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AN EMPIRICAL TEST OF A STRUCTURAL MODEL OF THE DISPOSITIONAL ANTECEDENTS OF MOTIVATION TO IMPROVE WORK THROUGH LEARNING

VOLUME I

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in The School of Vocational Education

by

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# TABLE OF CONTENTS

## VOLUME I

**ACKNOWLEDGMENTS** ................................................................. iii

**ABSTRACT** .................................................................................... ix

**CHAPTER 1: STATEMENT OF PROBLEM** ................................. 1

- Introduction .................................................................................. 1
  - Individual Motivation to Improve Work Through Learning .......... 2
  - Dispositional Approach To The Study of Individual Differences ... 5
  - Conceptual Model Of The Dispositional Perspective Of Motivation . 7

- Statement Of Problem .................................................................. 15
- Purpose ...................................................................................... 16
- Summary Of Research Model And Hypotheses ......................... 17

**CHAPTER 2: REVIEW OF RELATED LITERATURE** ..................... 19

- Introduction ................................................................................ 19
- Dispositional Perspective ................................................................. 19
  - Dispositional Approach Defined ................................................ 19
  - Theoretical Foundations Of The Dispositional Perspective .......... 22
  - Other Prominent Researchers Impacting The Dispositional 
    Perspective ....................................................................... 30
  - Traditional Approaches To The Study of Job Attitudes, Behavior 
    And Performance ......................................................... 33
  - Support For The Dispositional Approach .................................. 34
  - The Re-emergence Of The Dispositional Perspective ............... 38

- Personality Domain ....................................................................... 39
  - Introduction ............................................................................. 39
  - Personality Defined .................................................................. 41
  - Hierarchical Structure Of Personality ....................................... 43
  - The Five Factor Taxonomy Of Personality ................................ 45
  - The Empirical And Lexical Foundations Of The Five Factor Model . 47
  - Support For The Five Factor Model ......................................... 50
  - Criticisms Of The Five Factor Model ....................................... 52
  - Five Factor Model Of Personality And Work-Related Behaviors .. 53
  - Extraversion ............................................................................ 62
  - Neuroticism ............................................................................. 64
  - Agreeableness ........................................................................ 65
  - Conscientiousness .................................................................. 66
  - Openness To Experience ....................................................... 70

- Affectivity Domain ....................................................................... 71
<table>
<thead>
<tr>
<th>Chapter Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation To Improve Work Through Learning Defined</td>
<td>170</td>
</tr>
<tr>
<td>Relationship Between Achievement Motivation And Training</td>
<td>172</td>
</tr>
<tr>
<td>Personality/Training Relationship</td>
<td>173</td>
</tr>
<tr>
<td>Attitudes And Motivation To Improve Work Through Learning</td>
<td>176</td>
</tr>
<tr>
<td>Goal Orientation/Training Relationship</td>
<td>177</td>
</tr>
<tr>
<td>Affectivity And Motivation</td>
<td>178</td>
</tr>
<tr>
<td>Theories Of Motivation</td>
<td>180</td>
</tr>
<tr>
<td>Motivational States</td>
<td>191</td>
</tr>
<tr>
<td>Summary</td>
<td>192</td>
</tr>
<tr>
<td>CHAPTER 3: RESEARCH HYPOTHESES</td>
<td>194</td>
</tr>
<tr>
<td>Introduction</td>
<td>194</td>
</tr>
<tr>
<td>Personality Domain</td>
<td>194</td>
</tr>
<tr>
<td>Personality Dimensions</td>
<td>194</td>
</tr>
<tr>
<td>Hypothesis 1</td>
<td>195</td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>195</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>197</td>
</tr>
<tr>
<td>Hypothesis 4</td>
<td>198</td>
</tr>
<tr>
<td>Hypothesis 5</td>
<td>198</td>
</tr>
<tr>
<td>Hypothesis 6</td>
<td>199</td>
</tr>
<tr>
<td>Hypothesis 7</td>
<td>200</td>
</tr>
<tr>
<td>Hypothesis 8</td>
<td>201</td>
</tr>
<tr>
<td>Hypothesis 9</td>
<td>202</td>
</tr>
<tr>
<td>Affectivity Domain</td>
<td>202</td>
</tr>
<tr>
<td>Positive And Negative Affectivity</td>
<td>203</td>
</tr>
<tr>
<td>Hypothesis 10</td>
<td>204</td>
</tr>
<tr>
<td>Hypothesis 11</td>
<td>205</td>
</tr>
<tr>
<td>Values Domain</td>
<td>205</td>
</tr>
<tr>
<td>Hypothesis 12</td>
<td>207</td>
</tr>
<tr>
<td>Hypothesis 13</td>
<td>207</td>
</tr>
<tr>
<td>Work Commitment Attitudes Domain</td>
<td>207</td>
</tr>
<tr>
<td>Hypothesis 14</td>
<td>209</td>
</tr>
<tr>
<td>Full Structural Model</td>
<td>209</td>
</tr>
<tr>
<td>VOLUME II</td>
<td></td>
</tr>
<tr>
<td>CHAPTER 4: METHODOLOGY</td>
<td>211</td>
</tr>
<tr>
<td>Introduction</td>
<td>211</td>
</tr>
<tr>
<td>Sample</td>
<td>211</td>
</tr>
<tr>
<td>Procedure</td>
<td>212</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>213</td>
</tr>
<tr>
<td>Measuring The Five Factor Dimensions</td>
<td>213</td>
</tr>
<tr>
<td>Measuring PA And NA</td>
<td>217</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Measuring Work Ethic</td>
<td>219</td>
</tr>
<tr>
<td>Measuring Job Involvement</td>
<td>221</td>
</tr>
<tr>
<td>Measuring Organizational Commitment</td>
<td>223</td>
</tr>
<tr>
<td>Measuring Motivation To Improve Work Through Learning</td>
<td>224</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>228</td>
</tr>
<tr>
<td>CHAPTER 5: RESULTS</td>
<td>236</td>
</tr>
<tr>
<td>Introduction</td>
<td>236</td>
</tr>
<tr>
<td>Analyses</td>
<td>236</td>
</tr>
<tr>
<td>Step 1: Measurement Model Assessment</td>
<td>236</td>
</tr>
<tr>
<td>Step 2: Structural Model Assessment</td>
<td>257</td>
</tr>
<tr>
<td>CHAPTER 6: SUMMARY AND DISCUSSION</td>
<td>271</td>
</tr>
<tr>
<td>Introduction</td>
<td>271</td>
</tr>
<tr>
<td>Summary</td>
<td>271</td>
</tr>
<tr>
<td>Discussion</td>
<td>274</td>
</tr>
<tr>
<td>Structural Model</td>
<td>274</td>
</tr>
<tr>
<td>Measurement Model</td>
<td>284</td>
</tr>
<tr>
<td>Limitations</td>
<td>290</td>
</tr>
<tr>
<td>Implications For Practice And Research</td>
<td>291</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>299</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>396</td>
</tr>
<tr>
<td>Appendix A: Instructions to Respondents</td>
<td>396</td>
</tr>
<tr>
<td>Appendix B: Survey</td>
<td>398</td>
</tr>
<tr>
<td>Appendix C: Correlation Matrix</td>
<td>405</td>
</tr>
<tr>
<td>Appendix D: Descriptive Statistics</td>
<td>409</td>
</tr>
<tr>
<td>VITA</td>
<td>409</td>
</tr>
</tbody>
</table>
ABSTRACT

The development and success of employee training programs necessitates employer awareness of the individual differences of their employees that contribute to their motivation to improve work through learning. And, because of the potential benefits associated with employees who are highly trained, employee motivation to improve work through learning should be a chief concern within organizations. Therefore, a better understanding of the relationship between personality type, affectivity, values, level of work commitment and motivation will provide organizations with valuable insights that will enhance training efforts and contribute to the competitiveness and success of organizations.

The purpose of this study was to develop and test a model of dispositional effects on motivation to improve work through learning. More specifically, this study examined the degree to which the dimensions from the Five Factor Model of personality, affectivity, values (work ethic) and work commitment facets presented in Morrow's taxonomy (1983, 1993) (job involvement, affective commitment, continuance commitment) influence motivation to improve work through learning. The broad research hypothesis was that individual differences in personality, affectivity, values, and attitudes will influence employees' motivation to improve work through learning.

Data was obtained from a nonrandom sample of 239 private sector employees who were participants of in-house training programs. Causal relationships were tested using a two-step approach (Anderson & Gerbing, 1984) to structural equation modeling.
Findings indicated that dispositional effects were significant antecedents of motivation to improve work through learning. Four dispositional traits affected this dependent variable — two directly and two indirectly through work commitment attitudes. Results indicated that extraversion, positive affectivity and work commitment attitudes directly affected motivation to improve work through learning. In addition, conscientiousness and agreeableness directly affected work commitment, which mediated the effect of conscientiousness on the dependent construct. More specifically, 59% of the variance in motivation to improve work through learning was explained by positive affectivity ($\beta=.42$), work commitment ($\beta=.40$), and extraversion ($\beta=.14$). Fifty-two percent of the variance in the mediator construct, work commitment, was explained by conscientiousness ($\beta=.54$) and agreeableness ($\beta=.25$). This says that these dispositional effects are, in fact, important considerations in predicting motivation to improve work through learning.
CHAPTER 1: STATEMENT OF PROBLEM

Introduction

It has become widely accepted that people provide organizations with an essential source of competitive advantage (Prahalad, 1983; Pfeffer, 1994; Wright, McMahan, & McWilliams, 1994). Therefore, it logically follows that employee development programs are one of the most important activities of any organization. Arguably, the success of any organization is largely contingent upon its ability to unleash and maximize the talents and abilities of its workforce. "It is instrumental for . . . firms to harness the productive potential of their employees in order to achieve superior performance" (Youndt, Snell, Dean, & Lepak, 1996). In fact, Pfeffer (1994) contends that employee development programs are the key to success in today's global economy. Empirical evidence generally supports this contention and indicates that comprehensive training and development activities produce beneficial organizational outcomes (Bartel, 1994; Knoke & Kalleberg, 1994; Russell, Terborg & Powers, 1985).

To be competitive today, firms must build and develop intellectual and knowledge capital as a source of competitiveness. Economist Theodore Schultz recognized the importance of training and development efforts long ago, equating knowledge and skills with human capital. He argued that investments in education and training are crucial to organizational and national productivity and growth (Schultz, 1962). Human capital theory
suggests that people possess skills, knowledge, and abilities that are economically valuable to firms (Becker, 1993; Youndt et al., 1996). Others also recognize the importance of the inherent value of an organization's workforce. For example, organizations are increasingly turning to learning organization strategies to build intellectual capital (Senge, 1990). Doing so emphasizes the importance of learning at the individual, team and organizational levels, thereby increasing the likelihood of further developing employees and improving the organization's competitive advantage. Thus, well-trained, efficient, and capable workers are critical to the success of any organization, and key components in the success of effective training initiatives include employee skills and commitment (Snell & Dean, 1992).

