceived amount of dispersion of that information.

A basic decision rule for the development of scales required loadings greater than .60 and consistency with the union and company scales. Not only would items be forced to load above a set value to be included in a scale, but they must also load on similar factors across the scales. As shown in the table above, questions 1, 5, and 6 load on the first factor for the company social information scale, and questions 2, 3 and 4 for the other. For the union information scales, questions 37, 38, and 40 load on a single factor, and 39, 41 and 42 on another.

The issue of consistency comes into play when the wording of the questions is examined. The two areas, one for company social information and the other for union social information, were intended to be perceived as similar. In effect, questions should “pair up” across the two areas as shown below:

Table 7 - Question Pairs

Questions with Equated Wording
Q1 = Q37
Q2 = Q38
Q3 = Q39
Q4 = Q41
Q5 = Q40
Q6 = Q42

Unfortunately, this consistency is not shown in the results from the factor analysis. As indicated below, the equality of the pairs was not perceived by the respondents.

Table 8 - Pairing Inconsistencies

Pairings for First Factors				Pairings for Second Factors			
Company Factor 1	Expected Union Question	Pairing Correct?	Union Factor 1	Company Factor 2	Expected Union Question	Pairing Correct?	Union Factor 2
1	37	=	37	2	38	≠	42
5	40	=	40	3	39	=	39
6	42	≠	38	4	41	=	41

Only those items that both loaded together on their own social information factors (either company or union) and matched across the factors to how their pairs loaded were kept.

Accordingly, the first set of scales is comprised of questions Q1 and Q5 for the company information, and Q37 and Q40 for the union information. Q5 and Q40 were reverse coded. The questions read:

1. The company believes employee involvement programs would be helpful.
5. The company would use an employee involvement program to weaken the union.

37. My union supports employee involvement programs.
40. My union believes an employee involvement program would be a threat to the union.

These questions formed the CoPerInf scale, which is short for Company Perceived Information, and the UnPerInf scale, which is the Union Perceived Information scale. The title of the scale reflects the purpose of the questions: the information that the respondents perceive they have received from either their company or their union, with regards to support for employee involvement programs.

The second set of questions, shown below, form the UnIntent and CoIntent scales, which reflect the perception respondents have regarding the degree of

dispersion of such information. The scale reflects respondent's perceptions of how widely distributed that information is. The questions used are:

3. The company's position on employee involvement is well known by its employees.
4. The issue of employee involvement is often discussed by the company.

39. The union's position on employee involvement is well known by the members.
41. The issue of employee involvement is often discussed by my union.

None of these items required any special treatment during coding.

A closer examination indicates that the two pairs of questions that were not confirmed as consistently reflective might have been interpreted differently. Question Q2 and Q38 are:

- Q2. The company would only install a program with the help of its union.
- Q38. The union would help the company install an employee involvement program.

It is obvious that such questions, while intended to be the reverse of each other, might have been interpreted differently by the respondents. The first question in the pair, Q2, might have been seen as reflective of the company's overall position on labor relations, whereas Q38 might have been perceived with an historical intent, rather than as a philosophical question for the present. A similar situation most likely occurred with the remaining pair, questions Q6 and Q42:

- Q6. I believe the company's position on employee involvement is better than the union's.
- Q42. I believe my union's position on employee involvement is better than the company's position.

Thus the four scales (two for each source of the social information) that can be developed are used to measure the respondent's beliefs about their union's and company's position on employee involvement. Both the perceived position is measured, along with the perceived degree to which that information has been presented to others. Social information is most relevant when measured through the perceptual filters of the respondent, since it is those beliefs that will play a role in attitude formation.

Independent Variable Scales

The measures for Organizational Commitment, Union Commitment, Work Locus of Control, Interest in Work Innovation, and Participativeness were taken from existing scales. As shown in the table below, the majority of these scales had high reliabilities.

Table 9 - Independent Variable Scales

	α	Number of Items	Number of Responses
Organizational Commitment	.9387	15	227
Union Commitment	.9622	30	218
Participativeness	.8990	12	224
Work Locus of Control	.8139	16	227
Work Innovation	.6987	6	222

The Cronbach Alpha values shown in the table, which are a measure of the internal consistency of each scale, indicate that respondents answered the items within each scale in a somewhat uniform manner. The only scale not as highly consistent was the Interest in Work Innovation Index. While this 1965 scale had early test-retest reliabilities calculated, the scale appears not to have been used for some time, since no other reliability or validation information was available. However, since the scale measures the degree to which respondents desire innovation, it was retained, since this was not adequately captured elsewhere in the survey instrument.

Grouping of the Respondents

The model was designed to allow for separate analyses, based upon the respondent's degree (or lack thereof) of commitment to their company and their union. It was necessary to form groups within the data set to achieve this. The results from the OCQ and the Union Commitment Scales were used for this purpose.

The groups were initially split into high and low categories, for each scale, independently, using the overall mean as the dividing point. For the OCQ, the mean = 4.033 and for the Union Commitment scale, the mean = 3.431.

Table 10 - Union and Company Commitment Descriptive Results

	OCQ Scale	Union Commitment Scale
Mean	4.033	3.431
Mode	4.067	3.000
Median	4.067	3.400
Standard Deviation	1.368	0.686
Skewness	-.146	-.169
Kurtosis	-.715	-.774

Respondents above 4.033 were assigned to the High Company Commitment category, and those below 4.033 to the Low Company Commitment category. Those respondents above 3.431 on the Union Commitment scale were assigned to the High Union Commitment category, and those below 3.431 to the Low Union Commitment category. When combined, the following was found:

Table 11 - Grouping of Respondents Results

	Low Company Commitment (n=100)	High Company Commitment (n=112)
Low Union Commitment (n=105)	n=38	n=67
High Union Commitment (n=107)	n=62	n=45

Unfortunately, not all respondents completed the items necessary for the OCQ and Union Commitment scales. Accordingly, they were dropped from those analyses that required the group to be split.

Plant by Plant Responses

The basic demographic information was analyzed by location, as shown in the table below. While specific plant differences were not expected, or hypothesized, information of this nature can be useful in interpreting the results of other analyses. Hence, it is presented here.

Table 12 - Variable Scales by Location

		PLANT LOCATION					
		KY	OH	VA 1	VA 2	WV 1	WV 2
Affect	n	46	73	20	36	47	4
	\bar{x}	3.630	3.811	3.425	3.819	3.659	3.063
	sd	.692	.854	.888	.721	.823	1.329
	rg	2 – 5	1 – 5	1.75 – 5	2.5 – 5	2 – 5	2 – 5
CoIntent	n	47	73	21	36	47	4
	\bar{x}	3.287	3.233	3.214	3.305	2.883	2.625
	sd	1.004	.965	.845	.920	1.089	.750
	rg	1 – 5	1 – 5	2 – 5	1 – 5	1 – 5	1.5 – 3
CoPerInf	n	46	73	21	35	47	4
	\bar{x}	2.598	3.192	3.048	3.400	3.074	2.000
	sd	.997	.915	1.139	.914	1.118	1.155
	rg	1 – 5	1 – 5	1 – 5	2 – 5	1 – 5	1 – 3
Prtscal	n	46	73	20	34	47	4
	\bar{x}	2.759	2.946	2.870	2.679	2.579	2.896
	sd	.707	.628	.541	.571	.740	.524
	rg	1 – 4	1 – 4	2.083 – 4	1.167 – 3.583	1.000 – 3.75	2.417 – 3.500
Satisf	n	46	73	20	36	47	4
	\bar{x}	3.565	3.777	3.437	3.792	3.611	3.063
	sd	.735	.849	.942	.703	.771	1.329
	rg	2 – 5	1 – 5	1.75 – 5	2.5 – 5	1.75 – 5	2 – 5
UnIntent	n	43	73	21	36	47	4
	\bar{x}	3.058	2.890	2.785	3.000	3.128	2.750
	sd	.788	.796	.717	.746	.947	.500
	rg	1 – 5	1 – 5	1 – 4	1 – 5	1 – 5	2 – 3
UnPerInf	n	43	73	21	36	47	4
	\bar{x}	3.419	3.075	3.119	3.333	3.777	3.000
	sd	.715	.904	.835	.756	.772	0.000
	rg	1 – 5	1 – 5	1 – 5	2 – 5	2.5 – 5	3 – 3
WLC	n	47	73	21	35	47	4
	\bar{x}	3.387	3.179	3.491	3.066	3.364	3.859
	sd	.747	.689	.591	.684	.788	.236
	rg	1.56 – 5.06	1.75 – 4.875	2.500 – 4.375	1.938 – 4.688	1.063 – 4.563	3.688 – 4.188
Wrklnov	n	43	73	21	36	47	2
	\bar{x}	2.744	3.500	3.309	3.171	2.926	2.583
	sd	.884	.818	.857	.886	.853	2.239
	rg	1.167 – 4.833	1.333 – 5.000	2.333 – 4.833	1.333 – 4.833	1.167 – 5.000	1.000 – 4.167

n = number responding, \bar{x} = mean, sd = standard deviation, rg = range of values

In addition to the presentation of site specific demographic data, information is provided on the variables used to divide the data set. Organizational Commitment and

Union Commitment are provided in the table below, along with the number of respondents assigned to each of the four groups. A cursory examination seems to indicate that the plants had some differences, regarding the degree of company versus union commitment. This information can be used to better understand other results of the study, especially those areas that become dependent upon variation in these commitment variables.

Table 13 - Grouping of Respondents, by Location

	Commitment Variables and n for Each Group					
	OCQ Mean	UnComit Mean	n Group 1 (Low – Low)	n Group 2 (Hi Company – Low Union)	n Group 3 (Low Company – Hi Union)	n Group 4 (High - High)
KY	3.399	3.844	10	3	21	8
OH	4.006	3.082	21	29	14	9
VA 1	3.463	3.717	4	2	9	4
VA 2	5.248	3.000	1	22	1	10
WV 1	4.031	3.629	6	13	15	13
WV 2	2.817	4.208	0	0	3	1

An Analysis of the Proposed Model

The model was analyzed using LISREL 8.12a, a software package developed for the express purpose of testing structural equation models. Different sets of the data were used for the analysis, depending upon the specifications of the hypothesis regarding respondent characteristics. Using the commitment variables, 2 distinct sets were developed. The first broke the complete data set into 4 different subsets, as indicated above in **Error! Reference source not found.** This was, in effect, a two by two matrix using union and company commitment levels. These groups were used to test hypotheses H1a, H2a, and H3. In the second subset, the cells from the two by two matrix were collapsed for hypotheses H1 and H2, in order to represent those with high company commitment or high union commitment. The complete data set was used for hypothesis H4.

Table 14 - Specific Groups Examined by each Hypothesis

Hypotheses	Groups Used (Subsets of Total Data Collected)
Hypothesis 1:	High Union Commitment
Hypothesis 1a:	High Union Commitment and Low Company Commitment
Hypothesis 2:	High Company Commitment
Hypothesis 2a:	High Company Commitment and Low Union Commitment
Hypothesis 3:	High Company and Union Commitment
Hypothesis 4:	Complete Data Set

The actual hypotheses are shown in the following table:

Table 15 - Summary of the Hypotheses

H1	Union Information will be positively related to Employee Involvement Attitudes when Union Commitment is high.
H1a	Union Information will be more strongly related than Company Information to Employee Involvement Attitudes when Union Commitment is high and Company Commitment is low.
H2	Company Information will be positively related to Employee Involvement Attitudes when Company Commitment is high.
H2a	Company Information will be more strongly related than Union Information to Employee Involvement Attitudes when Company Commitment is high and Union Commitment is low.
H3	Both Company Information and Union Information will be positively related to Employee Involvement Attitudes when both Company Commitment and Union Commitment are high.
H4	Social Information will be positive and more strongly related to Employee Information Attitudes than will Dispositions.

These hypotheses focus on specific aspects of the model, as presented at the beginning of the third chapter. In most cases, overall models will be examined for their goodness of fit. However, some hypotheses require the analysis of specific paths within the models. These differences are reflected in the statistical methods employed to test each hypothesis, as seen in the following section.

Testing the Hypotheses

Prior to the testing of each individual hypothesis, it is necessary to examine the overall model. While no hypotheses are being tested, and there is no attempt to compare one model to another, this analysis will establish the overall fit of the model, with regard to the structural equation model depicted in Figure 15. Once this is done, the hypotheses can be tested using the results from the LISREL analysis of the theoretical model. The hypotheses require subsets of the overall data set, and will be tested individually.

Full Model with All Subjects

An initial analysis was conducted on the entire data set, to test the overall appropriateness of the model. As has been noted by Joreskog and Sorbom, one of the three methodological approaches appropriate for structural equation modeling is strictly confirmatory in nature, and uses a single model (Joreskog & Sorbom, 1993). This is in contrast to the model generation strategy, in which a starting model is modified, or the model comparison technique, in which various models are compared. While the confirmation strategy is not as widely used (MacCallum, 1995), it is used here since this study is concerned with confirming the model developed from the theory as being adequate. As a first step in confirming the model, the entire data set is examined simultaneously. The graphical output from LISREL 8.12a is shown in the figure, below, and the actual code used for the program is shown in Appendix B.