**Individual Motivation To Improve Work Through Learning**

The effectiveness of organizational training and development efforts is not solely contingent upon either the course material or the quality of the delivery methods. Learning within the organizational context is also heavily dependent upon the trainability of participants. Noe (1986) asserts that the concept of trainability is defined as a function of the trainee's ability, motivation and environment. Mathematically stated, \( \text{Trainability} = f(\text{Ability, Motivation, Environmental Favorability}) \). Thus, there must be an underlying motivational factor at work in compelling the individual to participate in organizational training programs, in addition to the trainee's ability and a supportive environment. Although it is not hard to imagine a
work scenario in which employees are “forced” to attend training sessions, not even the most Machiavellian managers can mandate the level of participation that trainees are expected to expend. In other words, attendance is not equivalent to participation. Motivation then is one of three core components necessary for workplace training to be effective and lead to desired outcomes.

Appropriate and effective employee development programs require implementation of systematic developmental processes. In order to develop and implement effective training programs, various aspects of the learning situation must be carefully and thoroughly considered. Examples of these aspects or dimensions of the learning situation that require attention include: the developmental goals and objectives; the individual and situational differences; and the core principles of adult learning (Knowles, Holton, & Swanson, 1998). Facilitators must fully understand and appreciate the complexities of:

a) the nature of the intended outcomes;

b) the training activities and experiences that can lead to these outcomes;

c) internal and external influences that potentially affect these outcomes; and,

d) the ways learners vary as individuals and groups (Tomlinson, Edwards, Finn, Smith, & Wilkinson, 1992).
To date, most of the research has been oriented toward the situational perspective and has largely ignored non-situational components. That is, much less emphasis has been focused on the way learners vary as individuals and in groups. This is an unfortunate and potentially crucial oversight given the current research emphasis on dispositional components. Thus, the focus of this study is on this variance among individuals, specifically variance in dispositional characteristics, and its relationship to motivation to improve work through learning. In organizational settings, such a comprehension will aid in recognizing and employing teaching strategies and methodologies that fit the learners, desired outcomes, and learning context.

Industrial, organizational, psychological, and sociological researchers have a long history of interest in individual differences. However, Eysenck (1997) contends that "much of the contribution of individual differences to the independent variable is neglected by experimental psychologists, and thus it becomes part of the error variance" (p. 1224). Applications of investigations related to individual differences can be found in assessment activities, vocational counseling, and personnel selection procedures. (Murphy, 1996). Murphy (1996) delineates four separate individual difference domains: cognitive ability, personality, orientation (values, interests, etc), and affective disposition (i.e., mood, affect, and temperament).

These four areas do not exhaust the set of individual differences that might have a substantial bearing on job performance or other organizationally relevant criteria (for
example, differences in physical or psychomotor abilities might be very important in specific situations), but they do represent the most frequent concerns of individual difference theory and research and I/O psychology (Murphy, 1996, p. 11).

All four domains contain dispositional components: cognitive ability is the only domain not included in this study.

As his model indicates, individual differences influence behavior in organizations; however, their influence extends past behavior to organizational outcomes. They can contribute to long-term performance improvement or a permanent decline in productivity, increased personal growth or intellectual stagnation, etc. Thus, a better understanding of these differences will enable the learning professional to more effectively tailor the application of adult learning principles (Knowles, Holton & Swanson, 1998). It seems clear that research in human resource development must begin to focus on individual differences.

Dispositional Approach To The Study Of Individual Differences

These individual differences have given rise to a stream of research known as the dispositional approach which has been the focus of much empirical research in the last few years. While other organizational research perspectives focus on situational and interactional perspectives (an interaction between the situation and the individual), the dispositional approach primarily focuses on the individual. Dispositional explanations for employee attitudes and their subsequent effects on workplace behavior have sparked a renewed interest in the debate over the relative effects of
dispositional versus situational variables on work attitudes, roles and behaviors (Judge, Martocchio, & Thoresen, 1997). Dispositional theorists posit that individuals possess certain characteristics that are enduring – consistent across situations and over time. These relatively stable individual characteristics affect an individual’s attitudes and behavior (Buss & Craik, 1983; Caspi & Bem, 1990; Hampshire, 1953; Weiss & Adler, 1984), or cause an individual to perceive different contexts in consistent ways (Schaubroeck et al., 1996). As pointed out by Murphy (1996), examples of these dispositional characteristics include personality, moods, and values. Hogan (1992) stated that “people can be characterized in terms of their enduring dispositional qualities and that applied psychologists can take advantage of this information in ways that have significant consequences of employee development and organizational effectiveness” (p. 874).

This dispositional perspective involves the identification of personal characteristics and the assumption that the measures of such characteristics are useful tools in the effort to explain individual attitudes and behaviors (Staw & Ross, 1985). As Davis-Blake and Pfeffer (1989) note, attitudes -- and not behavior -- are the primary focus of dispositional research. Schaubroeck et al. (1996) provided an explanation of this stream of research:

According to the dispositional approach, individuals have enduring traits that predispose them to view different contexts in different ways. Moreover, when confronting new situations, individuals are expected to act in ways that reflect their own unique pattern of traits, not entirely as a consequence of situational determinants. This approach therefore suggests that over time one’s positive or negative
Thus, the foundational premise of the dispositional approach is that individuals possess stable characteristics that significantly influence their affective and behavioral reactions to organizational settings (Davis-Blake & Pfieffer, 1989).

There is considerable evidence to support the dispositional approach (George, 1992; House, Shane, & Herold, 1996). Researchers have linked dispositional characteristics (especially personality) to a number of industrial and organizational topics (Hogan, 1992). "These include absenteeism (Mowday, Porter, & Steers, 1982), employee reliability (Sackett & Harris, 1984), employee satisfaction (Staw & Ross, 1985), goal setting (Campbell, 1982), job scope (Hackman & Oldham, 1976), leadership (Ghiselli, 1971), organizational climate (Schneider, 1985), performance variability (Kane & Lawler, 1978), and work motivation (Korman, 1976)" (Hogan, 1992, p. 874).

Conceptual Model Of The Dispositional Perspective Of Motivation

This body of dispositional research has led to the conclusion that the conceptual relationship between disposition and behavior is as shown in Figure 1.1. Figure 1.1 is the conceptual model that serves as the undergirding for this study and depicts the basic relationship between these constructs. As the exhibit illustrates, disposition -- as a variable of interest -- encompasses an individual's personality, which is comprised of his or her
traits, affective (mood) structure, and values. Personality then influences attitudes. Attitudes, in turn, affect motivation, which then lead to behavioral outcomes. Note that this is distinctly different from situational models mentioned earlier that primarily focus on the learning situation. In this model, situational factors do influence attitudes, motivation and behavior, but act in conjunction with dispositional factors.

Figure 1.1: Conceptual Model

Trait Domain of Disposition: Personality traits and the various other domains of individual differences not only have implications for training and motivation to improve work through learning, but also for workplace behavior. As Murphy (1996) states these individual differences have been related to a wide range of variables and to states that reflect the individual’s experience of membership in an organization (for example, interpersonal
relationships in the workplace, commitment to and identity with the organization. Subsequent to the development of various measures of personality type, researchers have begun to examine more closely the interrelatedness of workplace behavior and personality constructs.

The Five Factor Model of personality that views the personality construct in terms of five relatively distinct dimensions (Neuroticism or Emotional Stability, Conscientiousness, Extraversion, Openness to Experience, and Agreeableness) currently dominates the perspective held by personality theorists and researchers. Kanfer (1991) advocated the use of this model to advance the current body of motivational research that embodies individual difference factors. Organizational researchers have examined personality as a predictor of job performance (e.g., Digman, 1990; Barrick & Mount, 1991, 1993; Barrick, Mount, & Strauss, 1993; Hunter & Hunter, 1984; Schmitt, Gooding, Noe, & Kirsch, 1984), and personality measures for industrial and organizational applications have been steadily increasing within the past decade (Hough & Schneider, 1996). For instance, research indicates that conscientiousness is a strong predictor of job performance and training outcomes (Barrick & Mount, 1991), and for occupations requiring social interaction skills, extraversion is a predictor of job performance success. Therefore, knowledge of employees’ personality type should both enable the development of more effective employee training programs and provide information relative to employee workplace behaviors.
**Affective Domain of Disposition:** Researchers have identified, and empirical evidence has supported, two independent dimensions of an individual’s affect – Positive Affectivity and Negative Affectivity (c.f., Costa & McCrae, 1980; Diener & Emmons, 1985; Tellegen, 1985; Watson, Clark, & Tellegen, 1984. 1988; Watson & Tellegen, 1985). Individuals characterized as having high levels of negative affectivity tend to experience negative emotional states and individuals with high levels of positive affectivity tend to experience positive ones (Judge et al., 1997; Watson & Clark, 1984). Watson and Clark (1984) posited that the tendency for individuals to experience positive or negative affective tendencies represents a stable dispositional trait. These affectivity traits predispose individuals to experience positive or negative emotions or moods and influence their outlook and orientation (George & Brief, 1992).

As Schwartz (1990) asserts, trait affectivity can be viewed as information that individuals can use to direct motivational attention. Accordingly, affective traits figure prominently in the lives of individuals. Affectivity is responsible for shifts in motivational focus or attention (Frijda, 1988). As such, it cannot be isolated from an individual’s work experience. George and Brief (1996) recognize and emphasize this point, especially in relation to feelings and mood. They contend that “moods, with their origins in person-context interaction, are posited to impact both distal and proximal work motivation” (George & Brief, 1996, p. 75). They also assert that
"feelings influence the ways people proceed through their motivational agendas" (George & Brief, 1996, p. 76).

Because of its influential effects on work motivation and behavior, the affective domain is a construct that should be studied in conjunction with motivation for work-related training. Ashforth and Humphrey (1995), however, noted that feelings, emotions, or moods, are not currently centrally located in theoretical approaches to work motivation. George and Brief (1996) noted that researchers are beginning to rectify this situation. Because of its role in the work behavior of individuals, as well as the increasing attention that the construct is gaining from organizational researchers, the affective domain warrants consideration as a possible influence on motivation to improve work through learning.

**Values Domain:** The most commonly cited definition of values is the one offered by Rokeach (1973) who defined a value as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (p. 5). The enduring and stable nature of values firmly places the construct within the dispositional domain and makes them particularly significant to gaining a better understanding of individual behavior within the organizational context.

Researchers generally recognize that values encourage individuals to act in accordance with their beliefs, thus affecting individual behavior (Rokeach, 1973; Williams, 1979). They serve as the standards that guide an
individual’s actions and behavior. Locke (1976) and Rokeach (1973) emphasize this point with their assertions that values substantially influence both the affective and behavioral responses of individuals. Although individual values can vary significantly, they serve the common function of profoundly affecting an individual’s conceptualization of work and the opportunities provided through the work experience. For instance, when juxtaposed to the concept of motivation to engage in workplace learning activities, it is relatively easy to expect that an individual who values learning, career progression, hard-work, etc. will more readily embrace opportunities to enhance his or her job skills through appropriate training activities. Accordingly, the value construct must be considered when investigating dispositional factors affecting motivation to improve work through learning.

One value domain being discussed more frequently today is work ethic. Work ethic is defined as the belief that hard work holds an intrinsic good and that hard work is an end in itself (Mirels & Garrett, 1976). Numerous researchers have investigated characteristics associated with work ethic. Some of these characteristics are a high internal locus of control (Furnham, 1987; Lied & Pritchard, 1976; Mirels & Garrett, 1971; Waters, Bathis, & Waters, 1975); conservative attitudes and beliefs (Furnham & Bland, 1982; Joe, 1974; MacDonald, 1971); individualistic attribution styles (Furnham, 1982; Feather, 1984); and a high need for achievement (McClelland, 1961; Furnham, 1987). Furnham (1990) also contends that
high work ethic scorers are independent-minded, competitive, and hard working.

Intuitively, characteristics such as a need for achievement, a hard-working nature, competitiveness, etc. should influence motivation to improve work through learning. However, as a dispositional variable studied in relation to the dependent variable, motivation to improve work through learning, work ethic has been largely neglected. Thus, organizational researchers and human resource development professionals would benefit from further study of work ethic and its effects on work behaviors and motivation.

**Attitude Domain:** Work attitudes such as commitment are the knowledge structures that are used to organize and consolidate the multitude of thoughts and feelings that emerge from work experiences with a particular job (Anderson & Armstrong, 1989; Kruglanski, 1989; Olson & Zanna, 1993). “Attitudes are tied to specific jobs or organizations and encapsulate people’s feelings and beliefs about the nature of those jobs and organizations. As an important dimension of the work experience, attitudes capture the essence of one’s experience with a job or organization” (George & Jones, 1996, p. 320). Research also indicates that employees who possess more favorable work attitudes toward their jobs, work, and/or organizations will be more highly motivated to remain in and perform their jobs (Katzell & Thompson, 1990).
The importance of attitudes to this study is that dispositional effects manifest themselves in part through work attitudes. Morrow has provided particularly significant contributions to the area of work commitment. Because work commitment is the work attitude most likely to influence motivation in the workplace, her conceptual model of these work commitment foci is particularly important for this study. She has identified four distinct work commitment facets: work ethic (part of the value domain discussed above), career commitment, organizational commitment (affective and continuance), and job involvement (Morrow, 1993).

Hall (1971) defines career commitment as the strength of an individual's "motivation to work in a chosen career role. Commitment to the entire career field or role is to be distinguished from commitment to the job (i.e., job involvement as described by Lodahl & Kejner, 1965), or to one's organization (i.e., organizational identification as described by by Hall, Schneider & Nygren, 1970). These three forms of commitment are often correlated, but they are theoretically distinct and may have different causes and consequences" (p. 59). Organizational commitment is defined as the acceptance of, and loyalty to, organizational goals and values; the acceptance of the choice of organizational membership, and the willingness to exert effort on behalf of the organization (Morris & Sherman, 1981; Mowday, Steers, & Boulian, 1974). Job involvement, as defined by Lodahl and Kejner (1965) is the degree of daily absorption a worker experiences in work activity.
Morrow's model depicts each of the facets or foci as a circle in a set of concentric circles. She contends that the inner circle facets (work ethic followed by career commitment) of her model are more stable because they are disposition or culturally based, and the outer circle facets (organizational commitment followed by job involvement) are situation specific and are thus more likely to change. This study uses a modification of her work commitment taxonomy.

**Statement Of Problem**

Workers play a vital role in keeping companies and even nations productive and prosperous. As organizations strive to improve quality, increase efficiency, and do more with less, the skill levels of their employees becomes a critical factor in the organizational equation. Doing more with less requires exemplary employee training programs. Both the development and success of such training programs necessitates employer awareness of the individual differences of their employees that contribute to their motivation to improve work through training/learning. And, because of potential tangible and intangible benefits associated with employees who are highly trained, employee motivation to improve work through learning/training should be a chief concern in organizations. Therefore, a better understanding of the relationship between personality type, affectivity, values, level of work commitment and motivation will provide organizations with valuable insights that will enhance training efforts and contribute greatly to the competitiveness and success of organizations.
Despite the number of studies focusing on work experience, very little has been done to study the relationship between dispositional traits, work commitment facets, and employee motivation to improve work through learning. Although researchers have extensively used personality variables to examine other work related factors, there is relatively little information regarding the association between personality dimensions and motivation to improve work through learning. Moreover, there seems to be no empirical studies that attempt to link motivation to improve work through learning with personality and other individual characteristics including affectivity, values and attitudes, and there is no integrative conceptualization that contributes to the understanding of the way these factors correlate and manifest themselves in the work experience. Or, stated in simpler terms, there is no model that predicts an employee's motivation to improve work through learning.

**Purpose**

The purpose of this study will be to develop and empirically test a model of dispositional effects on motivation to improve work through learning. More specifically, this study will examine the degree to which the dimensions from the five-factor model of personality (Neuroticism or Emotional Stability, Extraversion, Conscientiousness, Openness to Experience, and Agreeableness), affectivity (PA or NA), values (work ethic) and other work commitment facets presented in Morrow's taxonomy (job involvement, affective organizational commitment, and continuance
organizational commitment) influence motivation to improve work through learning. The broad research hypothesis is that individual differences in personality, affectivity, values, and attitudes will influence employees' motivation to improve work through learning.

**Summary Of Research Model And Hypotheses**

It is traditional to present detailed research hypotheses at this point. However, because the model to be tested in this study is so complex, it is necessary to break from tradition. Detailed hypotheses are best presented after the reader has considerable background knowledge because the constructs in the model (traits, mood, values, attitudes, and motivation) are complex and the relationships embedded in the model are equally complex. Furthermore, it would be impossible to provide adequate background in this chapter to make detailed hypotheses useful at this point.

This is not an uncommon dilemma when testing complex causal models of this type. Causal modeling of this type depends on models developed from sound theory and research (Hair et al., 1998). Thus, the hypotheses are developed as a result of and supported by the literature review. It was decided that it would be best to present the research hypotheses as a separate chapter following the literature review after readers have a more complete understanding of all the constructs. Readers wishing to review the detailed research hypotheses at this point should turn to Chapter 3 where they are presented.
Figure 1.2 is provided at this point simply as a preview of the research model. This path model illustrates the hypotheses found in Chapter 3. Each path shown here will be developed as a separate research hypothesis.

![Research Path Model](image)

**Figure 1.2: Research Path Model**
CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

The research model introduced in Chapter 1 is organized into five distinctive domains: personality, affect, values, attitudes, and motivation. Therefore, the review of related literature presented in this chapter will follow that same organizational structure. However, before introducing these constructs, it is necessary to lay the foundation for the dispositional approach upon which this study is based. Therefore, the review of related literature is prefaced with a definition and explanation of this dispositional approach to the study of organizational behavior; theoretical foundations of the dispositional approach; traditional approaches to the study of job attitudes, behavior, and performance; support and criticisms of the dispositional approach; as well as a discussion of the recent reemergence of the dispositional perspective.

Dispositional Perspective

Dispositional Approach Defined

The fundamental premise of the dispositional approach to the study of work-related behaviors and performance is that there are relatively stable individual characteristics (i.e., traits) that affect an individual’s attitudes and behavior (Buss & Craik, 1983; Caspi & Bern, 1990; Hampshire, 1953; Weiss & Adler, 1984), or cause the individual to view different contexts in consistent ways (Schaubroeck et al., 1996). Examples of these dispositional characteristics include affect, moods, values and personality. This perspective
relates to the measurement of personal characteristics and the underlying assumption that these measures are useful in explaining individual attitudes and behaviors (Staw & Ross, 1985). As Davis-Blake and Pfeffer (1989) note, the primary focus of dispositional research is on attitudes rather than behavior. However, Davis-Blake and Pfeffer (1989) also point out that the ultimate goal of researchers with regard to the dispositional perspective is to explain both attitudes and behavior of individuals in organizations. Schaubroeck et al. (1996) provide an explanation of this stream of research:

According to the dispositional approach, individuals have enduring traits that predispose them to view different contexts in different ways. Moreover, when confronting new situations, individuals are expected to act in ways that reflect their own unique pattern of traits, not entirely as a consequence of situational determinants. This approach therefore suggests that over time one’s positive or negative evaluation of the environment will often remain quite stable, even when the job situation changes (p. 191).

Thus, the undergirding for the dispositional approach is that individuals possess stable traits that significantly influence their affective and behavioral reactions to organizational settings (Davis-Blake & Pfeffer, 1989).

As Staw and Ross (1985) note, the terms personal dispositions, traits, personality, and individual characteristics are often used interchangeably, though there are distinctions between the concepts. Occasionally, there is also some confusion between the meaning of the terms attitudes and traits. Attitudes, however, are not a dispositional component. Rather, they result from an individual’s dispositional characteristics and are associated with behavioral outcomes. What is undeniable, however, is the close relationship
between these various constructs. Disposition, as a variable of interest, encompasses an individual’s personality, which is comprised of his or her traits and values. These traits affect the individual’s mood structure, which influence attitudes. Attitudes, in turn, affect motivation, which is then translated into behavioral outcomes. This relationship is depicted in the Conceptual Model presented in Chapter 1.

It is important to recognize the commonalities and differences in the terms in order to distinguish between the meaning of the terms disposition, personality, traits, and attitudes. For instance, Allport’s conceptualization of traits (1931, 1965, 1966) is comparable to Cattell’s conceptualization of factor, and Eysenck’s conceptualization of dimension. Confusion also stems from the underlying assumptions that the terms share. Judge, Locke, and Durham (1997) broadly define the concepts to refer to stable and consistent ways of thinking, feeling, or acting exhibited by individuals. Other assumptions underlying the concepts include the following:

1. individuals can be characterized on certain dimensions;
2. there is some ongoing stability to these dimensions; and
3. these dimensions can be used as predictors of individual behavior across situations (Staw & Ross, 1985).