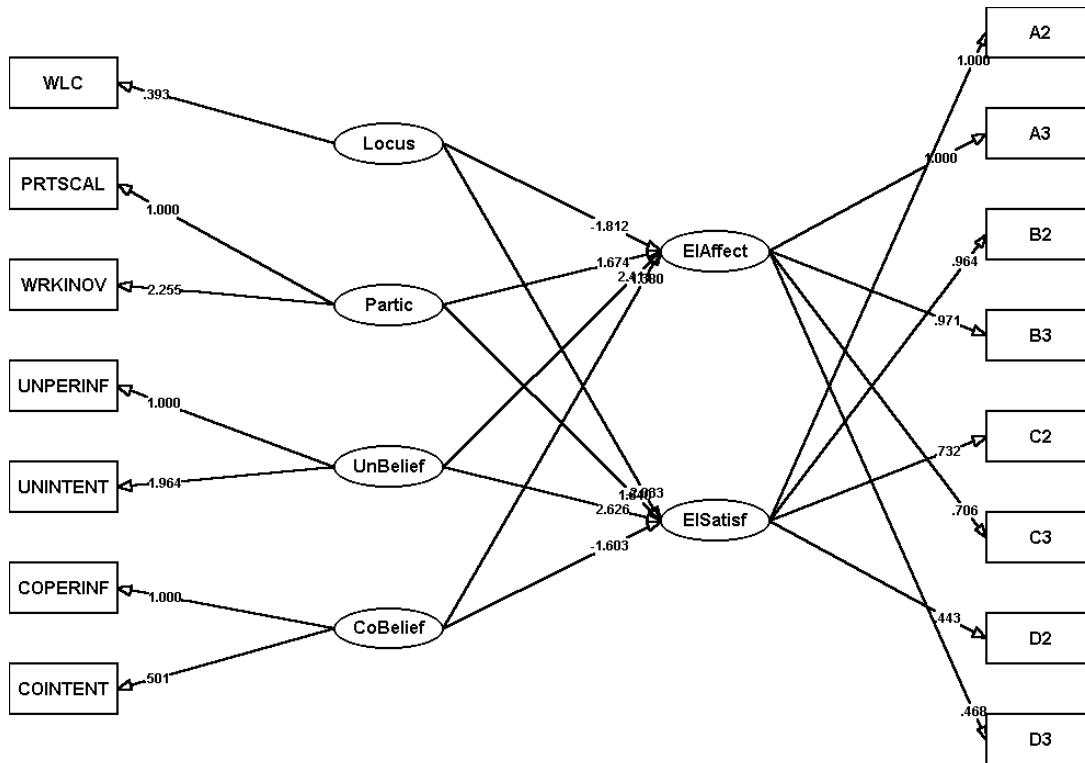


Figure 16 – Basic Model with Complete Data Set

The picture above can be summarized, by variable and path coefficient, as shown in the table below. This table examines solely the structural model, which is comprised of only the latent variables, and not the measured variables. The path coefficients and their significance, where appropriate, are shown.

Table 16 - Path Coefficients for the Base Structural Model

	EIAFFECT (Employee Involvement Affect)	EISATISF (Employee Involvement Satisfaction)
LOCUS (Locus of Control)	-1.812 ^a	-2.033 ^a
PARTIC (Participativeness)	1.674	1.640
UnBelief (Union Information)	2.411 ^a	2.626 ^a
CoBelief (Company Information)	-1.380	-1.603
R ²	0.943	1.025*
	a = p<.05	* R ² greater than 1 due to negative error variance

The fit statistics for this analysis, indicated in the following table, show that the data fit fairly well with the proposed model. However, the R²s from the previous table seem unexplainably high, indicating possible problems with the data set. While negative error variance is related to this issue, it too is indicative of base errors within the data. This causes the overall model fit, presented in the following table, to also be suspect.

Table 17 - Full Model Statistical Results

Statistic	Result
Chi-Square with 72 Degrees of Freedom	114.251
Goodness of Fit Index	0.937
Adjusted Goodness of Fit Index	0.896
Critical N	205.281

As shown in the table above, the data fit the proposed structural model well. The ratio of the Chi-Square statistic to the degrees of freedom (χ^2 / df) is 1.58682, indicating a good fit. Ratios of 5 or less have been shown to be indicators of good model fit (Wheaton, Muthen, Alwin & Summers, 1977) and other research has shown ratios of 2 or 3 as also adequate (Carmines & McIver, 1981).

In addition, a Goodness of Fit Index (GFI) greater than .90 is also representative of strong fit (Cuttance, 1987) (Bentler & Bonett, 1980) (Hu & Bentler, 1995). The Critical N is greater than 200, which also indicates a good fit (Hoetlter, 1983). Note, however, that the fit statistics for this model are just at the edge of acceptability. This will become an issue as the sample size decreases as the specific group models are tested.

The measures shown above were chosen for their ability as absolute fit indexes, rather than incremental fit indexes (Hu & Bentler, 1995). Such indexes examine how well a single, hypothesized model “fits” with the data collected. Incremental fit indexes, in comparison, are used to compare one model to another, such as a target model to a baseline model, or a set of nested models. Using these absolute fit indexes, it is possible to conclude that the overall model, when tested with the complete data set, has a good “fit”. In other words, the degree to which the data fit with the proposed model is appropriate and adequate.

Another graphical representation of the model that is relevant is that containing t-test statistics for the path coefficients. This is shown in the figure below:

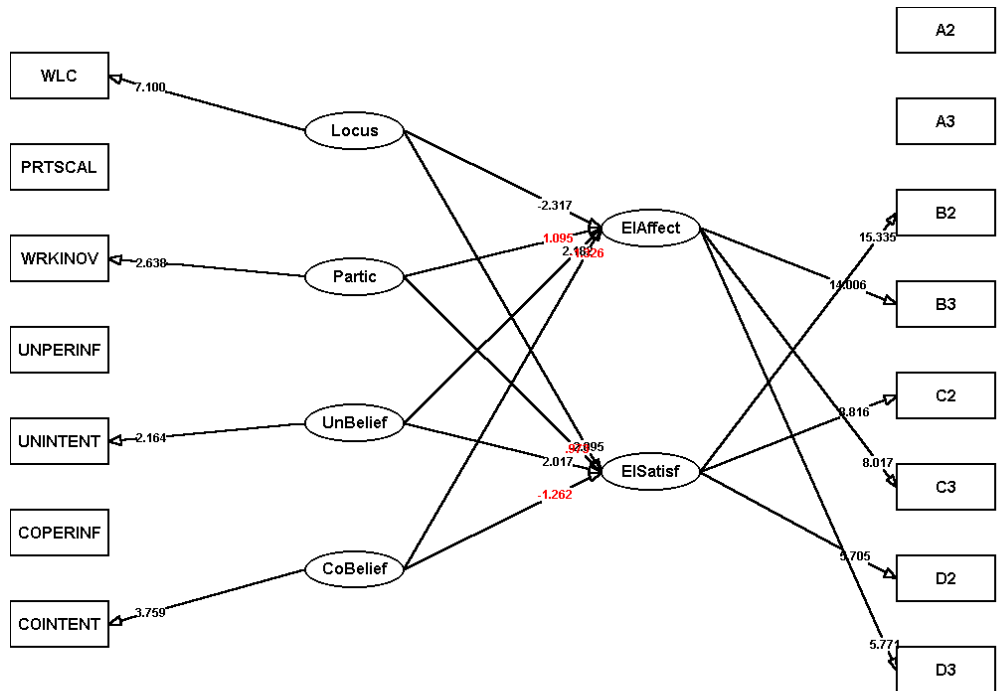


Figure 17 - T-Tests for Full Model

The t-test statistics shown in the figure above show that only some of the paths are significant. The non-significant results (shown with their numerals in red) reflect that the paths to EIAffect and EISatisf from Partic and CoBelief are not effective in explaining the variance in those two variables. Not all the paths are shown, since they were constrained in the analysis, to allow for the correct valuation of the metric for the other variables.

Shown below are the standardized solutions from the LISREL 8 program. The completely standardized solutions (abbreviated as SC in the LISREL programming code) provide values for the latent and observed, scaled to have variances of one (Joreskog & Sorbom, 1993). Standardization allows items measured with different scales, such as a 5 point Likert scale and a 7 point Likert scale, to be compared directly and in a fashion meaningful to both measures. In addition, this standardization allows for discussion of the results of the analyses conducted for the different groups, independent of their original metrics.

Table 18 - Standardized Solution, Dependent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-Y)		
	EIAffect	EISatisf
A2	--	0.890
A3	0.851	--
B2	--	0.891
B3	0.879	--
C2	--	0.546
C3	0.514	--
D2	--	0.372
D3	0.380	--

Table 19 - Standardized Solution, Independent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-X)				
	Locus	Partic	UnBelief	CoBelief
WLC	0.547	--	--	--
PRTSCAL	--	0.370	--	--
WRKINOV	--	0.617	--	--
UNPERINF	--	--	0.412	--
UNINTENT	--	--	0.839	--
COPERINF	--	--	--	0.784
COINTENT	--	--	--	0.412

Table 20 - Standardized Solution, Latent Variables, Full Model

REGRESSION MATRIX ETA ON KSI (STANDARDIZED)				
	Locus	Partic	UnBelief	CoBelief
EIAffect	-2.060	0.466	0.948	-1.272
EISatisf	-2.267	0.447	1.013	-1.449

Hypothesis One and One-A

Hypotheses 1 and 1a are corollaries, to a certain degree. In both, the role that social information plays is examined as to its relationship with the attitudes the

employees hold. For this first set, it is the role of the information from the union that is examined. The actual code used for both hypotheses is shown in Appendix B.

Hypothesis 1

The structural model is shown in the illustration below.

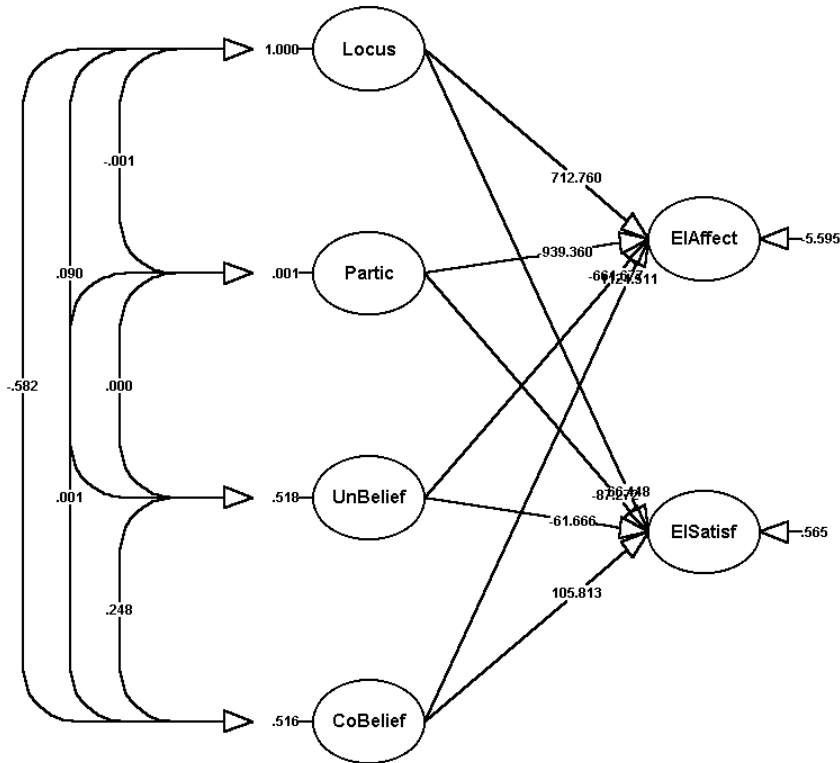


Figure 18 – Structural Model for High Union Commitment Group

The following table indicates that the model for this group, the respondents with high union commitment, is slightly less than adequate.

Table 21 - Hypothesis 1 Statistical Results

Statistic	Result
Chi-Square with 72 Degrees of Freedom	95.630
Goodness of Fit Index	0.896
Adjusted Goodness of Fit Index	0.827
Critical N	111.741

The GFI is not above the recommended .90 level, nor is the Critical N greater than 200, but the chi-square/degrees of freedom ratio still falls within established parameters.

What is most relevant for this hypothesis is the paths from UnBelief to EIAffect and EISatisf. These represent the relationships between the latent variables representing union information (UnBelief) and employee attitudes towards employee involvement (EIAffect and EISatisf). Additional output from LISREL 8.12a is shown below:

EIAffect = 712.760*Locus - 939.360*Partic - 661.677*UnBelief + 1124.511*CoBelief, Errorvar.= -5.595, R ² = 5.772
EISatisf = 66.448*Locus - 87.272*Partic - 61.666*UnBelief + 105.813*CoBelief, Errorvar.= 0.565, R ² = 0.541

Figure 19 - Lisrel Output for Hypothesis 1

For both of the employee involvement attitudes, there is an inverse relationship with the perceived union information. This is contrary to the proposed hypothesis, which had predicted a positive relationship, in that the type of information provided would be in agreement with the attitudes formed. The influence of the union social information (UnBelief) is in opposition to the attitudes formed about employee involvement. So, while an employee might perceive positive statements from their union regarding the programs, they would actually form negative attitudes. However, the negative values indicate that the data are unable to support the suppositions stated in the hypothesis.

Again, in order to allow for discussion of the results across the groups, the standardized solutions from the LISREL 8 program are used. They are shown in the following three tables:

Table 22 - Standardized Solution, Dependent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-Y)		
	EIAffect	EISatisf
A2	--	0.925
A3	0.932	--
B2	--	0.894
B3	0.888	--
C2	--	0.494
C3	0.470	--
D2	--	0.219
D3	0.287	--

Table 23 - Standardized Solution, Independent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-X)				
	Locus	Partic	UnBelief	CoBelief
WLC	0.694	--	--	--
PRTSCAL	--	0.045	--	--
WRKINOV	--	5.228	--	--
UNPERINF	--	--	0.836	--
UNINTENT	--	--	0.345	--
COPERINF	--	--	--	0.674
COINTENT	--	--	--	0.118

Table 24 - Standardized Solution, Latent Variables, Full Model

REGRESSION MATRIX ETA ON KSI (STANDARDIZED)				
	Locus	Partic	UnBelief	CoBelief
EIAffect	658.243	-27.114	-429.611	746.214
EISatisf	59.881	-2.458	-39.979	68.519

Hypothesis 1a

This hypothesis, which is a corollary of hypothesis 1, again examines the social information respondents are presented with, and what attitudes are formed. In this hypothesis, those employees that have high commitment to their union and low commitment to their company are used for the analysis. It was predicted that the information provided by their union would have a greater impact on the attitudes formed. The graphical output is provided below:

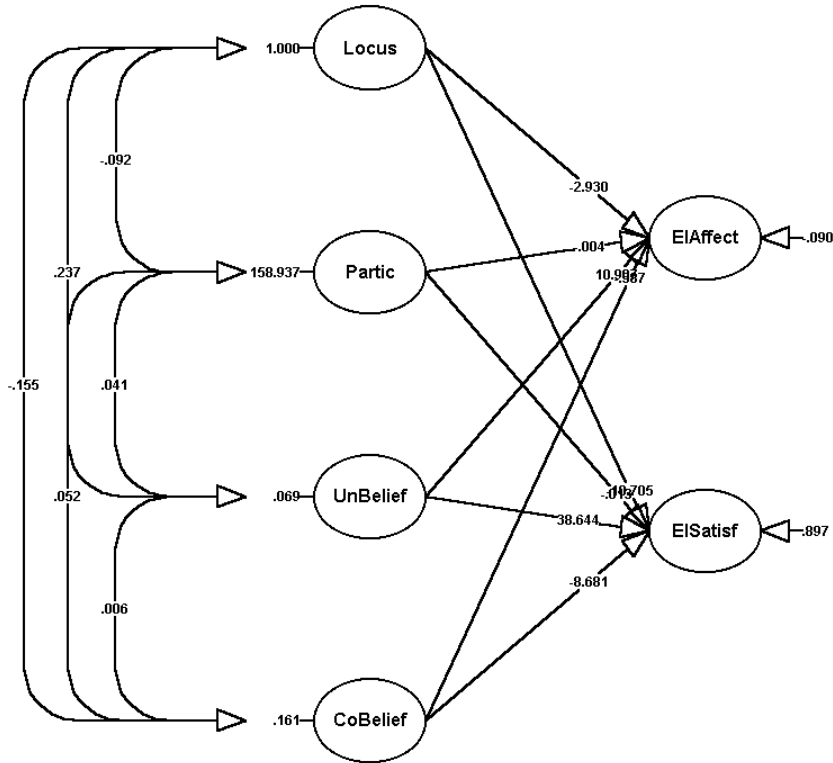


Figure 20 - Structural Model for Low Company Commitment and High Union Commitment Group