Traits serve as the factors by which the personality of one individual can be distinguished from other individuals. As such, they are a subset of the overarching, macro schema of personality, and are factors within the various dimensions of the personality construct. Traits, unlike attitudes, have neither
a bias nor a referent, and relate to an individual's personality structure. Attitudes, in contrast to traits, are not neutral and do have an object of reference. That is, there is a tendency or inclination (i.e., favorable or unfavorable) associated with attitudes, and that tendency is directed toward a particular object, person, event, etc. (i.e., a work task, a particular supervisor, etc.). Thus, attitudes are associated with the orientation of an individual to his or her environment.

Theoretical Foundations Of The Dispositional Perspective

Two well-known personality theorists, Gordon Allport and Raymond Cattell, have made tremendous contributions to the study of personality and traits. Their work has, in fact, become the cornerstone of the trait viewpoint and provides the basic beliefs about personality traits that guide researchers studying the dispositional perspective. Allport has contributed greatly to the understanding and explanation of the uniqueness and complexity of the total individual. Cattell has produced a prodigious amount of information both in the process of identifying basic personality traits and in providing instruments for the measurement of personality facets through multivariate research studies.

Allport was clearly one of the leading proponents of trait theory, and "never wavered in his assertion that personality involves real, person-centered, neuropsychic structures (Allport, 1937, 1961)" (Donahue & Harary, 1998, p. 610). Considered a personalistic theorist, Allport's focus was on attempting to determine what it is that makes individuals unique (Carducci, 1998). In
Allport's conceptualization, personalism is the uniqueness of the complete physical-psychological (psychophysical) system dynamically organized as a coping mechanism enabling internally consistent behavior.

Central to the development of trait theory is Allport’s definition of personality. Allport defined personality as “the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment” (1937b, p. 48). To fully understand the meaning of this definition, as it relates to this study, key components of his definition must be examined more closely. These include the following:

1. “Dynamic organization” refers to the formation of orderly, arranged or established patterns or systems that result in hierarchies among the habits and ideas that underlie the direction of an individual’s activity. As Carducci (1998) notes, “the system is in a constant state of change and personal growth . . . . Within such a state, each experience that is encountered serves to modify and/or strengthen, even in the slightest way, various aspects of the individual’s personality” (p. 210).

2. His use of the term “psychophysical” stresses the fact that personality is not limited to either the physical or mental aspects of an individual: it is an integration of mental and neural functions.

3. The “systems” of which he speaks consist of traits, habits, sentiments, behavioral style, or conceptual outlooks.

4. “Determine his characteristic behavior and thought” is another key component of Allport’s definition as it relates to this study.
Personality not only is something, it does something (Allport, 1961). These psychophysical systems are motivating, and, as such, they influence specific thought activity or behavioral action. Accordingly, the systems are directive, as they exert and express individual behavior and action.

5. “Characteristic” for Allport refers to any behavior or thought that distinguishes the unique personality of the individual. “Personality is an expression of each person’s uniqueness. The phrase “characteristic behavior and thought” refers to whatever people may do or think as they reflect on, adjust to, and/or strive to master their environment in a manner that is “unique” (i.e., characteristic of) to each person” (Carducci, 1998, p. 210).

6. “Behavior and thought” refer to the individual and behavioral activity of the individual. Because survival is not the exclusive objective of behavior and thought — growth is also a principal interest, and mental activity is necessary for effective action.

Allport’s definition of personality also centers on the notion of the proprium (1955). He writes, “personality includes . . . habits and skills, frames of reference, matters of fact and cultural values . . . . But personality includes what is warm and important also — all the regions of our life that we regard as peculiarly ours, and which for the time being . . . we call the proprium. The proprium includes all aspects of personality that make for inward unity” (Allport, 1955, p. 40). The proprium engulfs “those functions
that make for the peculiar unity and distinctiveness of personality, and at the same time seem to the knowing function to be subjectively intimate and important" (Allport, 1955, p. 61). Maddi (1989) comments that if traits are viewed as the fundamental components of personality, then in Allport's view, the proprium could be considered the fundamental component of personality. In a general sense, the proprium helps the person define a sense of self. It includes the vital and essential physical, psychological, and social aspects of life that are considered to be 'part of you'" (Carducci, 1998, p. 214).

In Allport's conceptualization, there are eight aspects of the proprium that are part of the individual development process (1955). These include:

1. "Bodily sense" – this is the initial experience of the proprium, the first sense of selfhood.

2. “Self-identity” – the second developmental phase, this aspect of the proprium is largely contingent upon an individual’s memory. Despite the fact that, from a developmental perspective, we are in a constant state of change, we become acutely aware of our own self-identity through memory. "Every experience we have modifies our brain, so it is impossible for the identical experience to occur a second time. For this reason every thought, every act is altered with time. Yet self-identity continues, even though we know that the rest of our personality has changes" (Allport, 1961, p. 115).

3. “Ego-enhancement” – the self-seeking component of the proprium, ego-enhancement is closely related to self-preservation and egoism.
4. "Ego-extension" – arises as a result of learning and acquiring possessions.

5. "Rational agent" – an aspect of the proprium that develops as the individual come to know the self as a thinker. This is the aspect of the proprium which is required to cope rationally with the social and physical environment.

6. "Self-image" – according to Allport, this propriate function has two aspects: "The way the patient regards his present abilities, status, and role; and what he would like to become, his aspirations for himself" (1955, p. 47).

7. "Propriate striving" – also called the self as motivator, this aspect of the proprium focuses on long-range planning for goals and remote aspirations such as career choice. Propriate striving always focuses on the future. "Propriate striving distinguishes itself from other forms of motivation in that, however beset by conflicts, it makes for unification of personality" (Allport, 1955, p. 50). Allport also stated, "Striving . . . always has a future reference. As a matter of fact, a great many states of mind are adequately described only in terms of their futurity. Along with striving, we may mention interest, tendency, disposition, expectation, planning, problem solving, and intention" (1955, p. 51).

8. "Knower" –

We not only know things, but we know (i.e., are acquainted with) the empirical features of our own proprium. It is I who have bodily sensations, I who
recognize my self-identity from day to day: I who note and reflect upon my self-assertion, self-extension, my own rationalizations, as well as upon my interests and strivings. When I thus think about my own propriate functions I am likely to perceive their essential togetherness, and feel them intimately bound in some way to the knowing function itself. Since such knowing is, beyond any shadow of doubt, a state that is peculiarly ours, we admit it as the eighth function of the prorium” (Allport, 1955, p. 53).

Allport, in addition to studying traits as a source of the uniqueness of individuals, intently researched other characteristics that constitute uniqueness among individuals. Chief among these factors are the values of the individual.

Table 2.1: Aspects of the Proprium

<table>
<thead>
<tr>
<th>Aspects of Proprium Development</th>
<th>Specific Knowledge of Self Acquired</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INFANCY (Years 1 to 3)</strong></td>
<td></td>
</tr>
<tr>
<td>Bodily Self (year 1)</td>
<td>I am separate from the environment. (e.g., I won’t bite my toe.)</td>
</tr>
<tr>
<td>Self-Identity (year 2)</td>
<td>I am separate from other individuals. (e.g., I am John.)</td>
</tr>
<tr>
<td>Self-Esteem (year 3)</td>
<td>I can manipulate and master my environment. (e.g., I can turn on the TV.)</td>
</tr>
<tr>
<td><strong>CHILDHOOD (Years 4 to 12)</strong></td>
<td></td>
</tr>
<tr>
<td>Self-Extension (years 4 to 12)</td>
<td>I can exist beyond my physical self. (e.g., This is my bike.)</td>
</tr>
<tr>
<td>Self-mage (years 4 to 6)</td>
<td>I see myself as being like this. (e.g., I am good at naming colors and afraid of the dark.)</td>
</tr>
</tbody>
</table>

(table continued)
Self as a Rational Coper (years 6 to 12)

I can solve my problems by using my "brain."
(i.e., I can think logically.)
(e.g., I'll get my kite untangled by shaking the branches of the bush.)

ADOLESCENCE (years 12 and above)

Propriate striving
(years 12 through adolescence)

What will I be in the future?
(e.g., I will take accounting in high school to help get my college degree in business.)


Cattell’s definitions of personality and traits are also critical components of the dispositional perspective. His definition of personality is associated with predictive ability. In other words, Cattell defined personality as “that which permits a prediction of what a person will do in a given situation” (1950, p. 2). He continued by stating that “the goal of psychological research in personality is thus to establish laws about what different people will do in different kinds of social and general environmental situations” (1950, p. 2). He expanded on this notion by providing a formula for personality: $R = f(S,P)$ which says that $R$, the nature and magnitude of an individual’s behavioral response, is a function of $S$, the stimulus situation in which he or she is placed, and $P$, the nature of his or her personality (1965). Accordingly, the fundamental premise of his assumptions regarding...
personality lies in the ability to use empirical measures to predict human behavior (Carducci, 1998). Cattell (1950) advocated using life events records (i.e., public documents, etc), self-ratings on personality tests, and individual observations as sources of empirical data.

Traits play a significant role in Cattell’s conceptualization of personality. He stated, “... we shall want to describe and measure personality by a number of traits, and perhaps by mood states at the time” (1965, p. 25). In defining traits, Cattell uses the individual’s behavior (Carducci, 1988). Traits, in accordance with Cattell’s definition, may be defined as “that which defines what a person will do when faced with a defined situation” (1979, p. 14). In his view, traits are representations of a broad tendency to react and express relatively stable personality features. Therefore, traits express some regularity and pattern of behavior. Accordingly, Cattell recognized a distinction between categories of traits and their respective effects on behavior and developed a two-part conceptualization of traits.

Cattell’s (1950) conceptualization of traits distinguishes surface traits and source traits. A fundamental difference between the two trait types is that source traits are, in part, explanatory in contrast to the descriptive nature of surface traits (Cattell, 1950). He formally defined a surface trait as “a collection of trait-elements, of greater or lesser width of representation, which obviously ‘go together’ in many different individuals and circumstances” (1950, p. 21). Carducci (1998) offers a concise explanation of surface traits by stating that they are the most visible evidence of a trait, and are related...
elements of behavior that have a tendency to cluster together when empirically measured and correlated. Source traits, in contrast to surface traits, are responsible for the diversity that is readily apparent in individuals. Cattell maintained that source traits "operate as an underlying source of observed behavior" (1965, p. 67).

The attitude construct is an important element of the research work of both Allport and Cattell. Accordingly, the relationship between the attitudes and traits was a principal concern of both theorists. Allport considered both attitudes and traits to be "indispensable concepts in psychology" (1961, p. 348). Allport (1961) noted that distinguishing between traits and attitudes is not always possible. However, he offered two distinctions between the concepts: (1) attitudes always have objects of reference, and (2) attitudes are typically dichotomous (i.e., pro or con, favorable or unfavorable, well disposed or ill disposed, etc.) (Allport, 1961). The relationship between attitudes and personality also figures prominently in Cattell's dispositional work. "The personality is in fact a 'hidden premise' in each person's statement of his attitude" (Cattell, 1950, p. 88).

Other Prominent Researchers Impacting The Dispositional Perspective

The personality theories of Eysenck (1967, 1981) and Gray (1972, 1981) also figure prominently in the foundation of dispositional research. However, there is confusion among dispositional researchers as to which theoretical interpretation best addresses the role of the two major personality dimensions in the emotional experience context (Fry & Heubeck, 1998).
Eysenck (1967, 1981, 1985) argues that there are two broad factors of fundamental trait dimensions: extraversion and neuroticism. As Ackerman and Heggestad (1997, p. 223) write, "His theory is set apart from other factor-based theories because it makes several direct connections to physiological processes (e.g., arousal) and because he claimed that these personality factors are orthogonal to intellectual ability factors (e.g., see H.J. Eysenck, 1994; and H.J. Eysenck & Eysenck, 1969)." Gray (1972, 1981, 1987b) advocates the same two-factor dimensions, but favors an interpretation of Eysenck’s rotation (McFatter, 1994). Gray (1972, 1981) contends that the two personality dimensions are found at 45° rotation to the dimensions proposed by Eysenck (1981) (Meyer & Shack, 1989).

Eysenck (1981) and Eysenck and Eysenck (1985) proposed that affective states were consequences of a personality and situation interaction. "Eysenck (1967, 1981) theorised (sic) that differences in behavior along the extraversion dimension are related to differential thresholds in the ascending reticular activating system (ARAS) leading to either excitation or inhibition of the cerebral cortex" (Fry & Heubeck, 1998, p. 650). Eysenck (1967) contended that there is a greater likelihood for extraverts to experience more positive affect than there is for introverts. Eysenck (1981) and Eysenck and Eysenck (1985) asserted that situations which provide low levels of stimulation produce optimal levels of arousal for introverts (Fry & Heubeck, 1998).
The neuroticism dimension was proposed to be independent of extraversion and to relate to differential thresholds in the activation of the visceral brain. People higher on the neuroticism dimension are supposed to have lower thresholds and are therefore more emotionally unstable" (Fry & Heubeck, 1998, p. 650). Eysenck’s more recent work (1987) suggests that extraversion implies a greater propensity toward positive affectivity and neuroticism implies a greater propensity toward negative affectivity.

sensitivity systems “appear to be quite consistent with, respectively, the higher order Positive Emotionality and Negative Emotionality dimensions” (p. 699).

**Traditional Approaches To The Study Of Job Attitudes, Behavior And Performance**

Dispositional traits have not traditionally been considered determinants of job attitudes, behaviors and performance (c.f., Ghiselli, 1973). Until recently, the vast majority of research on job attitudes has been situationally based (c.f., Fried & Ferris, 1987; Hackman & Oldham, 1980; Herzberg, 1966; Loher, Noe, Moeller, & Fitzgerald, 1985; Turner & Lawrence, 1965). Proponents of the situational model suggest that an individual’s behavior is best predicted by evaluating the characteristics of the situation in which the individual is momentarily located (Monson, Hesley, & Chernick, 1982). The situational approach “is exemplified by the job characteristics model (Hackman & Oldman, 1976, 1980) and the social information processing theory (Salancik & Pfeffer, 1977, 1978)” (Levin & Stokes, 1989, p. 752).

Staw and Ross (1985) provide a list of situational variables that are frequently studied as determinants of these job attitudes. These situational variables include task characteristics, supervision, pay, and working conditions (Locke, 1976); organization structure (Berger & Cummings, 1979; Oldham & Hackman, 1981); workspace characteristics (Oldham & Fried, 1987); and promotional opportunities (Locke, 1983). Other situational factors often researched within the job attitude and behavior context include frequency of recognition and praise by supervisors, and working conditions.
such as lighting, noise, and temperature (e.g., Lawler, 1971; Pritchard, Dunnett, & Jorgenson, 1972).

Job attitude and behavior researchers have also employed another approach – the interactionist perspective. Researchers have investigated the interaction between the individual and the situation (c.f., Dawis & Lofquist, 1984; Holland, 1985; Smith, Kendall, & Hulin, 1969; Vroom, 1964). The interactionist perspective “suggests that to predict human behavior one must possess knowledge of both the characteristics of the person and the characteristics of the situation in which the person is momentarily located” (Monson et al., 1982, pp. 385-386).

Support For The Dispositional Approach

Despite the wide use of the situational perspective, researchers are beginning to look past this perspective in their exploration of job attitudes and behaviors. Both organizational behavior researchers and theorists have begun more intense efforts to explore the dispositional approach to studying job attitudes and behaviors (e.g., Arvey, Bouchard, Segal, & Abraham, 1989; George, 1992; George & Brief, 1992; Gerhart, 1987; House, Shane, & Herold, 1996; Levin & Stokes, 1989; Pulakos & Schmitt, 1983; Schneider, 1987; Staw, Bell, & Clausen, 1986; Staw & Ross, 1985; Watson & Slack, 1993; Weiss & Adler, 1984). Researchers are also more optimistic about gaining a better understanding of behavior and performance in organizations as a result of information learned from dispositional studies (Baehr & Orban, 1989; Day & Silverman, 1989; Pulaskos, Borman, & Hough, 1988).
Judge (1992) provides compelling support for the dispositional perspective:

... dispositional studies have made personality the focus of the investigation, instead of the typical cursorily added variable after other effects of interest have been considered. According to Wiess and Adler (1984), putting personality at the center of the investigation should lead to more careful measurement of the variables of interest. . . . [A]lthough disposition has not been a clearly defined phenomenon, it is thought to be a more general aspect of personality — capable of characterizing most individuals — that influences individual perception, attitude formation, and behavior. As Chatman (1989) has noted, investigating isolated facets has limited the observed effects of personality variables in a nomothetic framework that seeks to characterize individuals on general dimensions. The above arguments suggest that the dispositional approach may succeed where other personological attempts have not. Dispositional research has also resurrected debate regarding the competitive strength of situations versus individual variables in predicting organizational attitudes and behaviors (Mitchell & James, 1989; Pervin, 1989).

Support for the dispositional approach can be found in several other sources. Among the empirical studies focused on the dispositional approach to job attitudes and behaviors are studies of its effect on job performance (Barrick & Mount, 1991; Cropanzano, James & Konovsky, 1993; Tett, Jackson, & Rothestein, 1991; Staw & Barsade, 1993), and examinations of test-retest correlations of job attitudes (Gerhart, 1987; Gutek & Winter, 1992; Newton & Keenan, 1991; Staw & Ross, 1985). Another job attitude, the relationship between dispositional factors and work-related strain, has also been investigated (Brief, Burke, George, Robinson, & Webster, 1988; Burke, Brief, & George, 1993; Larsen & Katelaar, 1991; McCrae & Costa, 1991).
And, George (1989) has investigated the relationship between dispositional affectivity and employee absences.

Researchers have also examined the associations between affective traits and task satisfaction (Kraiger, Billings, & Isen, 1989; Levin & Stokes, 1989); affectivity and boredom at work (McMurray, 1932; Smith, 1955; Wyatt & Langdon, 1937); and correlations of trait affect with job attitudes (Agho, Price & Mueller, 1992; Judge & Hulin, 1993; Staw, Bell, & Clausen, 1986; Watson & Slack, 1993). Brief, Butcher, and Roberson (1994) also studied job tasks in relation to dispositional factors. These researchers showed that, when subjected to the same task attributes, individuals' dispositional tendencies affect how they interpret the favorability of these attributes” (Judge et al., 1998, p. 17).

Meta-analyses to determine the relationships between personality traits and overall job performances have been conducted by Tett, Jackson, and Rothestein (1991) and Barrick and Mount (1991). Barrick and Mount (1991) studied specific relationships between various job performance dimensions and positive affectivity (PA) and negative affectivity (NA). Their findings suggest that the strongest relationship between PA and performance is associated with management and sales occupations – occupations requiring social interactions. Similarly, the findings indicate that PA is related to sales performance. The estimated true correlations between PA and job performance (collapsed across job performance dimensions) reported by these researchers in the 1991 study are listed below:
Unlike the Barrick and Mount study which provides information by occupation, the Tett et al., (1991) study provides PA and NA data collapsed across all occupations. A corrected mean correlation of -.22 between NA and job performance and .16 between PA and job performance was reported in their study.

Further support of the dispositional approach can be found in the work of Necowitz and Roznowski (1994). These researchers assessed work attitudes using the Job Description Index (JDI) (Smith, Kendall, & Hulin, 1969), and found that negative affectivity was significantly correlated with JDI Work ($r = -.29$, $p < .01$). In addition, when compared to individuals with lower negative affectivity, those with higher negative affectivity reported a greater frequency of withdrawal behaviors when both dissatisfied and satisfied with their jobs. Individuals with higher levels of negative affectivity recalled the negative features of tasks while individuals lower in negative affectivity recalled more descriptive aspects of tasks.

There is also longitudinal evidence to support the dispositional approach. For instance, Staw, Bell, and Clausen (1986) found that “personality factors, measured in childhood, predicted work satisfaction in adulthood” (Steel & Rentsch, 1997, p. 873). The results of the Staw et al. study indicated that even in adolescence, a significant correlation exists
between affective disposition and job attitudes. There was a .34 (p < .05) correlation between affective disposition and overall job satisfaction assessed at ages 12 to 14 and at ages 54 to 62.

Thus, research suggests that there are dispositional underpinnings of work-related factors (c.f., Arvey, Bouchard, Segal, & Abraham, 1989; George, 1989; Keller, Bouchard, Arvey, Segal, & Dawis, 1992; Staw, Bell, & Clausen, 1986; Williams, Suls, Alliger, Learner, & Wan, 1991). Because each of the three aspects of the work experience is affected by an individual’s dispositional traits, these dispositional underpinnings imply that there is an element of stability associated with job attitudes and behavior (Staw & Ross, 1985)” (George & Jones, 1997).

The Re-emergence Of The Dispositional Perspective

Despite the recent surge of interest that began in the 1980s, the theory that attitudes are influenced by dispositions is not new (Hoppock, 1935; Weitz, 1952). Attitudes have historically been considered stable dispositions to behave toward objects in a certain way (Kimble, 1990; Saal & Knight, 1988). In addition, the broad assumption that attitudes predict overt behaviors has been the prevailing thought among social psychologists for decades (Zanna, Olson, and Fazio, 1980). Zanna et al. (1980) claimed that the functional utility of the concept of attitude is largely contingent upon such an assumption. Judge et al. (1998), in describing a brief history of the dispositional perspective, recognize that although the potential dispositional effects have been recognized for many decades (e.g., Fisher & Hanna, 1931;
Hoppock, 1935; Locke, 1976; Smith, 1955; Weitz, 1952), it was the work of Staw and Ross (1985) and Staw, Bell, and Clausen (1986) that provided the initial empirical support for the dispositional hypothesis. As Judge and Hulin (1993) claim, this dispositional perspective "has rekindled interest in the effects of personality in organizations and has offered a unifying theoretical framework" (p. 389).