Shown below are the fit statistics for the model with this grouping of respondents:

Table 25 - Hypothesis 1a Statistical Results

Statistic	Result
Chi-Square with 72 Degrees of Freedom	89.212
Goodness of Fit Index	0.856
Adjusted Goodness of Fit Index	0.760
Critical N	72.455

Additionally, the output from Lisrel that shows the path coefficients is shown below:

EIAffect =	- 2.930*Locus - 0.00376*Partic + 10.907*UnBelief - 0.387*CoBelief, Errorvar.= -0.0904, R ² = 1.081
EISatisf =	- 10.705*Locus - 0.0129*Partic + 38.644*UnBelief - 8.681*CoBelief, Errorvar.= 0.897, R ² = 0.239

Figure 21 - Lisrel Output for Hypothesis 1a

For this hypothesis, the information provided by the union has a positive relationship with both of the employee involvement attitudes and the company information has a negative effect. In addition, for each of the equations shown in Figure 21, and in the standardized solution, provided in **Error! Reference source not found.** below, the union information has a greater effect in comparison to the company information, holding all other variables constant. And the fit statistics in **Error! Reference source not found.**, indicate that the model is acceptable, although not as good as when the analysis uses the entire data set. But the GFI is close to .90 and the chi-square / degrees of freedom ratio is still adequate.

Accordingly, hypothesis 1a is supported in that the union information is more strongly related than company information to the attitudes formed by those respondents that had high union commitment and low company commitment.

The standardized solutions are shown in the following tables:

Table 26 - Standardized Solution, Dependent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-Y)		
	EIAffect	EISatisf
A2	--	0.876
A3	0.886	--
B2	--	0.934
B3	0.924	--
C2	--	0.187
C3	0.156	--
D2	--	0.036
D3	0.129	--

Table 27 - Standardized Solution, Independent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-X)				
	Locus	Partic	UnBelief	CoBelief
WLC	0.690	--	--	--
PRTSCAL	--	15.804	--	--
WRKINOV	--	0.018	--	--
UNPERINF	--	--	0.286	--
UNINTENT	--	--	0.641	--
COPERINF	--	--	--	0.373
COINTENT	--	--	--	0.081

Table 28 - Standardized Solution, Latent Variables, Full Model

REGRESSION MATRIX ETA ON KSI (STANDARDIZED)				
	Locus	Partic	UnBelief	CoBelief
EIAffect	-2.774	-0.045	2.707	-0.147
EISatisf	-9.860	-0.149	9.331	-3.204

Hypothesis Two and Two-A

Hypotheses 2 and 2a are similar in nature to hypotheses 1 and 1a, except that the focus is on the company as the source of social information. Similar methods are used to test these hypotheses. The analysis of the data follows.

Hypothesis 2

This hypothesis uses those respondents with high company commitment. The graphical depiction of the structural model is provided, followed by other relevant output.

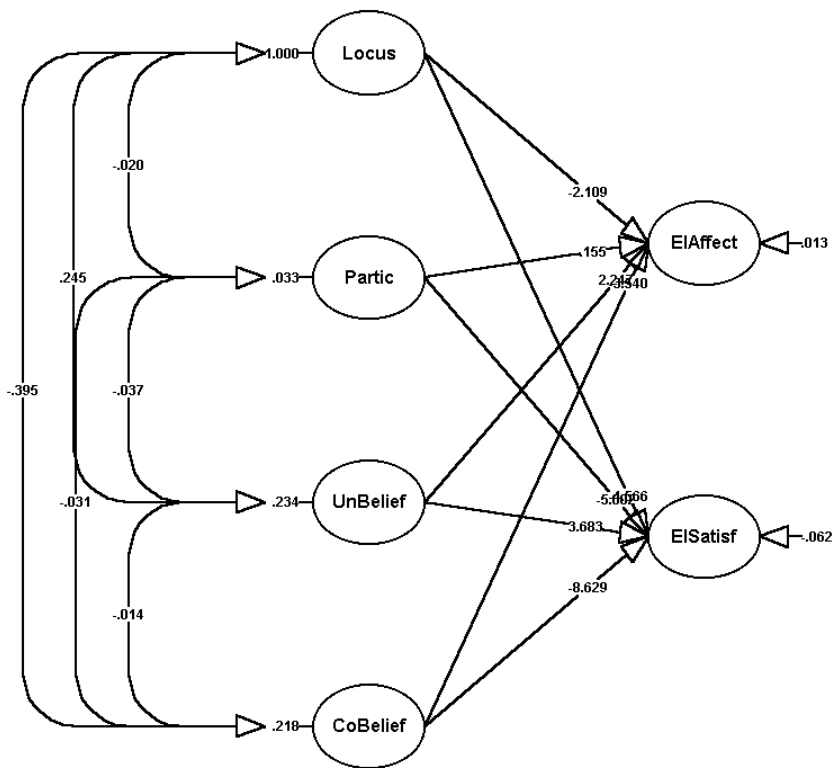


Figure 22 – Structural Model for High Company Commitment Group

The fit statistics are also provided in the table below, as well as specifics on the path coefficients in the table following that. The code used for this analysis is provided in Appendix B.

Table 29 - Hypothesis 2 Statistical Results

Statistic	Result
Chi-Square with 72 Degrees of Freedom	110.521
Goodness of Fit Index	0.877
Adjusted Goodness of Fit Index	0.796
Critical N	103.332

EIAffect =	- 2.109*Locus + 0.155*Partic + 2.247*UnBelief - 3.540*CoBelief, Errorvar.= 0.0129, R ² = 0.968
EISatisf =	- 4.566*Locus - 5.002*Partic + 3.683*UnBelief - 8.629*CoBelief, Errorvar.= -0.0621, R ² = 1.177

Figure 23 - Lisrel Output for Hypothesis 2

As can be seen, the data fit the hypothesized model somewhat well. The goodness of fit index is close to .90, and the chi-square / degrees of freedom ratio is adequate, although small. The Critical N is less than 200, which indicates some inadequacy of the fit. Most problematic, however, is that the path coefficients for the information provided by the company (CoBelief) are inverse to that expected. In addition, as shown in the figure below, none of the t-tests are significant (all paths to EISatisf and EIAffect are shown in red, depicting non-significant results). Both attitudes are negatively related to the company information. This is contrary to the hypothesis specified, indicating that the hypothesis can not be supported.

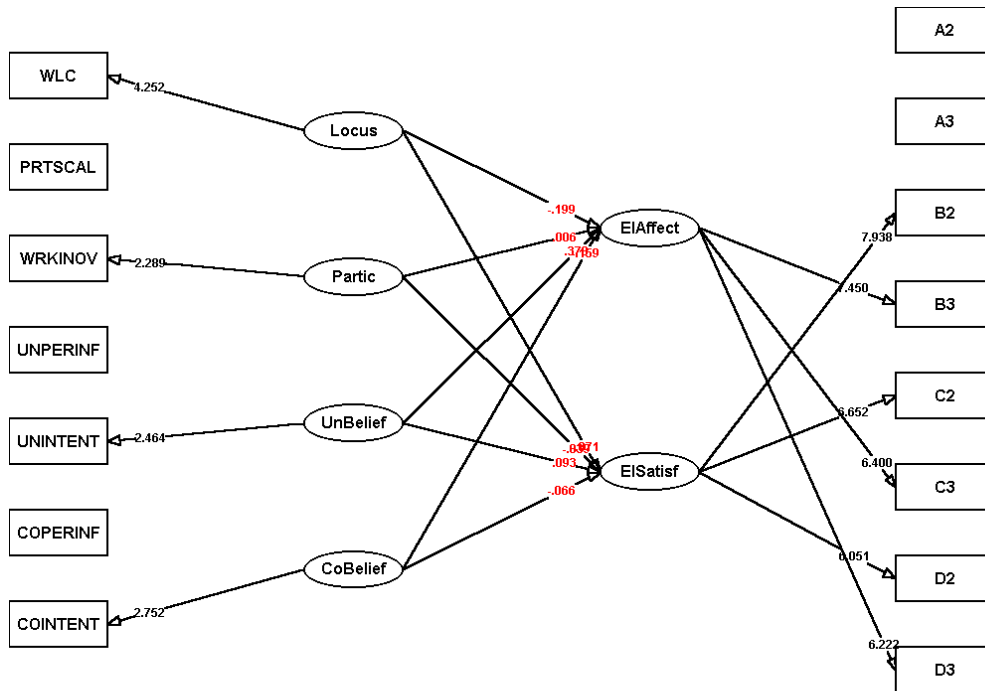


Figure 24 - T-Test Results for Hypothesis 2

Shown below are the completely standardized solutions for this hypothesis.

Table 30 - Standardized Solution, Dependent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-Y)		
	EIAffect	EISatisf
A2	--	0.849
A3	0.778	--
B2	--	0.767
B3	0.777	--
C2	--	0.630
C3	0.639	--
D2	--	0.576
D3	0.620	--

Table 31 - Standardized Solution, Independent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-X)				
	Locus	Partic	UnBelief	CoBelief
WLC	0.495	--	--	--
PRTSCAL	--	0.325	--	--
WRKINOV	--	0.387	--	--
UNPERINF	--	--	0.559	--
UNINTENT	--	--	0.754	--
COPERINF	--	--	--	0.565
COINTENT	--	--	--	0.707

Table 32 - Standardized Solution, Latent Variables, Full Model

REGRESSION MATRIX ETA ON KSI (STANDARDIZED)				
	Locus	Partic	UnBelief	CoBelief
EIAffect	-3.335	0.044	1.718	-2.616
EISatisf	-7.714	-1.532	3.007	-6.813

Hypothesis 2a

Again, this hypothesis is related to both Hypothesis 1 and 1a, and can be seen as a corollary to Hypothesis 2. The actual code used for this hypothesis is shown in Appendix B. In testing this hypothesis, those employees with high company commitment and low union commitment were used. The results follow, with the graphical portrayal of the structural model presented first.

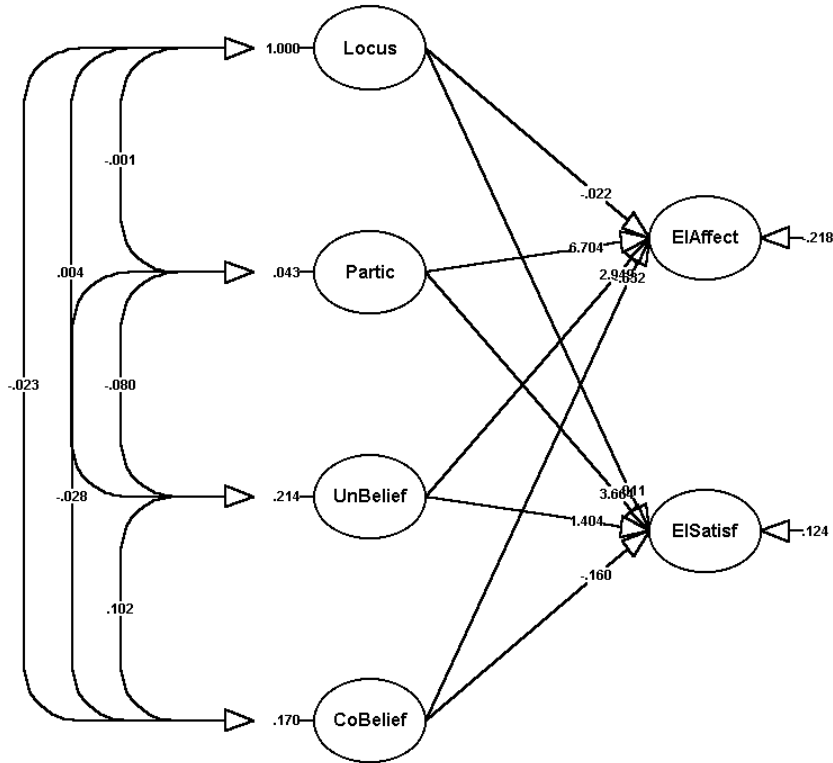


Figure 25 - Model for High Company Commitment and Low Union Commitment Group

The statistical results follow:

Table 33 - Hypothesis 2a Statistical Results

Statistic	Result
Chi-Square with 72 Degrees of Freedom	96.212
Goodness of Fit Index	0.847
Adjusted Goodness of Fit Index	0.744
Critical N	73.668

EIAffect = - 0.0216*Locus + 6.704*Partic + 2.949*UnBelief - 0.632*CoBelief, Errorvar.= -0.218, R ² = 1.687
EISatisf = - 0.0110*Locus + 3.664*Partic + 1.404*UnBelief - 0.160*CoBelief, Errorvar.= 0.124, R ² = 0.565

Figure 26 - Lisrel Output for Hypothesis 2a

Again, the model fit is less than adequate, and just beyond the range of parameters indicating a good fit. In addition, the path coefficients, which are most relevant for the

testing of this hypothesis, do not support the hypothesis. For both attitudes, the information provided by the union has a greater effect than that provided by the company. With this data, it is impossible to show support for the hypothesis that those employees with high company commitment and low union commitment have their attitudes influenced more by the company than the union. Just the opposite is true, in that the union is a more relevant source of social information than the company.

Shown below are the standardized solutions from the LISREL 8 program.