Empirical studies of the temporal stability and cross-situational consistency support the stability premise of job attitudes. For instance, Schneider and Dachler, in their 1987 study of one work-related attitude, job satisfaction, observed managers and non-managers over a 16-month period. They found that the job satisfaction for these individuals was stable for the period. Schneider contends that "the attributes of people, not the nature of the external environment, or organizational technology, or organizational structure, are the fundamental determinants of organizational behavior (p. 437). Staw and Ross (1985, 1989) found that job satisfaction for individuals (even if they changed jobs or occupations) was cross-situationally consistent over a 5-year period.

Personality Domain

Introduction

Regardless of the fact that an individual forms his or her personality outside of the organization, the concept of personality remains an important aspect of workplace behavior. Because personality affects an individual's perceptions of and attitudes toward an organization, as well as his or her
behavior in organizational situations, gaining an understanding of basic personality attributes is important (Pervin, 1984). As Gibson, Ivancevich, and Donnelly (1991) contend, "the behavior of an employee cannot be understood without considering the concept of personality. In fact, personality is so interrelated with perception, attitudes, learning, and motivation that any attempt to understand behavior is grossly incomplete unless behavior is considered" (p. 78). Thus, it is relatively easy to understand that the relationship between behavior and personality is both one of the most complex and one of the most important issues that organizational researchers and practitioners face.

Researchers have not reached a universal agreement regarding the exact definition of personality. Much of the debate and controversy over the various definitions of the term centers on the different perspectives from which the definition is derived. "Most people tend to equate personality with social success (good, popular, or ‘a lot of personality’) and to describe personality by a single dominant characteristic or trait (strong, weak, shy, or polite). When it is realized that literally thousands of words can be used to describe personality this way, the definitional problem becomes staggering. Others, on the other hand, take a different perspective. For example, the descriptive-adjective approach commonly used by most people plays only a small part. However, scholars cannot agree on a definition of personality because they operate from different theoretical bases. As long as there is
disagreement on the theory of personality, there will be disagreement on its definition” (Luthans, 1989, p. 117).

**Personality Defined**

Both culture and social factors significantly influence personality. Regardless of how it is defined, however, psychologists generally accept certain principles:

1. Personality is an organized whole; otherwise, the individual would have no meaning.
2. Personality appears to be organized into patterns that are to some degree observable and measurable.
3. Although personality has a biological basis, its specific development is a product of social and cultural environments.
4. Personality has superficial aspects, such as attitudes toward being a team leader, and a deeper core, such as sentiments about authority or the Protestant work ethic.
5. Personality involves both common and unique characteristics. Every person is different from every other person in some respects, while being similar to other persons in other respects.

These five ideas are included in this definition of personality:

An individual's personality is a relatively stable set of characteristics, tendencies, and temperaments that have been significantly formed by inheritance and by social, cultural, and environmental factors. This set of variables determines the commonalities and differences in the behavior of the individual” (Gibson, Ivancevich, & Donnelly, Jr., 1991, p. 78).
Hogan and Shelton (1998) contend that the word personality has two distinct definitions: one concerning the way individuals are perceived by others and the second concerning the process within the individual that explain actions and create reputations. The external aspect of personality consists of five key elements:

1. Descriptions of the target individuals by others define personality from the outside

2. An individual’s reputation serves to constitute his or her personality

3. Reputations are a valid means of forecasting full behavior because past behavior serves as a guidepost to predict future actions

4. Trait terms are used to describe behavior. [The Five Factor Model representation is the optimal model of reputation (c.f., Hogan, 1996).]

5. Parallels exist between assessments of an individual’s interpersonal style and job-specific appraisals by supervisors (Hogan & Shelton, 1998).

6. Reliable assessments can be made of personality from the observer’s perspective (Funder & Sneed, 1993).

The most important aspect of personality, however, is what Hogan and Shelton (1998) consider the second definition: the internal processes of an individual that guide and direct behavior and actions. “Personality from the
inside reflects the strategies a person has developed to get along, get ahead, and find meaning; it is defined in terms of a person's identity; and is used to explain a person's performance" (Hogan & Shelton, 1998, p. 132). There are two primary determinants associated with the development of personality from this perspective (Hogan, Rybicki, & Motowidlo, 1998). First, these internal processes that manifest themselves in an individual's identity are derived from the individual's temperament (Buss & Plomin, 1975). The second determinant is grounded in the fact that an individual uses his or her "interests, preferences, successes, failures, desires, and aversions to build a story that is told to others about him or herself and this story is a person's identity (see also McAdams, 1993)" (Hogan, Rybicki, & Motowidlo, & Borman, 1998).

Because measures of personality from this perspective rely almost solely on self-reported information, it is much harder to study than personality from the outside. Understandably, it is much more difficult to verify self-report information; thus, both the reliability and validity of self-reported information are difficult to establish (Hogan, Rybicki, Motowidlo, & Borman 1998).

Hierarchical Structure Of Personality

As Botwin and Buss (1989) write, personality psychologists have, for decades, shared a common goal of identifying a taxonomic structure of personality (Cattell, 1946; Eysenck, 1947; Fiske, 1949; Goldberg, 1972, 1981; Hogan, 1983; John, Goldberg, & Angleitner, 1984; McCrae & Costa, 1985b;
Personality researchers generally agree that personality can be described as a hierarchical structure of traits with general traits positioned at the top of the hierarchy and more specific traits at the lower levels (George, 1996). Despite the agreement among researchers regarding the existence of this structure, there exists some controversy over the number and type of traits positioned at the top of the structure. Among the researchers who have expressed concerns regarding the adequacy of existing personality taxonomies are Block (1995a, 1995b), H.J. Eysenck (1991), Pervin (1994), Schneider and Hough (1995), Tellegen (1993), and Waller and Ben-Porath (1987). It is important to note that the principal debate among personality psychologists centers on the number of factors that should be included in the structure. Currently, the number of factors ranges from three to six. For instance, Eysenck’s (1947) original conceptualization of personality included two factors: Neuroticism and Extraversion; the Psychoticism factor was added in 1970 (Eysenck). However, Digman (1996) says closer examination of these factors reveals that there is not a great deal of disparity among the existing taxonomies. “The Eysenck model has four dimensions in all, then, if we include, rather than set aside, the domain of Intellect, and compared with the analyses of Thurstone, Cattell, and Guilford, very parsimonious – and very close to the five-factor model” (Digman, 1990 p. 417). These dimensions were developed independent of the work cited above.
Still another framework for personality, the Myer-Briggs Type Indicator (Myers & McCaulley, 1985), is based on Jungian theory (Jung, 1923). This personality measure is designed to assess the combinations of the four basic mental functions, two distinct orientations toward life, and two separate orientations toward the outer world defined by Jung (1923). Respectively, these are thinking/feeling, sensing/intuition, extraversion/introversion, and judging/perceiving.

The Five-Factor Taxonomy Of Personality

The Five-Factor Model (FFM), also known as the Big Five, dominates the current view and provides a unifying structure for the study of personality. A number of different investigations have converged upon this five-factor taxonomy (Digman & Inouye, 1986; Fiske, 1949; Goldberg, 1981, 1982; Hogan, 1983; McCrae & Costa, 1985b, 1987; Norman, 1963; Ostendorf, 1990; Tupes & Christal, 1961; Wiggins & Pincus, 1992). This model has, in fact, garnered so much support, that the FFM “has now become an almost universal template for understanding the structure of personality” (Ferguson & Patterson, 1998, p. 789).

As the name implies, this conceptual model suggests that there are five broad categories of traits at the top of this hierarchy. These are: Extraversion versus Introversion; Neuroticism versus Emotional Stability; Agreeableness versus Antagonism; Openness to Experience to Closedness to Experience (or Unconventionality, Intellect); and Conscientiousness versus Constraint
Barrick and Mount (1993) and Costa and McCrae (1992) describe prototypical characteristics or facets for each factor. These facets include the following:

- **Extraversion**: warmth, gregariousness, assertiveness, activity, excitement-seeking, positive emotions
- **Agreeableness**: trust, straightforwardness, altruism, compliance, modesty, tender-mindedness
- **Conscientiousness**: competence, order, dutifulness, achievement, striving, self-discipline, deliberation
- **Emotional Stability/Neuroticism**: anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability (Costa and McCrae, 1992).

The (FFM) of personality is a version of trait theory that views human nature from the perspective of enduring and consistent individual differences (McRae & John, 1992). The relatively orthogonal five-factor taxonomy resulted from decades of research on the structure of human personality (Costa & McCrae, 1992). The model recognizes the uniqueness of individuals while providing a framework to organize common trait differences. The taxonomy has gained the support of numerous researchers (Costa & McCrae, 1995a; Digman, 1990; Goldberg, 1990, Goldberg & Saucier, 1995; John, 1990;
McCrae & John, 1992; McCrae & Costa, 1987). McCrae and Costa (1996) contend that "one of the chief merits of the model is that it provides a comprehensive yet manageable guide to personality traits" (p. 57).

The Empirical And Lexical Foundations Of The Five Factor Model

Aristotle, who contemplated the ways various combinations of fear and confidence could lead to cowardly or brave behavior, provided one of the earliest examples of taxonomic personality descriptions (Revelle, 1987). Sir Francis Galton's ideas regarding personality descriptors (1884) later gave rise to the birth of the Five Factor Model (FFM) of personality (Hough & Schneider, 1996). Galton posited that the first step in the process of scientifically describing personality should be lexical. In other words, researchers should begin the process by identifying words in dictionaries that individuals use to describe each other. Allport and Odbert (1936) identified approximately 18,000 words (chiefly adjectives) designating descriptive terms of individuals found in unabridged dictionaries (Hough & Schneider, 1996; John, 1989, 1990; John, Angleitner, & Ostendorf, 1988). After cataloguing the terms, Allport and Odbert divided the terms into four groups (Goldberg, 1990). The two researchers classified the first of the four groups as stable traits.

Cattell, in the 1940s, began the task of systematically selecting personality variables representative of the whole "personality sphere" (John, 1989). Cattell worked from the following lexical assumption:
... all aspects of human personality which are or have been of importance, interest, or utility have already become recorded in the substance of language. For throughout history, the most fascinating subject of general discourse, and also that in which it has been most vitally necessary to have adequate, representative symbols, has been human behavior (1943, p. 483).

Thus, Cattell (1943, 1945, 1947) employed a series of sophisticated reduction steps using factor analysis and subsequently reduced the list assembled by Allport and Odbert (1936) to thirty-five bipolar clusters of related personality descriptors. Further analysis of these thirty-five descriptors, according to Cattell's interpretation, suggested at least twelve factors (John, 1989).

Fiske (1949) worked from Cattell’s bi-polar clusters and was “unable to find evidence for anything more complex than a five-factor solutions” (Digman, 1990, p. 419). Tupes and Christal (1961, 1992), also worked from Cattell’s thirty-five variables and developed the Five Factor Model as it is currently known (Hough & Schneider, 1996). The five factors, as labeled by Tupes and Christal, included: Surgency, Agreeableness, Dependability, Emotional Stability, and Culture. The Tupes-Christal report (1961), however, was published in an Air Force technical report and most personality researchers were unaware of its existence. It was Norman (1963) who replicated the five-factor structure presented in the Tupes and Christal (1961) report and drew more attention to the taxonomy. Digman (1990) writes that, “research on the five-factor model has given us a useful set of very broad dimensions that characterized individuals’ differences . . . . Taken together, they provide a good answer to the question of personality structure” (p. 436).
Other personality researchers (Borgatta, 1964; Digman & Takemoto-Chock, 1981; Fiske, 1949; Norman, 1963) using more common analytical methods, have also suggested only five replicable factors (Goldberg, 1990; John, 1989). Barrick and Mount (1991) assert that “Borgotta’s findings are noteworthy because he obtained five stable factors across five methods of data gathering” (p. 2). Using variables sets that differed from Cattell’s, similar five-dimensional structures (labeled differently, however) have been documented by Digman (1972), Goldberg (1980), John, Goldberg, and Angleitner (1984), Digman and Inouye (1986), McCrae and Costa (1985, 1987), Conley (1985), and Peabody and Goldberg (1988). Examples of label differences can be noted by considering the fifth factor, Culture. It has also been identified as Openness (McCrae & Costa, 1987) and as Intellect (Digman & Takemoto-Chock, 1981; Peabody & Goldberg, 1989). (See Table 2.2 for a listing of the various interpretative labels that have been assigned to the five factors.)

Table 2.2: Five Broad Dimensions of Personality

<table>
<thead>
<tr>
<th>Author</th>
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<tr>
<td>Fiske (1949)</td>
<td>Confident Self-Expression</td>
<td>Social Adaptability</td>
<td>Conformity</td>
<td>Emotional Control</td>
<td>Inquiring Intellect</td>
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<tr>
<td>Tuples and Christal (1961)</td>
<td>Surgency</td>
<td>Agreeableness</td>
<td>Dependability</td>
<td>Emotional Stability</td>
<td>Culture</td>
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<tr>
<td>Borgatta (1964)</td>
<td>Assertive-ness</td>
<td>Likeability</td>
<td>Task Interest</td>
<td>Emotional Stability</td>
<td>Intelligence</td>
</tr>
<tr>
<td>Norman (1963)</td>
<td>Surgency</td>
<td>Agreeableness</td>
<td>Conscientiousness</td>
<td>Emotional Stability</td>
<td>Culture</td>
</tr>
<tr>
<td>Smith (1967)</td>
<td>Extraver-sion</td>
<td>Agreeableness</td>
<td>Strength of Character</td>
<td>Emotional Stability</td>
<td>Refinement</td>
</tr>
<tr>
<td>Digman (1981)</td>
<td>Extraver-sion</td>
<td>Friendly Compliance</td>
<td>Will to Achieve</td>
<td>Ego Strength (Anxiety)</td>
<td>Intellect</td>
</tr>
<tr>
<td>Hogan (1986)</td>
<td>Ambition and Sociability</td>
<td>Likeability</td>
<td>Prudence (Impulsivity)</td>
<td>Adjustment</td>
<td>Intelligence</td>
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<tbody>
<tr>
<td>Power</td>
<td>Love</td>
<td>Work</td>
<td>Affect</td>
<td>Intellect</td>
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<tr>
<th>Other Structural Models</th>
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<tbody>
<tr>
<td>Block (1961, 1971)</td>
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<tr>
<td>Buss and Plomin (1975)</td>
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<td>Cattell (1947)</td>
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<tr>
<td>Eysenck</td>
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<tr>
<td>Guilford</td>
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<td>Leary (1957), Wiggins (1979)</td>
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Support For The Five Factor Model

A principal advantage of this personality taxonomy is that it provides a comprehensive yet parsimonious taxonomy of personality traits (Digman, 1990). Digman (1990) contends that this set of factors adequately addresses the question of personality structure. The personality variables that comprise the five-factor taxonomy of personality each embody several more narrowly defined traits or facets. It is important to note that FFM theorists believe that the five-factors represent personality at the highest hierarchical level of trait description. Thus, these theorists do not maintain that the five-factors exhaust personality description; rather, they serve as a framework for interpreting...
other personality constructs (McCrae & Costa, 1989; McCrae & John, 1992; Wiggins & Pincus, 1992).

The empirical, systematic and lexical origins of the Five Factor Model distinguish it from the theoretical origin of other personality models (Widiger & Trull, 1997). Accordingly, the FFM “aims to provide a reasonably comprehensive description of personality while taking a more theoretically neutral position” than other personality models (Widiger & Trull, 1997, p. 229). This neutrality with regard to etiological theories translates into fewer validity-related concerns. Widiger and Trull (1997), extolling the strength of the FFM, contend that the “lexical FFM also avoids relying on the negotiations and compromises of a committee, or the brilliance and talent of a particular theorist, to identify the fundamental dimensions of personality” (p. 229).

Support for the five factor taxonomy can be found across gender, age, occupation, lifespan and rating formats and sources (self, peer, observer and stranger) (Costa & McRae, 1988, 1992; Digman & Inouye, 1986; Digman & Takemoto-Chock, 1981; Fiske, 1949; Helson & Wink, 1992; John, 1990; McCrae & Costa, 1985, 1987, 1989; McGue, Bacon & Lykken, 1993), and across cultures and languages (Bond, 1994; Bond, Nakazato, & Shiraishi, 1975; Borkenau & Ostendorf, 1989; Digman & Takemoto-Chock, 1981; Noller, Law, & Comrey, 1987). Barrick and Mount (1991) also point out evidence for the robustness of the Five-Factor Model across various theoretical frameworks (Goldberg, 1981) and using different instruments (e.g.,
Conley, 1985; Costa & McCrae, 1988; Lorr & Youniss, 1973; McCrae, 1989; McCrae & Costa, 1985, 1987, 1989). The work of Eysenck and Eysenck (1975) and Angleitner, et al. (1990) also provides support for the replicability of the descriptive structures of personality across languages and cultures (Stelmack, 1997). The “replicability of the FFM has been touted as one of its biggest selling points, and indeed the FFM has been replicated many times across several decades and numerous samples” (Hough & Schneider, 1996, p. 41). Other research efforts have focused on heritability of the Five Factor model factors (Bergman et al., 1993; Gilbert & Ones, 1995a, 1995b).

Criticisms Of The Five Factor Model

Despite its wide acceptance among personality psychologists, there are critics of the taxonomy. Some researchers (Schmit, Ryan, Stierwalt, & Powell, 1995; Hogan, Murphy, & Hogan, 1994; Rothstein, Jackson & Tett, 1994) challenge the usefulness of the broad definitions in maximizing predictions of relevant criteria (e.g., job performance). Others challenge the comprehensiveness of the model or point to the importance of examining the limitations of the model (Paunonen, 1993). In addition, empirical evidence indicates that the more narrowly defined measures provide higher validity coefficients (Cronbach, 1984; Hough, 1992). Hogan (1986) supports a six-factor structure (Sociability, Adjustment, Prudence, Intellectance, Ambition, and Likeability). In addition to Hogan (1986), there are others who contend that there are either greater or fewer factors than five (Ben-Porath & Waller, 1992; Block, 1995; Brand, 1994; Cellar, Miller, Doverspike, & Slawsky, 1992; Block, 1995; Brand, 1994; Cellar, Miller, Doverspike, & Slawsky,
These challenges and criticisms notwithstanding, the model represents an important step in the study of personality functioning and, as exemplified in the many studies examining aspects of the model, serves a meaningful heuristic function in the exploration of personality structure (Schinka, Lalone, & Broeckel, 1997). As Parker and Stumpf state, “a general conclusion that can be drawn from the discussion about the model is that while the comprehensiveness of the FFM is not beyond question (Paunonen et al., 1992), the five factors certainly are useful concepts for describing adult personality and guiding research” (1998, p. 1006).

**Five Factor Model Of Personality Dimensions And Work-Related Behaviors**

Researchers conducting empirical studies and meta-analyses have illustrated that certain personality constructs are valid predictors of job-related behaviors (i.e., performance) (Barrick & Mount, 1991, 1993; Barrick, Mount, & Strauss, 1993; Barrick, Stewart, Neubert, & Mount, 1998; Hough, 1992; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; House, Shane, & Herold, 1996; McHenry, Hough, Tocquam, Hanson & Ashworth, 1990; Mount, Barrick, & Stewart, 1998; Mount, Barrick, & Strauss, 1994; Ones, Viswesvaran, & Schmidt, 1993; Salgado, 1997, 1998; Stewart, & Carson, 1995; Tett, Jackson, & Rothstein, 1991). For instance, Barrick and Mount’s
(1991) meta-analytic study showed that Conscientiousness validly predicted job performance across all occupational groups (professionals, police, managers, sales, and skilled/semi-skilled) studied \( (r = .20) \); and, Extraversion validly predicted job performance for sales representatives \( (r = .15) \) and managers \( (r = .18) \). These are two occupations that typically require a high degree of interactions with others. Other personality dimensions served as valid predictors for some criterion categories or occupations, however, the magnitude of these validities was smaller \( (r \leq .10) \) (Barrick & Mount, 1993).

Validity of predictors for training proficiency ranged from \( r = .26 \) for Extraversion, \( r = .25 \) for Openness to Experience, \( r = .10 \) for Agreeableness, and \( r = .07 \) for Emotional Stability.

Hough et al. (1990) found that two components of Conscientiousness, achievement and dependability, validly predicted all job-related criteria. The Hough meta-analysis (1992) revealed a higher correlation between Agreeableness and job proficiency for health care workers \( (r = .19) \) than for managers \( (r = -.03) \) or executives \( (.07) \). Tett et al. (1991) found that validity is higher when the selection of personality measure used in a study is based on job analysis or is guided by the hypothesis. And, Mount, Barrick and Stewart (1998) found positive correlations between Agreeableness \( (r = .18) \), Conscientiousness \( (r = .26) \), and Emotional Stability \( (r = .18) \) and performance in jobs requiring interpersonal interactions. These researchers also found that
Agreeableness and Emotional Stability are more strongly related to job performance when teamwork is a component of the job.