Table 34 - Standardized Solution, Dependent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-Y)		
	EIAffect	EISatisf
A2	--	0.806
A3	0.741	--
B2	--	0.712
B3	0.680	--
C2	--	0.592
C3	0.620	--
D2	--	0.581
D3	0.576	--

Table 35 - Standardized Solution, Independent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-X)				
	Locus	Partic	UnBelief	CoBelief
WLC	6.005	--	--	--
PRTSCAL	--	0.357	--	--
WRKINOV	--	0.403	--	--
UNPERINF	--	--	0.561	--
UNINTENT	--	--	0.424	--
COPERINF	--	--	--	0.544
COINTENT	--	--	--	0.811

Table 36 - Standardized Solution, Latent Variables, Full Model

REGRESSION MATRIX ETA ON KSI (STANDARDIZED)				
	Locus	Partic	UnBelief	CoBelief
EIAffect	-0.038	2.459	2.424	-0.463
EISatisf	-0.021	1.416	1.216	-0.124

Hypothesis Three

Respondents that reported high company commitment and high union commitment were used for this analysis. The fit statistics and Lisrel output are shown in the table and figure below, and the actual code is shown in Appendix B:

Table 37 - Hypothesis 3 Statistical Results

Statistic	Result
Chi-Square with 72 Degrees of Freedom	187.896
Goodness of Fit Index	0.709
Adjusted Goodness of Fit Index	0.514
Critical N	25.077

EIAffect = 0.0222*Locus + 4.890*Partic + 1.558*UnBelief + 1.683*CoBelief, Errorvar.= -0.00424, R ² = 1.007
EISatisf = 0.0189*Locus + 3.286*Partic + 0.998*UnBelief + 1.201*CoBelief, Errorvar.= 0.00519, R ² = 0.981

Figure 27 - Lisrel Output for Hypothesis 3

The goodness of fit statistic indicates a poorer fitting model when analyzed with this data set, as does the critical N. The chi-square / degrees of freedom ratio is also suspect given the other indicators. In addition, the model never reached convergence during the LISREL analysis. In terms of the actual hypothesis, Figure 27 shows that all the path coefficients for union information and company information, with respect to the employee involvement attitudes, are positive. So, while the model fit may not be as strong as that of the other hypotheses, the path coefficients are in the correct direction, providing support for the hypothesis. Employees with dual commitment form attitudes that are consistent with the information they receive from both the company and the union. However, this interpretation must be approached cautiously, given the issues surrounding the fit of the model and the lack of convergence.

The standardized solutions for the model used for this hypothesis are shown below.

Table 38 - Standardized Solution, Dependent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-Y)		
	EIAffect	EISatisf
A2	--	0.762
A3	0.851	--
B2	--	0.921
B3	0.936	--
C2	--	0.551
C3	0.564	--
D2	--	0.521
D3	0.691	--

Table 39 - Standardized Solution, Independent Variables, Full Data Set

COMPLETELY STANDARDIZED SOLUTION (LAMBDA-X)				
	Locus	Partic	UnBelief	CoBelief
WLC	15.020	--	--	--
PRTSCAL	--	0.317	--	--
WRKINOV	--	0.478	--	--
UNPERINF	--	--	0.033	--
UNINTENT	--	--	14.917	--
COPERINF	--	--	--	0.430
COINTENT	--	--	--	0.661

Table 40 - Standardized Solution, Latent Variables, Full Model

REGRESSION MATRIX ETA ON KSI (STANDARDIZED)				
	Locus	Partic	UnBelief	CoBelief
EIAffect	0.029	1.120	0.051	0.844
EISatisf	0.036	1.089	0.048	0.871

Hypothesis Four

This hypothesis uses the entire data set for its analysis. The graphical output and fit statistics have already been presented (see Figure 16 and **Error! Reference source not found.**, respectively), as have the standardized solutions. Appendix B contains the actual code used in the LISREL program. The figure below provides the necessary information to test the hypothesis:

EIAffect =	- 1.812*Locus + 1.674*Partic + 2.411*UnBelief - 1.380*CoBelief, Errorvar.= 0.0443 , R ² = 0.943
EISatisf =	- 2.033*Locus + 1.640*Partic + 2.626*UnBelief - 1.603*CoBelief, Errorvar.= -0.0204 , R ² = 1.025

Figure 28 - Lisrel Output for Hypothesis 4

As can be seen, the social information is both positively and negatively related to the employee involvement attitudes, as are the dispositions. However, the results are consistent across the two attitudes. Participativeness and the union information are positively related, and locus of control and the company information are negatively related. The union information has the strongest impact, followed by the locus of control. Unfortunately, such mixed findings preclude finding in favor of the hypothesis. It can not be conclusively stated that social information plays a greater role in the

formation of employee involvement attitudes, nor that the relationship is strictly positive.

Summary

In this chapter, the results from the data collection were tabulated and analyzed using varying statistical methods. Descriptive results were presented, and the survey instrument was examined for its reliability and validity. Six hypotheses were examined in order to test the theory of the attitude formation of union members towards employee involvement developed in chapters two and three. The next chapter draws inferences from the results presented in this chapter, provides suggestions for future research, and concludes the study.

DISCUSSION AND CONCLUSION

Discussion

While the study was able to substantiate a model for the development of union member attitudes towards employee involvement, some of the specific hypotheses remained unsupported. This fact, along with other conclusions, limitations, and suggestions for future research will be discussed in this chapter. The chapter concludes with a discussion of the implications of this research for labor and management and an overall summary of the project.

Evaluating the Models

Minor modifications to each of the models were suggested by the Lisrel software program. However, there is no theoretical foundation to accept the modifications as suggested. Most modifications suggested were correlations between various error terms. The modifications proposed crossed the model, requiring a correlation of error terms for dependent and independent variables. In addition, the increase in the amount of variance explained by these proposed modifications was not significant. The modifications were hence rejected, given these reasons.

The overall structural equation model proved to be appropriate for understanding how union members form employee involvement attitudes. The model was also somewhat appropriate for the specific groupings of the employees. Using union commitment and company commitment, it was possible to subdivide the overall data set and allow more detailed analysis. However, when the model was evaluated using these subgroups, there was not always sufficient evidence to show adequate fit.

Problems arose with models using the groups developed from union and company commitment. In many instances, the fit indices reflected less than adequate fit, or poor fit. This is most likely an artifact of sample size. In one instance the number of respondents used for testing the model was less than the total degrees of freedom in the model. While this can not be addressed adequately through the data gathered during this study, it is hoped that future research with a larger sample can overcome this possible source of error.

Evaluating the Results of the Hypothesis Testing

Unfortunately, not all the hypotheses were supported by the data. While the overall models were appropriate, the data often contradicted the hypotheses and the predicted relationships within the model. This is shown in the table below:

Table 41 - Summary of Hypotheses Tested

Hypothesis	Expected Relationship	Relationship Found	Hypothesis Accepted or Rejected?
H1:	Union Information → EI Attitudes (+)	Inverse Relationship	Reject
H1a:	Union Information > Company Information	As hypothesized	Accept
H2:	Company Information → EI Attitudes (+)	Inverse Relationship	Reject
H2a:	Company Information > Union Information	Union > Company	Reject
H3	Union Information → EI Attitudes (+) AND Company Information → EI Attitudes (+)	As hypothesized	Accept
H4	Social Information > Dispositions	Mixed, depending upon which source of information and which disposition	Reject

In order to begin to explain the possible failures, the first place examined must be the data. Given the failures at the hypotheses testing stage, sources of error within the data must be postulated.

Sample size, especially once the data set was subdivided, was certainly an issue. The literature on structural equations calls for sample sizes of 200 to 500, which was not met once the groupings had been established. It is expected that an increase in the sample during future studies would eliminate these problems.

Also at issue was the factor analysis of the social information variables. As has been discussed, the questions did not load on the factors as had been expected. The respondents were interpreting these questions in a fashion not anticipated. Further study is necessary, in order to clarify these measures more fully.

Of course, there might be factors external to the variables captured for this study. Uncontrollable circumstances prior to and during the study must be taken into account. Various situational factors, such as the organizations' recent layoffs, use of human resource programs, and issues of trust, are highlighted here.

Discussions with company officials uncovered other factors that may have impacted the employees and the process of attitude formation. In the years recently preceding the survey, approximately 20,000 employees were laid off, company-wide. The issue of how employees deal with "surviving" such layoffs was not examined during this study, but might add explanation as to why some of the hypotheses failed. These layoffs probably heightened perceptions of distrust towards the company, and possibly the union, for failing to prevent the action.

In addition, the company has a history of implementing new human resource techniques, and then changing them within a few years, or, in some cases, within a few months. The phrase "program of the month" has been used by some employees of the organization. There is some thought that the team environment recently enacted at the production facilities is simply another new program, destined to be replaced by a newer

trend, and that there is not strong company commitment to it. Undoubtedly, this perception affected the social information being presented by the company about its new team environment. When the data set is examined for the size of teams, many are above 30, with a single supervisor. Much of the team literature points to much smaller teams as being appropriate and necessary for what is normally thought of as a team based workplace.

Many of the sites were either in contract negotiations or were just completing them when the survey was distributed. While data about the contract negotiation process were not collected, it is possible to speculate what role that event may have had on the data. It is conceivable that the negotiations affected the employees' perceptions of both their company and their union. This can be coupled with the fact that the external environment for the company is shifting to one of deregulation. The organization had worked for years within the regulated environment of electrical power, with government control of production and price. The most recent information indicates that there will be deregulation of this industry, forcing this organization and others in the industry to face competition in a free market for the first time.

While not statistically tested, the demographic information points to possible differences between the plants. However, all the data were aggregated for inclusion during the analyses. But differences between the plants begins to suggest that employees may have had vastly different perceptions of their company, their union, and even of the survey questionnaire itself. Future research must attempt to control for this possible source of variation, as well as the other situational factors already discussed.

Without data for these elements, it is impossible to do more than present supposition as to how they may have affected the data and the hypotheses testing process. Such uncontrolled variables, while not elements in the original theory, might be relevant for future studies. Other limitations affected the study, and are presented in the following section.

Limitations

Probably the most limiting factor in the study, as already mentioned, was the sample size. While 229 was adequate for the overall model, some of the subcategories analyzed were much smaller. A larger overall sample size would help eliminate some of the statistical problems evident in the study.

Uncontrolled variables, as previously discussed, may also have been a contributing factor. While it is impossible to control for every source of variance, or sacrifice response rate by forcing the survey instrument to an unmanageable size, it might have been advantageous to include other questions. For instance, a measure of whether employees felt their job was in jeopardy, might have allowed some additional control in the study.

Another limitation was a lack of direct control of the method of survey distribution. While there is nothing to suggest error at this stage, it is conceivable that the method biased the responses. Some employees, who received the surveys along with their paycheck, may have had different perceptions of the survey than those who received in a different manner. Others may have felt that the anonymity and confidentiality of the process was in jeopardy. And, unlikely though it might be, some surveys may not have been distributed to employees management perceived as unable or unwilling to

complete them, or who might have been seen as anti-management. In any case, this was uncontrollable given the distribution method used, yet certainly needed to be mentioned. The method used may have been a limiting factor, and is hence presented as such.

Implications

The original design of the study, and the original hypotheses, would have led to a very specific set of implications. However, the failure to establish the relationships as theorized brings about new implications. In the sections below, the implications are drawn directly from the data and their results. Some are contrary to accepted theory or practice, but are consistent with what the data for this study propose.

For Management

Given the results of the study, the implications for management contradict many of the accepted teachings and philosophies of employee involvement. In almost every instance, the role of the company was either negligible in the attitudes formed, or were contrary. This would imply that the company's role in developing an involvement program, or the information it provided its employees about the new program, would have no effect on the employees' attitudes towards the program. This seems to contradict many of the concepts of program development and implementation, where management takes a role of providing support and education. However, what might be at issue in this study is the degree to which management has lost the trust of its employees, and its promotion of an idea actually works to blemish that idea.

Somewhat less controversial is the notion that high union commitment is related to the attitudes formed. Again, the role of management seems negligible in the attitude formation process. This implies that management would need to establish a visible partnership with their union, in order to be perceived as supporting the same issues as the union. Of course, this is logical, as a more positive labor relationship makes the implementation and ongoing support of an involvement program possible. But the greatest implication is that the social information provided by the company seems to have less impact than the social information provided by the union, and that it might be difficult for management to get the workforce attitudinally positioned to receive and accept an involvement program.

Dispositional measures show some promise for the possible selection of employees for involvement programs. For employees with dual loyalty, both measures of participativeness and locus of control provide insight into the attitudes forms. Participativeness was stronger than the locus of control measures, but was not as reliable and has not been as strongly established in the literature. Use of such dispositional measures as selection devices requires further study and validation, but seem likely candidates for companies wishing to ensure some degree of success with their involvement programs.

For Labor

The implications of labor unions are similar to that of management, but with greater statistical support. The data support the notion that social information provided

by the union can influence the attitudes employees develop about employee involvement programs. The social information provided by the union has a greater influence on the attitudes formed than does the company information. So, while management can use dispositional measures to choose the appropriate employees, it would appear that unions can use social information to establish their agendas, either for or against such programs. However, caution is again urged. These implications are drawn from situations where unions have received strong commitment from bargaining unit members. In other situations the results are mixed, and it is unclear if the social information provided by the company or the union has a greater affect on the attitudes formed.

For Theory

The study attempted to establish a new theoretical model which would be relevant to future research in the areas of employee involvement, labor relations, and attitude formation. Various theoretical fields were drawn from, in an attempt to craft the most appropriate model. While the data set begins to support the model, future study is needed. The technique in this study was to test a single model, rather than to compare one model to another. Future study needs to compare multiple models, in order to draw stronger conclusions about the appropriateness and stability of the model.

Many of the limitations already mentioned could be incorporated into future models. Situational variables could also be included, in order to control for them and to provide additional models for testing and comparison. Caution is recommended, however, in that additional models must be generated from a strong theoretical base. Modifications to the model used in this study were suggested by the LISREL program, but were discarded since there was not theoretical reason to include them. While the modifications may have strengthened the statistical validity of the model, their inclusion would have been unfounded.

Taken on its merits, the model generated and tested in this study begins to explain how and why union members form attitudes towards employee involvement programs. Their personal dispositions, along with the social information they receive, act to guide the attitude formation process. While further research is necessary, this study provides limited, preliminary support for such a model.

Future Research

It is hoped that future research can clarify many aspects of this study, and possibly overcome some of the limitations already discussed. One immediate need is replication with a much larger sample. This could overcome the small size problem associated with the division of the data according to the commitment scales.

Also needed is better control for external variables. It might be possible to conduct the study in a single large site that only has a single union. This would provide a measure of control for the social information provided. In addition, it might be necessary to measure relevant situational variables, along with the commitment measures. While commitment has been seen as a proxy measure for the relationship of labor and management, perhaps other measures of trust or loyalty are necessary, to

more fully capture possible variance.

Another option would be a deliberate attempt to use multiple employers with a common union, given the fact that social information provided by the union seemed most relevant in the model. While this would not control for company variables, it would control for the union side of the model, at least from the social information provided by the international union. The local unions as a source of social information would still be uncontrolled. In addition, collection of social information on a site by site basis may begin to quantify the role of company information to a greater degree. A sample that gathers a variety of social information, from different company perspectives, could prove useful. Again, a larger sample, with sample sizes of at least 200 per site, can help clarify this issue.

Further analysis of the disposition versus social information debate is also possible. Other dispositions relating to involvement could be included in the model, as well as additional measures of participativeness and locus of. In addition, other sources of social information, such as co-workers or family members, need to be included. As already mentioned, these measures need further development and validation. While this survey did not conclusively answer the social information versus disposition debate, future study may be able to further the discussion, especially with stronger and additional measures.

Conclusions

The study was able to develop a theoretical model designed to understand how social information and dispositions form union member attitudes towards employee involvement programs. While the results were at times contrary to the hypothesized relationships within the model, the overall model was appropriate. The data fit with the theorized model well enough to provide support for the model. While a conclusive statistical test is not provided for the structural equation model, the interpretation of the output justifies this conclusion. Using dispositional measures of participativeness and locus of control, in combination with the social information of the company and the union, it was possible to develop and test this model. Through the variables measured and the data collected, this model effectively demonstrated how employee involvement attitudes are formed.

LITERATURE CITED

Ackers, P., Marchington, M., Wilkinson, A., & Goodman, J. (1992, Winter). The use of cycles? explaining employee involvement in the 1990s. *Industrial Relations Journal*, 23(4), 268-283.

Alderfer, C. P. (1977, December). A critique of Salancik and Pfeffer's examination of need-satisfaction theories. *Administrative Science Quarterly*, 22, 658-669.

Allport, G. W. (1935). Attitudes. In C. Murchison (Ed.), *Handbook of Social Psychology* (pp. 798-844). Worcester, MA: Clark University Press.

Anderson, L. R., & Fishbein, M. (1965). Prediction of attitude from the number, strength, and evaluative aspect of beliefs about the attitude object: A comparison of summation and congruity theories. *Journal of Personality and Social Psychology*, 3, 437-443.

Appelbaum, E., & Batt, R. (1994). *The New American Workplace*. Ithaca, NY: ILR Press.

Bentler, P. M., & Bonett, D. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606.

Bluestone, B., & Bluestone, I. (1992). *Negotiating the Future: A Labor Perspective on American Business*. New York: BasicBooks.

Bollen, K. A. (1989). *Structural Equations with Latent Variables*. New York: John Wiley & Sons.

Carmines, E., & McIver, J. (1981). Analyzing models with unobserved variables. In W. Bohrnstedt & E. Borgatta (Eds.), *Social Measurement: Current Issues* (pp. 65-115). Beverly Hills, California: Sage Publications, Inc.

Cohen-Rosenthal, E., & Burton, C. E. (1993). *Mutual gains: A guide to Union-Management Cooperation*. Ithaca, New York: ILR Press.

Collins, D., Hatcher, L., & Ross, T. L. (1993). The decision to implement gainsharing: The role of work climate, expected outcomes, and union status. *Personnel Psychology*, 46, 77-104.

Cooke, W. N. (1989, Spring). Improving productivity and quality through collaboration. *Industrial Relations*, 28(2), 299-319.

Cotton, J. L. (1993). *Employee involvement*. Newbury Park, California: SAGE Publications, Inc.

Cotton, J. L., Vollrath, D. A., Froggatt, K. L., Lengnick-Hall, M. L., & Jennings, K. R. (1988). Employee participation: Diverse forms and different outcomes. *Academy of Management Review*, 13(1), 8-22.

Currall, S. C. (1992). Labor-Management trust: Its dimensions and correlates. In J. F. Burton, Jr. (Ed.), *Proceedings of the Forty-Fourth Annual Meeting* (pp. 465-474). Madison, WI: Industrial Relations Research Association.

Cutcher-Gershenfeld, J., Kochan, T. A., & Verma, A. (1991). Recent developments in U.S. employee involvement initiatives: Erosion or diffusion. In D. Lewin & D. Sockell (Eds.), *Advances in Industrial and Labor Relations, Volume 5* (pp. 1-32). Greenwich, Connecticut: JAI Press Inc.

Cuttance, P. (1987). Issues and problems in the application of structural equation models. In P. Cuttance & R. Ecob (Eds.), *Structural Modeling by Example*. New York: Cambridge University Press.

Dachler, H. P., & Wilpert, B. (1978, March). Conceptual dimensions of participation in organizations: A critical evaluation. *Administrative Science Quarterly*, 23, 1-39.

Deery, S. J., Iverson, R. D., & Erwin, P. J. (1994, December). Predicting organizational and union commitment: The effect of industrial relations climate. *British Journal of Industrial Relations*, 32(4), 581-597.

Deutsch, S., & Schurman, S. (1993). Labor initiatives for worker participation and quality of working life. *Economic and Industrial Democracy*, 14, 345-354.

Eaton, A. E., Gordon, M. E., & Keefe, J. H. (1992, April). The impact of quality of work life programs and grievance system effectiveness on union commitment. *Industrial & Labor Relations Review*, 45(3), 591-604.

Eaton, A. E., & Voos, P. B. (1992). Unions and contemporary innovations in work organization, compensation, and employee participation. In L. Mishel & P. B. Voos (Eds.), *Unions and Economic Competitiveness* (pp. 173-215). Armonk, New York: M.E. Sharpe, Inc.

Eaton, A. E., & Voos, P. B. (1994). Productivity-enhancing innovations in work organization, compensation, and employee participation in the union versus the nonunion sectors. In D. Lewin & D. Sockell (Eds.), *Advances in Industrial and Labor Relations, Volume 6* (pp. 63-109). Greenwich, Connecticut: JAI Press Inc.

Fatehi-Sedeh, K., & Safizadeh, H. (1986, Autumn). Labor union leaders and codetermination: An evaluation of attitudes. *Employee Relations Law Journal*, 12(No. 2), 188-204.

Fields, M. W., & Thacker, J. W. (1992). Influence of quality of work life on company and union commitment. *Academy of Management Journal*, 35(2), 439-450.

Fishbein, M. (1967). A behavior theory approach to the relations between beliefs about an object and the attitude toward the object. In M. Fishbein (Ed.), *Readings in attitude theory and measurement* (pp. 389-400). New York: John Wiley & Sons, Inc.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, Massachusetts: Addison-Wesley Publishing Company.

Fishbein, M., & Raven, B. H. (1962). The AB scales: An operational definition of belief and attitude. *Human Relations*, 15, 35-44.

Glew, D. J., Griffin, R. W., & Van Fleet, D. D. (1995). Participation in organizations: A preview of the issues and proposed framework for future analysis. *Journal of Management*, 21(3), 395-421.

Gordon, M. E., & Ladd, R. T. (1990). Dual allegiance: Renewal, reconsideration, and recantation. *Personnel Psychology*, 43, 37-69.

Gordon, M. E., Philpot, J. W., Burt, R. E., Thompson, C. A., & Spiller, W. E. (1980, August). Commitment to the union: Development of a measure and an examination of its correlates. *Journal of Applied Psychology Monograph*, 65(4), 479-499.

Graham, J. W., & Verma, A. (1991). Predictors and moderators of employee responses to employee participation programs. *Human Relations*, 44(6), 551-568.

- Hayduk, L. A. (1989). *Structural Equation Modeling with LISREL*. Baltimore, MD: The Johns Hopkins University Press.
- House, R. J., Shane, S. A., & Herold, D. M. (1996). Rumors of the death of dispositional research are greatly exaggerated. *Academy of Management Review*, 21(1), 203-224.
- Hu, L.-T., & Bentler, P. M. (1995). Evaluating Model Fit. In R. H. Hoyle (Ed.), *Structural Equation Modeling: Concepts, Issues, and Applications* (pp. 76-99). Thousand Oaks, California: Sage Publications Inc.
- Iverson, R. D., & Kuruvilla, S. (1990, January). Does dual commitment underlie the constructs of company and union commitment? Industrial Relations Research Association, 42nd Annual Meeting.
- Iverson, R. D., & Kuruvilla, S. (1995). Antecedents of union loyalty: The influence of individual dispositions and organizational context. *Journal of Organizational Behavior*, 16(Special Issue), 557-582.
- Joreskog, K. G., & Sorbom, D. (1993). *Lisrel 8: Structural Equation Modeling with the SIMPLIS Command Language*. Chicago, IL: Scientific Software International, Inc.
- Judge, T. A. (1992). The dispositional perspective in human resources research. In unknown (Ed.), *Research in Personnel and Human Resources Management, Volume 10* (pp. 31-72). Greenwich, Connecticut: JAI Press Inc.
- Juravich, T., Harris, H., & Brooks, A. (1993, Spring). Mutual Gains? Labor and management evaluate their employee involvement programs. *Journal of Labor Research*, 14(2), 165-185.
- Kaminski, M. (1993). Why Should Employees Want to Participate in Decisions? The Role of Perceived Control and Growth Need Strength [Diss]. University of Michigan.
- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, 24, 163-204.
- Kochan, T. A., Katz, H. C., & Mower, N. R. (1984). *Worker Participation and American Unions*. Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research.
- Lansbury, R. D., & Davis, E. M. (1991). Employee involvement and workers' participation in management: The Australian experience. In D. Lewin & D. Sockell (Eds.), *Advances in Industrial and Labor Relations, Volume 5* (pp. 33-57). Greenwich, Connecticut: JAI Press Inc.
- Lawler, E. E., III, Ledford, G. E., JR., & Mohrman, S. A. (1989). *Employee Involvement in America: A Study of Contemporary Practice*. Houston, Texas: American Productivity & Quality Center.
- Leana, C. R., & Florkowski, G. W. (1992). Employee involvement programs: Integrating psychological theory and management practice. In unknown (Ed.), *Research in Personnel and Human Resources Management, Volume 10* (pp. 233-270). Greenwich, Connecticut: JAI Press Inc.
- MacCallum, R. C. (1995). Model Specification: Procedures, Strategies, and Related Issues. In R. H. Hoyle (Ed.), *Structural Equation Modeling: Concepts, Issues, and Applications* (pp. 16-36). Thousand Oaks, California: Sage Publications, Inc.
- Mann, S. Z. (1989, Spring). Labor-Management cooperation and worker participation: A public sector perspective. *Public Productivity Review*, 12(3), 229-236.

Martin, C. L., Parsons, C. K., & Bennett, N. (1995). The influence of employee involvement program membership during downsizing: Attitudes toward the employer and the union. *Journal of Management*, 21(No. 5), 879-890.

Martin, J. E., Magenau, J. M., & Peterson, M. F. (1982, August 15-18). Variables differentiating patterns of commitment among union stewards. *Proceedings of the 42nd Annual Academy of Management Meeting*, pp. 302-306.

Miller, R. W., & Prichard, F. N. (1992, December 1992). Factors associated with workers' inclination to participate in an employee involvement program. *Group & Organization Management*, 17(4), 414-430.

Mohrman, S. A., & Lawler, E. E., III. (1984). Quality of work life. In *Research in Personnel and Human Resource Management, Volume 2* (pp. 219-260). Greenwich, Connecticut: JAI Press, Inc.

Motowidlo, S. J. (1986). Information processing in personnel decisions. In unknown (Ed.), *Research in Personnel and Human Resources Management, Volume 4* (pp. 1-44). Greenwich, Connecticut: JAI Press Inc.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224-247.

Munsterberg, H. (1913). *Psychology and Industrial Efficiency*. Boston: Houghton Mifflin.

Nadler, D. A., Hanlon, M., & Lawler, E. E., III. (1980). Factors influencing the success of labour-management quality of work life programs. *Journal of Occupational Behavior*, 1(1), 53-67.

Noble, B. P. (1993, July-August). Reinventing labor: An interview with union president Lynn Williams. *Harvard Business Review*, pp. 115-125.

O'Reilly, C. A., III, & Caldwell, D. F. (1985). The impact of normative social influence on task perceptions and attitudes: A social information processing approach. *Journal of Occupational Psychology*, 58, 193-206.

Osgood, C. E., & Tannenbaum, P. (1955). The principle of congruity in the prediction of attitude change. *Psychological Review*, 62, 42-55.

Parker, M., & Slaughter, J. (1994). *Working smart: A union guide to participation programs and reengineering*. Detroit: Labor Education and Research Project (Labor Notes).

Perline, M. M., & Poynter, D. J. (1990, July). Union and management perceptions of managerial prerogatives: Some insight into the future of co-operative bargaining in the USA. *British Journal of Industrial Relations*, 28(2), 179-196.

Perline, M. M., & Sexton, E. A. (1994, July). Managerial perceptions of labor-management cooperation. *Industrial Relations*, 33(3), 377-385.

Peterson, R. B., & Tracy, L. (1988, Fall). Lessons from labor-management cooperation. *California Management Review*, pp. 40-53.

Pfeffer, J. (1980). A partial test of the social information processing model of job attitudes. *Human Relations*, 33(No. 7), 457-476.

Phares, E. (1976). *Locus of Control in Personality*. Morristown, NJ: General Learning Press.

Pinder, C. C. (1984). *Work Motivation*. Glenview, Illinois: Scott, Foresman and Company.

Plovnick, M. S., & Chaison, G. N. (1985, September). Relationships between concession bargaining and labor-management cooperation. *Academy of Management Journal*, 28(No. 3), 697-704.

Porter, L. W., & Smith, F. J. (1970). The etiology of organizational commitment: A longitudinal study of the initial stages of employee-organizational reactions. Graduate School of Administration, University of California at Irvine.

Porter, L. W., Steers, R. M., & Mowday, R. T. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(5), 603-609.

Renn, R.W., & Vandenberg, R.J. (1991). Differences in employee attitudes and behaviors based on Rotter's (1966) internal-external locus of control: Are they all valid? *Human Relations*, 44(11).

Rhine, R. J. (1958). A concept-formation approach to attitude acquisition. *Psychological Review*, 65, 362-370.

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(No. 1), 1-28.

Salancik, G. R., & Pfeffer, J. (1977, September). An examination of needs-satisfaction models of job attitudes. *Administrative Science Quarterly*, 22, 427-456.

Salancik, G. R., & Pfeffer, J. (1978, June). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23, 224-253.

Schuster, M. H. (1984). *Union-Management Cooperation*. Kalamazoo, Michigan: W.E. Upjohn Institute For Employment Research.

Schwarz, R. M. (1990, Fall - Spring). Participative decision making and union-management cooperative efforts: Attitudes of managers, union officials, and employees. *Review of Public Personnel Administration*, 11(No. 1-2), 38-54.

Sherer, P. D., & Morishima, M. (1989, Summer). Roads and roadblocks to dual commitment: Similar and dissimilar antecedents of union and company commitment. *Journal of Labor Research*, X(3), 311-330.

Spector, P. E. (1988). Development of the Work Locus of Control Scale. *Journal of Occupational Psychology*, 61, 335-340.

Spector, P. E. (1992). *Summated Rating Scale Construction: An Introduction*. Newbury Park, California: Sage Publications, Inc.

Staats, A. W. (1967). An outline of integrated learning theory of attitude formation and function. In M. Fishbein (Ed.), *Readings in attitude theory and measurement* (pp. 373 - 376). New York: John Wiley & Sons, Inc.

Stickler, K. B., & Mehler, P. L. (1993). Employee participation programs after Electromation: They're worth the risk! *Annals of Health Law*, 2, 55-66.

Sverke, M., & Kuruvilla, S. (1995). A new conceptualization of union commitment: Development and test of an integrated theory. *Journal of Organizational Behavior*, 16(Special Issue), 505-532.

Thomas, J., & Griffin, R. (1983). The social information processing model of task design: A review of the literature. *Academy of Management Review*, 8(No. 4), 672-682.

Thurstone, L. (1928). Attitudes can be measured. *American Journal of Sociology*, 33, 529-554.

Thurstone, L. (1931). The measurement of social attitudes. *Journal of Abnormal and Social Psychology*, 26, 249-269.

U.S. Department of Labor, B. o. L.-M. R. a. C. P. (1984). *Labor-Management Cooperation: Perspectives from the Labor Movement*. Washington, D.C.: U.S. Department of Labor.

United States. Commission on the Future of Worker-Management Relations. (1995). *Report and recommendations of the Commission on the Future of Worker-Management Relations, issued January 9, 1995*. Washington, D.C.: Bureau of National Affairs.

Verma, A., & Cutcher-Gershenfeld, J. (1993). Joint Governance in the workplace: Beyond union-management cooperation and worker participation. In B. E. Kaufman & M. M. Kleiner (Eds.), *Employee Representation: Alternatives and Future Directions* (pp. 197-234). Madison, WI: Industrial Relations Research Association.

Verma, A., & McKersie, R. B. (1987, July). Employee involvement: The implications of noninvolvement by unions. *Industrial & Labor Relations Review*, 40(No. 4), 556-568.

Voos, P. B. (1989, Winter). The influence of cooperative programs on union-management relations, flexibility, and other labor relations outcomes. *Journal of Labor Research*, 10(1), 103-117.

Wheaton, B., Muthen, B., Alwin, D., & Summers, G. (1977). Assessing reliability and stability in panel models. In D. Heise (Ed.), *Sociological Methodology*. San Francisco, California: Jossey-Bass, Inc.

Zalesny, M. D., & Ford, J. K. (1990). Extending the social information processing perspective: New links to attitudes, behaviors, and perceptions. *Organizational Behavior and Human Decision Processes*, 47, 205-246.

APPENDIX A

The Following pages are a reproduction of the survey distributed to the power generation facility employees. It was printed on 3 sheets of 11 inch by 17 inch paper and saddle stapled to form a 12 page booklet. The back cover had a return postage label and a return address. The booklet was formatted so the respondents could bi-fold it, staple or tape it shut, and drop it in the U.S. Mail. The booklet was formatted for a Hewlett Packard LaserJet 5L printer using a double column style.

Attitude Survey for AEP Hourly Employees



Research Conducted by:

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(540) 231-4990 or 231-6353

Dear AEP Employee:

I need your help. My name is Robert Hoell and this survey is part of my graduate research at Virginia Tech. It has been designed to examine the attitudes of employees towards their work. I am conducting it under the guidance of Dr. Jerald F. Robinson, with the cooperation of AEP. Your Union Business Manager has also given his support for this survey. I appreciate your help by filling out the survey and returning it to me.

Please read all the directions and consider your answers carefully. All individual answers will be kept completely confidential. AEP and your Union will receive only a summary of the data, so there is no way your answers can be connected directly to you. In addition, the information you give about your union will NOT be shared with AEP in any form. This study has received the approval of the Human Subjects Committee, Institutional Review Board, of the Research and Graduate Studies Division at Virginia Tech.

The survey will take roughly 30 minutes to complete. When done, fold the survey so the postage-paid notice and my address are visible on the outside. Tape the survey closed and place it in the mail. Do not return it to your team leader - instead, send it directly to me by placing it in any mailbox or by taking it to the post office.

Your participation in this study will be very much appreciated! Please complete and return the survey as soon as possible. Thank you for taking the time to complete the survey.

Sincerely,

Robert C. Hoell
Dr. Jerald F. Robinson

Please read the following statements carefully. They ask you about work in general, and what you think about working. Check or mark the box beneath the statement that best describes how much you agree or disagree with the statement. Answer as well as you can, based on your own experience. Do not leave any answers blank: instead, choose the box that is as close as possible to how you feel about the statement.

1. A job is what you make of it.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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2. On most jobs, people pretty much accomplish whatever they set out to accomplish.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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3. If you know what you want out of a job, you can find a job that gives it to you.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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4. If employees are unhappy with a decision made by their boss, they should do something about it.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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5. Getting the job you want is mostly a matter of luck.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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6. Making money is primarily a matter of good fortune.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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7. Most people are capable of doing their jobs well if they make the effort.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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8. In order to get a really good job you need to have family members or friends in high places.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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9. Promotions are usually a matter of good fortune.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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10. When it comes to landing a really good job, who you know is more important than what you know.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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11. Promotions are given to employees who perform well on the job.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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12. To make a lot of money you have to know the right people.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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13. It takes a lot of luck to be an outstanding employee on most jobs.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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14. People who perform their jobs well generally get rewarded for it.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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15. Most employees have more influence on their supervisors than they think they do.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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16. The main difference between people who make a lot of money and people who make a little money is luck.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
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In the next part, think about how work should be done. How much say do you think workers should have in the following areas of the job? Read each statement and check or "x" the box below that indicates how much say you feel employees should have.

17. The way the work is done.

No Say	A Little Say	Some Say	A Lot of Say
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18. In keeping track of quality.

No Say	A Little Say	Some Say	A Lot of Say
--------	--------------	----------	--------------

19. How fast the work is done.

No Say	A Little Say	Some Say	A Lot of Say
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20. In the use of new technology on your job.

No Say	A Little Say	Some Say	A Lot of Say
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21. How much work people should do.

No Say	A Little Say	Some Say	A Lot of Say
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22. Who should do what job in your work team.

No Say	A Little Say	Some Say	A Lot of Say
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23. When the work day begins or ends.

No Say	A Little Say	Some Say	A Lot of Say
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24. Handling complaints or grievances.

No Say	A Little Say	Some Say	A Lot of Say
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25. Who should be fired if he does a bad job.

No Say	A Little Say	Some Say	A Lot of Say
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26. Who should be hired into your group.

No Say	A Little Say	Some Say	A Lot of Say
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27. Who gets promoted.

No Say	A Little Say	Some Say	A Lot of Say
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28. The selection of your supervisor.

No Say	A Little Say	Some Say	A Lot of Say
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For the next area, think about how you feel about working at AEP and how you do your job. Choose the box below each statement that best matches how you feel about the statement.

29. I am willing to put in a great deal of effort beyond that normally expected in order to help AEP be successful.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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30. I talk up AEP to my friends as a great organization to work for.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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31. I feel very little loyalty to AEP.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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32. I would accept almost any type of job assignment in order to keep working for AEP.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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33. I find that my values and AEP's values are very similar.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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34. I am proud to tell others that I am part of AEP.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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35. I could just as well be working for a different organization as long as the type of work was similar.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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36. AEP inspires the very best in me in the way of job performance.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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37. It would take very little change in my present circumstances to cause me to leave AEP.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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38. I am extremely glad that I chose AEP to work for over others I was considering at the time I began working here.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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39. There's not too much to be gained by sticking with AEP indefinitely.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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40. Often, I find it difficult to agree with AEP's policies on important matters relating to its employees.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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41. I really care about the fate of AEP.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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42. For me, this is the best of all possible companies to work for.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
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43. Deciding to work for AEP was a definite mistake on my part.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
-------------------	---------------------	-------------------	----------------------------	----------------	------------------	----------------



The next section asks you about types of programs in the workplace. For this area, please read each of the 4 descriptions carefully and then answer the questions following each one. Answer the questions based on how you feel about the situation the paragraph describes. Please answer as well as you can.

A) Imagine that you have just heard that a new committee is being formed. This committee will meet monthly on company time, and is made up of employees from all parts of your workplace. Issues discussed include problems employees have with their jobs, and things like respect from their supervisors and overall satisfaction. The committee also has management members who will listen and discuss issues with the committee and with upper management. The goal of the committee is to make your workplace a better place to work.

Would you participate if you had the chance to join such a group?

I certainly would not participate	I probably would not participate	I probably would participate	I certainly would participate
-----------------------------------	----------------------------------	------------------------------	-------------------------------

Overall, how satisfied would you be with such a group?

I would be strongly dissatisfied	I would be somewhat dissatisfied	I would be neither satisfied nor dissatisfied	I would be somewhat satisfied	I would be strongly satisfied
----------------------------------	----------------------------------	---	-------------------------------	-------------------------------

Overall, how much would you like such a group?

I would strongly dislike it	I would somewhat dislike it	I would neither like nor dislike it	I would somewhat like it	I would strongly like it
-----------------------------	-----------------------------	-------------------------------------	--------------------------	--------------------------

Have you ever participated in a group or committee like the one described?

I have never participated on such a committee	Yes, here at AEP but not at another job	Yes, here at AEP and at another place I've worked	Not here at AEP but at another place I've worked
---	---	---	--

B) Again, imagine that you have been told a new group is being formed at work. Employees will be involved, and the purpose is to discuss quality and issues related to quality. There will be between 5 and 15 members in the group. It will meet weekly, on company time, and attendance is voluntary. The group will discuss the problems and offer solutions to management. There is not necessarily a bonus or reward for being in the group.

Would you participate if you had the chance to join such a group?

I certainly would not participate	I probably would not participate	I probably would participate	I certainly would participate
-----------------------------------	----------------------------------	------------------------------	-------------------------------

Overall, how satisfied would you be with such a group?

I would be strongly dissatisfied	I would be somewhat dissatisfied	I would be neither satisfied nor dissatisfied	I would be somewhat satisfied	I would be strongly satisfied
----------------------------------	----------------------------------	---	-------------------------------	-------------------------------

Overall, how much would you like such a group?

I would strongly dislike it	I would somewhat dislike it	I would neither like nor dislike it	I would somewhat like it	I would strongly like it
-----------------------------	-----------------------------	-------------------------------------	--------------------------	--------------------------

Have you ever participated in a group or committee like the one described?

I have never participated on such a committee	Yes, here at AEP but not at another job	Yes, here at AEP and at another place I've worked	Not here at AEP but at another place I've worked
---	---	---	--

C) In this question, imagine that your company has decided to place the employees into groups. These groups will make decisions every day about what work will be done and who in the group will do which jobs. These groups will be roughly 12 to 15 members in size. Management will only be there to aid and support the groups, and no supervisor will be involved with the group after an initial training period. Rewards and bonuses all depend on how productive the group is, and the level of quality that is maintained.

Would you participate if you had the chance to join such a group?

I certainly would not participate	I probably would not participate	I probably would participate	I certainly would participate
-----------------------------------	----------------------------------	------------------------------	-------------------------------

Overall, how satisfied would you be with such a group?

I would be strongly dissatisfied	I would be somewhat dissatisfied	I would be neither satisfied nor dissatisfied	I would be somewhat satisfied	I would be strongly satisfied
----------------------------------	----------------------------------	---	-------------------------------	-------------------------------

Overall, how much would you like such a group?

I would strongly dislike it	I would somewhat dislike it	I would neither like nor dislike it	I would somewhat like it	I would strongly like it
-----------------------------	-----------------------------	-------------------------------------	--------------------------	--------------------------

Have you ever participated in a group or committee like the one described?

I have never participated on such a committee	Yes, here at AEP but not at another job	Yes, here at AEP and at another place I've worked	Not here at AEP but at another place I've worked
---	---	---	--

D) Finally, imagine that you have just been told that a special committee is being formed. Your union and the management of the company are putting together a group of union members, union officials, and managers to deal with an issue in the contract. Part of the contract is unclear and the purpose of the committee is to come to an agreement as to what the language means, and how it will be applied in the future. The committee will meet once a week, on company time, until a conclusion is reached. It may be necessary to meet more frequently, but right now the schedule is only once a week. There is no direct reward or bonus other than clearing up that one part of the contract language.

Would you participate if you had the chance to join such a group?

I certainly would not participate	I probably would not participate	I probably would participate	I certainly would participate
-----------------------------------	----------------------------------	------------------------------	-------------------------------

Overall, how satisfied would you be with such a group?

I would be strongly dissatisfied	I would be somewhat dissatisfied	I would be neither satisfied nor dissatisfied	I would be somewhat satisfied	I would be strongly satisfied
----------------------------------	----------------------------------	---	-------------------------------	-------------------------------

Overall, how much would you like such a group?

I would strongly dislike it	I would somewhat dislike it	I would neither like nor dislike it	I would somewhat like it	I would strongly like it
-----------------------------	-----------------------------	-------------------------------------	--------------------------	--------------------------

Have you ever participated in a group or committee like the one described?

I have never participated on such a committee	Yes, here at AEP but not at another job	Yes, here at AEP and at another place I've worked	Not here at AEP but at another place I've worked
---	---	---	--

The following asks you questions about AEP and employee involvement. Employee involvement programs are when employees like yourself use their knowledge, skills, and abilities to help the company reach its goals. Read each of the statements and indicate how much you agree with the statement by checking the response in the box below each one.

1. The company believes employee involvement programs would be helpful.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

2. The company would only install a program with the help of its union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

3. The company's position on employee involvement is well known by its employees.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

4. The issue of employee involvement is often discussed by the company.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

5. The company would use an employee involvement program to weaken the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

6. I believe the company's position on employee involvement is better than the union's.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------



The following questions ask about you and your union. Please choose the response that best expresses how much you agree with the statement.

7. I feel a sense of pride being a part of this union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

8. Based on what I know now and what I believe I can expect in the future, I plan to be a member of the union the rest of the time I work for AEP.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

9. The record of this union is a good example of what dedicated people can get done.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

10. The union's problems are my problems.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

11. Even though he/she may not like parts of it, the union member must "live up to" all terms of the Contract.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

12. My loyalty is to my work, *not* to the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

13. It's every union member's responsibility to see to it that management "lives up to" all the terms of the Contract.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

14. It is the duty of every worker "to keep his/her ears open" for information that might be useful to the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

15. Members of this local are *not* expected to have a strong personal commitment in the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

16. A union member has more security than most members of management.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

17. I feel little loyalty towards this union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

18. As long as I'm doing the kind of work I enjoy, it does *not* matter if I belong to a union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

19. It's every member's duty to support or help another worker use the grievance procedure.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

20. I am willing to put in a great deal of effort beyond that normally expected of a member in order to make the union successful.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

21. I could just as well work in a non-union company as long as the type of work was similar.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

22. I have *little* confidence and trust in most members of my union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

23. I talk up the union to my friends as a great organization to be a member of.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

24. There's a lot to be gained by joining a union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

25. I doubt that I would do special work to help the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

26. Deciding to join the union was a smart move on my part.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

27. My values and the union's values are *not* very similar.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

28. It's every member's duty to know exactly what the Contract entitles him/her to.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

29. I rarely tell others that I am a member of the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

30. It's every union member's responsibility to see that other members "live up to" all terms of the Contract.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

31. If asked, I would serve on a committee for the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

32. If asked, I would run for an elected office in the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

33. It's easy "to be yourself" and still be a member of the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

34. Very little of what the membership wants has any real importance to the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

35. The member does *not* get enough benefits for the money taken by the union for dues.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

36. Every member must be prepared to take the time and risk of filing a grievance.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------



The following area asks you to think about what your union feels about employee involvement programs. These types of programs ask that workers use their knowledge, skills and abilities more effectively for the company. Choose the answer that best reflects what your union feels about the programs.

37. My union supports employee involvement programs.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

38. The union would help the company install an employee involvement program.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

39. The union's position on employee involvement is well known by the members.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

40. My union believes an employee involvement program would be a threat to the union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

41. The issue of employee involvement is often discussed by my union.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------

42. I believe my union's position on employee involvement is better than the company's position.

Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
-------------------	-------------------	----------------------------	----------------	----------------



The next section asks you to think about the team you are working with. Read each statement and indicate how much you agree or disagree by marking the appropriate box below.

43. I am willing to put in a great deal of effort beyond that normally expected in order for the team to be successful.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

44. I talk up (brag about) this team to my friends as a great team to work on.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

45. I feel very little loyalty to this team.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

46. I would accept almost any job in order to keep working with this team.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

47. I find that my values and the team's values are very similar.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

48. I am proud to tell others that I am part of this team.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

49. I could just as well be working for a different team as long as the work was similar.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

50. This team really inspires the very best in me in the way of job performance.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

51. It would take very little to cause me to leave this team.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

52. There's not too much to be gained by sticking with this team indefinitely.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

53. I agree with this team's goals.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

54. I really care about the fate of this team.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------

55. For me this is the best of all possible teams with which to work.

Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
--------------------	---------------------	-------------------	----------------	------------------	-----------------



This final area asks you to read the following questions about your job and how you do things. Read each question and then choose the response underneath that best answers the question.

In your kind of work, if a person tries to change his usual way of doing things, how does it usually turn out?

- Usually turns out worse: the tried and true methods work best in my work
- Usually doesn't make much difference
- Usually turns out better: our methods need improvement

Some people prefer doing a job the same way all the time because this is the way they can count on always doing a good job. Others like to go out of their way in order to think up new ways of doing things. How is it on your job?

- I always prefer doing things pretty much in the same way
- I mostly prefer doing things pretty much in the same way
- I mostly prefer doing things in new and different ways
- I always prefer doing things in new and different ways

How often do you try out, on your own, a better or faster way of doing something on the job?

- Once a week or more often
- Two or three times a month
- About once a month
- Every few months
- Rarely or never

How often do you get chances to try out your own ideas on your job, either before or after checking with your supervisor?

- Several times a week or more
- About once a week
- Several times a month
- About once a month
- Less than once a month

In my kind of job, it's usually better to let your team leader worry about new or better ways of doing things.

- Strongly Agree
- Mostly Agree
- Mostly Disagree
- Strongly Disagree

How many times in the past year have you suggested to your team leader a different or better way of doing something on the job?

- Never had the occasion to do this during the past year
- Once or twice
- About three times
- About five times
- Six to ten times
- More than ten times during the past year

This last section asks you a few things about yourself. As already discussed, your answers to all the questions will be kept in complete confidence and no one will know what you answered.

What Power Generation Facility do you work at: _____

Job Title: _____

Shift: _____

Department: _____

Which Team are you on: _____

Team Leader's Name: _____

Are You? ___ Male ___ Female

Your Age? _____

What ethnic group do you belong to?

___ White ___ Black (Not Hispanic) ___ American Indian or Alaskan Native
___ Hispanic ___ Asian or Pacific Island ___ Other

What is the highest level of education you have obtained?

___ Some High School ___ GED/Equivalency Degree
___ Technical Training ___ High School Degree
___ Some College ___ Associate Degree
___ Bachelor Degree ___ Some Graduate School
___ Masters Degree ___ Doctoral Degree or Doctoral Work

Are you presently a union member? ___ YES ___ NO

If yes, which union _____ and for how long _____

How long have you worked in your current position? _____

How long have you worked for AEP, total? _____

Are there any other comments you would like to add about working for AEP, your job, or how work is done at your plant? Please add them in the space below:

THANK YOU! I appreciate the time you took to fill out this survey. To return it to me, fold it so my name and address are facing out, and then tape it shut and place it in the mail. If you have any questions I would be happy to hear from you at (540) 231-4990. Again, thank you for filling out the survey.

Robert C. Hoell
2007 Pamplin Hall
Virginia Tech
Blacksburg, VA 24061-0233

APPENDIX B

Code used for the Analysis of the Complete Model and for Hypothesis 4:

```
Full Model for Dissertation
Observed Variables
A2 A3 B2 B3 C2 C3 D2 D3 WLC PRTSCAL WRKINOV UNPERINF UNINTENT COPERINF
COINTENT
Covariance Matrix
1.014
.868 1.068
.782 .751 .941
.741 .757 .836 .942
.629 .598 .503 .538 1.449
.592 .588 .458 .506 1.405 1.476
.311 .309 .365 .369 .364 .331 1.142
.336 .314 .350 .391 .409 .382 1.058 1.172
-.232 -.221 -.225 -.242 -.192 -.164 -.065 -.050 .517
.095 .134 .081 .096 .165 .178 .097 .111 -.018 .438
.194 .201 .229 .222 .190 .190 .173 .157 -.073 .135 .801
.125 .083 .099 .133 .127 .137 .149 .170 .007 .011 -.094 .706
-.027 -.086 .012 .039 -.011 -.018 .079 .124 .139 -.016 -.089 .235 .656
.399 .363 .339 .342 .344 .369 .111 .101 -.261 .041 .185 .086 -.111 1.069
.120 .141 .162 .168 .182 .161 .058 .057 -.182 -.024 .005 -.009 .018 .329 .971
Sample Size 228
Latent Variables: Locus Partic UnBelief CoBelief EIAffect EISatisf
Relationships:
  A3 = 1* EIAffect
  B3 = EIAffect
  C3 = EIAffect
  D3 = EIAffect
  A2 = 1 * EISatisf
  B2 = EISatisf
  C2 = EISatisf
  D2 = EISatisf
  WLC = Locus
  PRTSCAL = 1 * Partic
  WRKINOV = Partic
  UNPERINF = 1 * UnBelief
  UNINTENT = UnBelief
  COPERINF = 1 * CoBelief
  COINTENT = CoBelief
  EIAffect = Locus Partic UnBelief CoBelief
  EISatisf = Locus Partic UnBelief CoBelief
Let the Errors of A3 and A2 Correlate
Let the Errors of B3 and B2 Correlate
Let the Errors of C3 and C2 Correlate
Let the Errors of D3 and D2 Correlate
Number of Decimals = 3
Options: AD=OFF
Print Residuals
Path Diagram
LISREL OUTPUT SC
```

End of Problem

Code used for Hypothesis 1

```
Model for Hypothesis 1 for Dissertation (High Union Commitment)
Observed Variables
  A2 A3 B2 B3 C2 C3 D2 D3 WLC PRTSCAL WRKINOV UNPERINF UNINTENT COPERINF
COINTENT
Covariance Matrix
1.441
1.152 1.349
1.080 .999 1.156
.989 1.035 1.018 1.119
.808 .748 .559 .645 1.744
.772 .753 .522 .619 1.733 1.819
.233 .183 .257 .237 .184 .177 .753
.301 .240 .298 .292 .237 .212 .644 .723
-.323 -.314 -.233 -.247 -.233 -.228 -.038 -.039 .495
.054 .049 .083 .108 .122 .144 -.056 -.053 .017 .493
.251 .203 .273 .266 .176 .146 .144 .130 -.060 .149 .840
.288 .225 .271 .274 .273 .251 .124 .131 .017 .053 -.002 .741
-.020 -.063 .059 .077 .077 .057 .031 .089 .212 .063 -.047 .215 .752
.576 .515 .479 .461 .488 .514 .112 .081 -.278 .020 .211 .286 -.105 1.137
.096 .156 .104 .102 .290 .253 -.049 -.033 -.088 -.046 -.076 -.042 -.078 .121
.929
Sample Size 104
Latent Variables: Locus Partic UnBelief CoBelief EIAffect EISatisf
Relationships:
  A3 = 1* EIAffect
  B3 = EIAffect
  C3 = EIAffect
  D3 = EIAffect
  A2 = 1 * EISatisf
  B2 = EISatisf
  C2 = EISatisf
  D2 = EISatisf
  WLC = Locus
  PRTSCAL = 1 * Partic
  WRKINOV = Partic
  UNPERINF = 1 * UnBelief
  UNINTENT = UnBelief
  COPERINF = 1 * CoBelief
  COINTENT = CoBelief
  EIAffect = Locus Partic UnBelief CoBelief
  EISatisf = Locus Partic UnBelief CoBelief
Let the Errors of A3 and A2 Correlate
Let the Errors of B3 and B2 Correlate
Let the Errors of C3 and C2 Correlate
Let the Errors of D3 and D2 Correlate
Number of Decimals = 3
Options: AD = OFF
Options: IT = 5000
Print Residuals
Path Diagram
LISREL OUTPUT SC
```

End of Problem

Code Used for Hypothesis 1a

Group 3 based on Full Model for Dissertation (Hypothesis 1a)

Observed Variables

A2 A3 B2 B3 C2 C3 D2 D3 WLC PRTSCAL WRKINOV UNPERINF UNINTENT COPERINF
COINTENT

Covariance Matrix

```
1.536
1.219 1.425
1.117 .996 1.218
1.004 1.071 1.066 1.200
.649 .620 .350 .460 1.883
.630 .613 .298 .439 1.898 2.029
.152 .114 .180 .155 .111 .142 .895
.267 .199 .270 .235 .171 .151 .820 .913
-.129 -.121 -.041 -.091 -.033 -.024 .049 .012 .314
.071 .071 .130 .164 .171 .184 -.126 -.145 -.017 .631
.138 .070 .161 .170 .069 .012 .093 .119 .081 .220 .998
.345 .339 .330 .330 .181 .181 .156 .157 .033 .060 -.017 .840
-.064 -.045 .119 .082 .022 .019 .106 .098 .215 .082 -.001 .149 .783
.503 .470 .460 .416 .318 .400 .153 .084 -.065 .084 .122 .345 -.072 1.155
.127 .089 .057 .114 .209 .150 -.056 -.016 .010 -.008 -.015 -.130 -.0007 .026
.928
```

Sample Size 63

Latent Variables: Locus Partic UnBelief CoBelief EIAffect EISatisf

Relationships:

```
A3 = 1* EIAffect
B3 = EIAffect
C3 = EIAffect
D3 = EIAffect
A2 = 1 * EISatisf
B2 = EISatisf
C2 = EISatisf
D2 = EISatisf
WLC = Locus
PRTSCAL = 1 * Partic
WRKINOV = Partic
UNPERINF = 1 * UnBelief
UNINTENT = UnBelief
COPERINF = 1 * CoBelief
COINTENT = CoBelief
EIAffect = Locus Partic UnBelief CoBelief
EISatisf = Locus Partic UnBelief CoBelief
```

Let the Errors of A3 and A2 Correlate

Let the Errors of B3 and B2 Correlate

Let the Errors of C3 and C2 Correlate

Let the Errors of D3 and D2 Correlate

Number of Decimals = 3

Options: AD = OFF

Print Residuals

Path Diagram

LISREL OUTPUT SC

End of Problem

Code Used for Hypothesis 2

```
Model for Hypothesis 2 for Dissertation (High Company Commitment)
Observed Variables
  A2 A3 B2 B3 C2 C3 D2 D3 WLC PRTSCAL WRKINOV UNPERINF UNINTENT COPERINF
COINTENT
Covariance Matrix
.488
.412 .661
.321 .378 .498
.320 .368 .426 .526
.421 .424 .336 .410 1.226
.413 .453 .344 .428 1.203 1.272
.345 .335 .329 .304 .376 .337 1.076
.362 .315 .276 .322 .443 .441 .906 .954
-.025 -.061 -.087 -.079 -.077 -.078 -.031 -.011 .441
.045 .092 -.001 .015 .054 .075 .091 .117 .013 .311
.085 .165 .146 .120 .122 .146 .173 .163 -.034 .057 .661
.091 .024 .028 .089 .216 .218 .141 .194 .014 .021 -.158 .748
.057 -.081 -.011 .062 .099 .076 .084 .167 .127 -.040 -.073 .287 .621
.054 .058 .014 .014 .135 .130 -.025 .002 -.151 -.036 .038 .0001 -.086 .684
-.032 .035 .052 .034 .116 .117 .017 -.003 -.172 -.092 -.079 .042 -.007 .314
.904
Sample Size 111
Latent Variables: Locus Partic UnBelief CoBelief EIAffect EISatisf
Relationships:
  A3 = 1* EIAffect
  B3 = EIAffect
  C3 = EIAffect
  D3 = EIAffect
  A2 = 1 * EISatisf
  B2 = EISatisf
  C2 = EISatisf
  D2 = EISatisf
  WLC = Locus
  PRTSCAL = 1 * Partic
  WRKINOV = Partic
  UNPERINF = 1 * UnBelief
  UNINTENT = UnBelief
  COPERINF = 1 * CoBelief
  COINTENT = CoBelief
  EIAffect = Locus Partic UnBelief CoBelief
  EISatisf = Locus Partic UnBelief CoBelief
Let the Errors of A3 and A2 Correlate
Let the Errors of B3 and B2 Correlate
Let the Errors of C3 and C2 Correlate
Let the Errors of D3 and D2 Correlate
Number of Decimals = 3
Options: AD = OFF
Print Residuals
Path Diagram
LISREL OUTPUT SC
End of Problem
```

Code Used for Hypothesis 2a

```
Group 2 based on Full Model for Dissertation (Hypothesis 2a)
Observed Variables
  A2 A3 B2 B3 C2 C3 D2 D3 WLC PRTSCAL WRKINOV UNPERINF UNINTENT COPERINF
COINTENT
Covariance Matrix
.447
.369 .585
.255 .277 .459
.255 .246 .382 .490
.413 .400 .312 .373 1.350
.415 .415 .315 .407 1.325 1.408
.315 .369 .288 .242 .378 .369 1.266
.300 .292 .180 .227 .424 .462 1.066 1.081
.012 .029 -.088 -.075 -.050 -.029 .056 .074 .465
.047 .137 -.021 -.001 .041 .056 .115 .136 -.008 .334
.056 .162 .107 .071 .110 .134 .139 .152 .002 .052 .739
.023 .015 -.066 .019 .117 .169 .035 .096 -.035 -.035 -.222 .681
.008 -.115 -.045 .009 .026 .029 .069 .099 .074 -.086 -.034 .126 .471
.064 .023 .026 -.004 .073 .063 .049 .064 -.101 -.029 -.039 .079 .070 .575
-.006 -.046 .038 .015 -.018 -.025 .126 .095 -.165 -.098 -.028 .134 .197 .310
.859
Sample Size 69
Latent Variables: Locus Partic UnBelief CoBelief EIAffect EISatisf
Relationships:
  A3 = 1* EIAffect
  B3 = EIAffect
  C3 = EIAffect
  D3 = EIAffect
  A2 = 1 * EISatisf
  B2 = EISatisf
  C2 = EISatisf
  D2 = EISatisf
  WLC = Locus
  PRTSCAL = 1 * Partic
  WRKINOV = Partic
  UNPERINF = 1 * UnBelief
  UNINTENT = UnBelief
  COPERINF = 1 * CoBelief
  COINTENT = CoBelief
  EIAffect = Locus Partic UnBelief CoBelief
  EISatisf = Locus Partic UnBelief CoBelief
Let the Errors of A3 and A2 Correlate
Let the Errors of B3 and B2 Correlate
Let the Errors of C3 and C2 Correlate
Let the Errors of D3 and D2 Correlate
Number of Decimals = 3
Options: AD = OFF
Options: IT = 1000
Print Residuals
Path Diagram
LISREL OUTPUT SC
End of Problem
```

Code Used for Hypothesis 3

Group 4 based on Full Model for Dissertation

Observed Variables

A2 A3 B2 B3 C2 C3 D2 D3 WLC PRTSCAL WRKINOV UNPERINF UNINTENT COPERINF
COINTENT

Covariance Matrix

```
.472
.439 .794
.358 .512 .533
.350 .530 .455 .548
.358 .432 .313 .410 .999
.358 .502 .350 .424 1.001 1.071
.228 .192 .272 .266 .189 .135 .539
.293 .258 .293 .334 .286 .258 .387 .453
-.044 -.181 -.060 -.057 -.062 -.109 -.082 -.073 .394
.044 .030 .028 .039 .064 .098 .048 .083 .058 .300
.125 .182 .205 .192 .093 .123 .179 .125 -.072 .052 .521
.004 -.092 .026 .044 .249 .208 .048 .078 .128 .127 -.051 .563
-.012 -.132 -.073 .029 .115 .075 -.089 .075 .249 .037 -.135 .304 .721
.142 .181 .071 .125 .298 .283 -.031 .035 -.231 -.065 .154 .075 -.191 .781
.016 .230 .148 .059 .387 .384 -.047 -.063 -.214 -.104 -.181 .079 -.197 .241
.952
```

Sample Size 45

Latent Variables: Locus Partic UnBelief CoBelief EIAffect EISatisf

Relationships:

```
A3 = 1* EIAffect
B3 = EIAffect
C3 = EIAffect
D3 = EIAffect
A2 = 1 * EISatisf
B2 = EISatisf
C2 = EISatisf
D2 = EISatisf
WLC = Locus
PRTSCAL = 1 * Partic
WRKINOV = Partic
UNPERINF = 1 * UnBelief
UNINTENT = UnBelief
COPERINF = 1 * CoBelief
COINTENT = CoBelief
EIAffect = Locus Partic UnBelief CoBelief
EISatisf = Locus Partic UnBelief CoBelief
```

Let the Errors of A3 and A2 Correlate

Let the Errors of B3 and B2 Correlate

Let the Errors of C3 and C2 Correlate

Let the Errors of D3 and D2 Correlate

Number of Decimals = 3

Options: AD = OFF

Print Residuals

Path Diagram

LISREL OUTPUT SC

End of Problem

VITA

ROBERT C. HOELL

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Education:

Ph. D. Virginia Polytechnic Institute and State University.
Pamplin College of Business.
Blacksburg, VA 24061-0233
Major: Industrial Relations
Minor: International Studies
Degree Expected May, 1998

Dissertation: "Determinants of Union Member Attitudes Towards Employee Involvement Programs".

M.S.B.A. Virginia Polytechnic Institute and State University.
Pamplin College of Business.
Blacksburg, VA 24061-0233
Major: Human Resource Management and Labor Relations
Degree Received June, 1993

Thesis: "Factors Inhibiting the Unionization of the Virginia Governmental Employees Association".

B.A. Virginia Polytechnic Institute and State University.
College of Arts and Sciences.
Department of English
Blacksburg, VA 24061
Major: English
Minor: Technical Theatre Production
Degree Received December, 1985

Doctoral Seminars Taken:

MGT 6315 - Seminar in Organizational Behavior
MGT 6325 - Seminar in Organization Theory
MGT 6364 - Advanced Seminar in Labor Relations
MGT 6374 - Seminar in Advanced Topics in Human Resources Management
MGT 5974 - Advanced Seminar in Current Research in Labor Relations

International Educational Experiences:

Slovenian Graduate Student Delegation Spring, 1995; Spring, 1996.

Acted as a host and assistant-coordinator, arranging transportation, business site visits, and other educational experiences for a group executive M.B.A. students from the University of Maribor, Slovenia. Planned and coordinated tours and meetings with government officials, business leaders, and faculty. Explored cross-cultural differences in management and business through formal and informal meetings and discussions.

Global Workplace Study Abroad Program Summer, 1994.

Visited seven east and central European countries during a 5 week period to observe cultural and business practices. Examined the privatization process in former Communist countries. Participated in discussions with Labor Union Leaders and Management Executives regarding future strategic issues. Exchanged viewpoints at a student roundtable regarding cultural differences, shared experiences, and explored the nature of culturally-bound behavioral theories.

Rijksuniversiteit Groningen Fall, 1992.

Traveled with a group of students attending a University "Intensive Week" in the Netherlands. Met with faculty, attended classes given as part of the Master's in European Labour Studies program, and evaluated research support facilities.

Publications and Research:

Hoell, Robert C. (October, 1997). Employee involvement attitudes of union members. Proceedings of the Eighteenth Annual Southern Industrial Relations And Human Resources Conference, October, 1997.

Connerley, Mary L. and Robert C. Hoell (June, 1997). Perceptions of Privacy Needs in the Workplace: A Cross-Cultural Perspective. Proceedings of the Eastern Academy of Management International Conference, June, 1997.

Bishop, James W. and Robert C. Hoell (January, 1997). Scanlon Plans and Section 8(a)(2) of the NLRA: Productivity in the Balance. Presented at the Forty-Ninth Meeting of the Industrial Relations Research Association, January, 1997.

Partridge, Dane M. and Robert C. Hoell (1996). Do Safety Committees in Non-Union Workplaces Violate the National Labor Relations Act? Proceedings of the

Seventeenth Annual Southern Industrial Relations and Human Resource Conference, October, 1996.

Hoell, Robert C. (1995). Union Climate and Union Activity: Testing a Conceptual Model. Proceedings of the Forty-Seventh Annual Meeting of the Industrial Relations Research Association.

Hoell, Jackie and Robert C. Hoell (1995). Readers Name their Favorite Small Museums. International Travel News, Issue 229.

Hoell, Robert C. and Jerald F. Robinson (1992). The Virginia Governmental Employees Association: From Association to Union Behavior? Proceedings of the Forty-Fourth Annual Meeting of the Industrial Relations Research Association.

Presentations:

Hoell, Robert C. (October, 1997). Employee involvement attitudes of union members. Presented at the Eighteenth Annual Southern Industrial Relations And Human Resources Conference, October, 1997.

Connerley, Mary L. and Robert C. Hoell (June, 1997). Perceptions of Privacy Needs in the Workplace: A Cross-Cultural Perspective. Presented at the Eastern Academy of Management International Conference, Dublin, Ireland.

Bishop, James W. and Robert C. Hoell (1997). Scanlon Plans and Section 8(a)(2) of the NLRA: Productivity in the Balance. Presented at the Forty-Ninth Meeting of the Industrial Relations Research Association, January, 1997.

Partridge, Dane M. and Robert C. Hoell (1996). Do Safety Committees in Non-Union Workplaces Violate the National Labor Relations Act? Presented at the 17th Annual Southern Industrial Relations & Human Resource Conference, October, 1996.

Hoell, Robert C. (1996). Experiences as a Bargaining Team Member (Or, What I Did on My Spring Break). Presented to the R. B. Pamplin College of Business, Virginia Polytechnic Institute and State University, April 9, 1996.

Hoell, Robert C. (1995). Union Climate and Union Activity: Testing a Conceptual Model. Presented at the Forty-Seventh Annual Meeting of the Industrial Relations Research Association, January, 1995.

Hoell, Robert C. and Jerald F. Robinson (1992). The Virginia Governmental Employees Association: From Association to Union Behavior? Presented at the Forty-Fourth Annual Meeting of the Industrial Relations Research Association, January, 1992.

Teaching Experience:

American University

18.609 Organizational Behavior and Human Resource Management

10.671 Strategic Human Resource Management

10.686 Management/Union Relations

see www.american.edu for more detailed information

Virginia Tech

MGT 3304 Management Theory and Practice

MGT 3324 Organizational Behavior

MGT 3334 Human Resource Leadership

MGT 3344 Labor Relations

See www.vt.edu for more detailed information

Technical Assistance and Consulting:

Federal Mogul, Inc., and the United Steelworkers of America, AFL-CIO-CLC, Local 1035 Spring, 1996.

Served as a member of the Management Team during collective bargaining for the Lititz and Lancaster facilities. Present at pre-negotiation strategy meetings, provided input on Company positions, and aided the Human Resources Staff in preparing economic scenarios. Attended all bargaining sessions as a managerial bargaining team member, and responsible for keeping notes during bargaining and summarizing factual content during caucuses. Contract was ratified by the membership following negotiations.

Federal Mogul, Inc. Winter, 1994 and Spring, 1995.

Assisted with the review and editing of the Blacksburg facility's Affirmative Action Program. Work concerned the formulation of a current plan, in accordance with a legal judgment made concerning previous OFCCP charges.

Federal Mogul, Inc., and the International Association of Machinists and Aerospace Workers, AFL-CIO, Local 2533 Fall, 1993.

Served as the notetaker for the Management Team during collective bargaining at the Blacksburg facility. Performed various duties. Due to a non-acceptance of first contract proposal, returned to the table in the Spring of 1994 to re-negotiate and finalize the currently implemented contract.

Philip Morris, Incorporated Spring, 1993.

Wrote an informative paper for Mr. William L. Van Arnam, Director of Personnel Operations, examining the status of employment-at-will in Virginia. Analyzed the

current exceptions to the doctrine, and provided recommendations for future personnel operations.

Quality Enhancement Seminars, Inc. March 9 - 12, 1993, New Orleans, LA. "Quality, Productivity, and Competitive Position", presented by Dr. W. Edwards Deming.

Attended as a Seminar Assistant, aiding in the registration of seminar participants, preparing information packets, monitoring autograph lines, and facilitating evening discussion groups. Attended all seminar sessions, acted as an "emergency runner", and was given proximity seating to Dr. Deming.

Work Experience

Assistant Professor, 8/96 to present
Personnel and Human Resource Management Program
American University

Instructor, 6/96 to 8/96
Department of Management
Virginia Tech

Graduate Assistant, 8/92 to 6/96
Department of Management
Virginia Tech

Management Positions, 12/87 to 8/92
Newman Library
Virginia Tech

Positions Held: As Program Support Technician, coordinated and supervised the lending section of Inter-Library Loan Unit. As Reserve Unit Head, maintained Reserve Collection by insuring the availability of reserve materials as requested by faculty. As Missings Clerk/Assistant Night Supervisor, located items declared missing by patron requests or computer generated reports, and provided supervision of the circulation department on weekends and in the absence of the Night Supervisor. Duties for all positions including the hiring, training, supervision, discipline and firing of personnel.

(Other Work Experience and further details available upon request)

Awards and Scholarships

Software Award Recipient, University Senate Computer Resource Committee, American University, 1998

Jack Hoover Memorial Award for Teaching Excellence, Recipient, 1996

Beta Gamma Sigma Honor Society Initiate, 1996

Lt. Colonel William A. Trice Scholarship, Recipient, 1992-1993, 1993-1994.

Graduate Student Assembly, Graduate Research Development Project Grant, Recipient, 1992

VTLS, Inc., Travel Funding Grant, Recipient, 1991

Memberships and Offices Held

Chapter Advisor, Society For Human Resource Management, Chapter #5128 – American University

Vice-President, Management Department Ph.D. Association, 1995 - 1996

Committee Member, Department of Management World Wide Web Homepage Committee, 1995 - 1996

Committee Member, Department of Management Graduate Curriculum Committee, 1993 - 1994

Affiliations: Industrial Relations Research Association, Society for Human Resource Management, Academy of Management, Southern Management Association, National Eagle Scout Association

References Available Upon Request

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The End.