Salgado (1997) investigated the relationship between the Big Five factors and job criteria within the European community. His findings indicated that Conscientiousness and Emotional Stability validly predict across all occupations and job criteria. Agreeableness and Openness were predictors for training criterion (r = .31 and r = .26, respectively). Salgado's 1998 meta-analyses were carried out using civil and army samples. The findings of this meta-analysis indicated that Conscientiousness was a valid predictor for all civil occupations and all criteria (r = .24). In the meta-analysis that involved only army samples, the Emotional Stability/Neuroticism validity was .45, "a value never found in previous meta-analysis of personality dimensions" (Salgado, 1998, p. 283).

Other researchers have used the FFM to investigate other job-related factors. For instance, Ferguson et al. (1994) investigated occupational personality assessment; and, Hogan et al. (1998) studied the relationship between personality dimension, and occupational advancement. Results of the Hogan et al. (1998) study indicated that ambition/surgency (Extraversion) predicted contextual performance.

Hough's (1992) meta-analysis provided information on FFM constructs and teamwork. The correlations between the personality dimensions and teamwork were as follows:
• Agreeableness: \( r = .17, \)

• Emotional Stability/Neuroticism: \( r = .13, \)

• Conscientiousness (two factors: achievement and dependability): \( r = .14 \) and \( r = .17, \) respectively,

• Openness to Experience: \( r = .11, \) and

• Extraversion: \( r = .08. \)

Thus, Hough's (1992) results indicated that Emotional Stability, Conscientiousness, and Agreeableness were the best predictors of teamwork. Or, as Mount, Barrick, and Stewart (1998) write, "individuals who are more dependable, achievement oriented, hardworking, cooperative, tolerant, secure, and well-adjusted, are able to cooperate and work more effectively with others than those who scored lower on these characteristics" (p. 149).

In another team related study, Barrick, Stewart, Neubert, and Mount (1998) investigated the relationship between team outcome and personality constructs. These researchers found that teams with higher mean levels of Agreeableness, Conscientiousness, and Emotional Stability performed better (\( r = .34, r = .26, r = .24, \) respectively). Their study of 51 work teams (consisting of 652 employees) also examined social cohesion, and team outcomes. Their findings indicated that teams rating higher in general mental ability (GMA), Conscientiousness, Agreeableness, Extraversion, and Emotional Stability received higher team performance ratings from supervisors. "Teams higher in GMA, Extraversion, and Emotional Stability
received higher supervisor ratings for team viability. Results also showed that Extraversion and Emotional Stability were associated with team viability through social cohesion" (Barrick, Stewart, Neubert, & Mount, 1998, p. 377).

In a study investigating the relationship between customer service orientation and the FFM dimensions, Costa and McCrae (1995b) found that Neuroticism/Emotional Stability, Conscientiousness, and Agreeableness were associated with service orientation. Hough & Schneider (1996) summarize Costa and McCrae's (1995b) findings as follows:

Within the Emotional Stability (Neuroticism) domain, the facet scale Anger/Hostility correlates most highly with Service Orientation \( (r = -.62, p < .001) \), and the facet scale Vulnerability correlates least highly \( (r = -.22, p < .05) \). Within the Agreeableness domain, Compliance correlates most highly with Service Orientation \( (r = .52, p < .00) \), and Trust correlates least highly \( (r = .21, p < .05) \). Finally, within the Conscientiousness domain, the facet scales Dutifulness and Deliberation correlate most highly with Service Orientation \( (r's = .35 \text{ and } .30, \text{ respectively; both } p > .001) \), whereas Achievement Striving is uncorrelated with Service Orientation \( (r = -.01, ns) \) (p. 60).

In a related study conducted by McDaniel and Frei (1994), Extraversion Emotional Stability and Agreeableness were found to be related to customer service orientation (Hough & Schneider, 1996). And, research efforts of McCrae, Costa, and Piedmont (1992) revealed a correlation between Openness to Experience and Gough's (1987) achievement via independence which predicts academic achievement in college-level learning situations.

The relationship between personality constructs and counterproductive job-related behaviors has also been investigated (Dunn et al., 1995; Hogan &
Hogan, 1989; Hough et al., 1990). Results of these studies indicate a
correlation between counterproductive behaviors and Conscientiousness,
Agreeableness, and Neuroticism or Emotional Stability (Dunn et al., 1995).
For instance, Goldberg (1991) found that dishonesty loaded most heavily on
Agreeableness (Dunn et al., 1995). Hough, et al. (1990) investigated
components of Conscientiousness and found a -.35 average correlation
between achievement and counterproductive behavior and a -.28 average
correlation between dependability and counterproductive behavior. This
suggests that there is a negative correlation between Conscientiousness and
counterproductive behavior (Dunn et al., 1995). Hogan and Hogan (1989)
measured another aspect of counterproductive behavior — organizational
delinquency -- using the Employment Reliability Index (ERI). “High scores
were linked to conscientiousness, attention to detail, rule compliance, and
social maturity. Low scores were associated with aggressiveness, hostility,
self-indulgence, and impulsivity” (Dunn et al., 1995). Dunn et al. (1995)
found that Neuroticism or Emotional Stability, Conscientiousness, and
Agreeableness were important attributes related to counterproductive job-
related behaviors. The average beta weights for the constructs were:
Neuroticism or Emotional Stability (β = -.36); Conscientiousness (β= -.25);
and, Agreeableness (β = -.24) (Dunn et al., 1995). Judge, Martocchio, and
Thoresen (1997) investigated the relationship between personality dimensions
and employee absenteeism and found that Extraversion and Conscientiousness
predicted absenteeism. Cooper and Payne (1966) also found a positive relationship between Extraversion and absenteeism.

Because of the severe ramifications involved with the absence of employee integrity (i.e., employee theft, tardiness, absenteeism, dishonesty, violence, etc.) this characteristic also falls within the area of counterproductive behaviors. A meta-analysis of the construct validity of integrity measures was conducted by Ones, Schmidt et al., (1994). Their findings indicated a correlation \( r = .42 \) between integrity and Conscientiousness; a \( .33 \) correlation between integrity and Emotional Stability; and a \( .40 \) correlation between integrity and Agreeableness.

Mount et al. (1994) investigated the validity of observer ratings and self-ratings of five factor personality measures using a sample of sales representatives. Overall, the findings of their study indicated that for Extraversion and Conscientiousness — two particularly job-relevant personality dimensions — observer ratings of performance (i.e., supervisor, coworker and customer) were valid predictors of performance ratings when assessed from the perspective of observers. Results also indicated that observer ratings on these two personality dimensions accounted for significant variance beyond the self-ratings alone. More specifically, “the magnitudes of the zero-order correlations for self-ratings of Conscientiousness were .26 and .23 (corrected) for the two criteria, which is very similar to the value reported for conscientiousness for sales representatives (.23) by Barrick and Mount (1991)” (Mount et al., 1994, p, 277).

59
Researchers have also examined the correlations between intelligence, cognitive strategies, and personality dimensions. Cattell and Butcher (1968), using the Wechsler Adult Intelligence Scale (WAIS) found that introverts performed slightly better on the Performance aspect of the test and extroverts performed slightly better on the verbal subtest (Kossowska & Necka, 1993). Kossowska and Necka (1993), working in Poland, have also conducted studies addressing this issue. Their findings indicated that neurotics (EPQ) more frequently employ analytical strategies, whereas extroverts (EPQ) more frequently use global strategies. The primary distinction between global and analytical strategies is in the amount of time that subjects used in the task completion. Analytical group subjects spent more time in the preparatory stage of the task and less time in the executive stage. Global subjects did exactly the opposite, spending more time in the executive stage and less time in the preparatory stage. Thus, as Kossowska and Necka (1993) write, those employing analytical strategies prefer to solve the task in a step by step manner, whereas those employing global strategies prefer to have all the necessary information. Kossowska and Necka (1993) “call this strategy global because it may be preferred by people who are unable or unwilling to rely on incomplete pieces of information. These people may decide to speed up the process of information acquisition. The opposite strategy characterizes people who prefer to analyze the task from the very beginning, no matter how incomplete the information may be at the given stage of processing” (p. 36).
The link between personality and learning style has also been investigated (Eysenck, 1978; Furnham, 1992; Jackson & Lawty-Jones, 1996). Eysenck (1978) asserted that there is a close association between the two constructs; and, "Drummond and Stoddard (1992) noted the overlap between a learning style instrument and the Myers Briggs Type Indicator" (Lawty-Jones, 1996, p. 293). Eysenck's (1978) work indicates that the tendency of extraverts to engage in social interaction, coupled with their lack of concentration, results on their distraction from academic work. Individuals with high scores in the Neuroticism dimension typically allow their anxiety to interfere with their work (Eysenck, 1978). Using the Learning Styles Questionnaire [LSQ (Honey & Mumford, 1992)], which is based on Kolb's learning cycle (Kolb, 1984), and the Eysenck Personality Questionnaire [EPQ (Eysenck, 1975), Furnham (1992) addressed this same issue. His findings indicated that individuals with high ratings on the Extraversion dimension rate high on the Activist and Pragmatist dimensions of the LSQ, and low Extraversion scores rated high on the Reflector dimension of the LSQ (Furnham, 1992). Jackson and Lawty-Jones (1996) found a relationship between all elements of learning style and at least one of the personality dimensions. For instance, there is a strong relationship between Extraversion and all elements of the Activist dimension of the LSQ, and there is a strong overlap between Extraversion and the Reflector dimension (Lawty-Jones, 1996).
Extraversion

Digman (1990) writes that researchers generally agree that this first dimension of the taxonomy most closely corresponds to Eysenck's (1947) Extraversion/Introversion. As such, it is one of the "Big Two" factors that Eysenck proposed more than 40 years ago (Digman, 1990). It has also been labeled Extraversion or Surgency (Botwin & Buss, 1989; Digman & Takemoto-Chock, 1981; Hakel, 1974; Hogan, 1983; Howarth, 1976; John, 1989; Krug & Johns, 1986; McCrae & Costa, 1985; Norman, 1963; Smith, 1967). Eysenck and Eysenck (1975) report that extraverts consider themselves to be lively, active, and talkative. Other descriptors of extroverts include energetic, assertive, gregarious, and sociable (Barrick & Mount, 1991). Extraverts "... like people and prefer larger groups and gatherings" (Costa & McCrae, 1992, p. 15), are bold, forceful, and surgy (Goldberg, 1990), and often exhibit a great deal of commitment to social activities and groups (Judge, Martocchio, & Thoresen, 1997). Costa and McCrae (1992b) also assert that extraverts frequently seek out exciting new situations and activities. Hogan (1986) deviates from other researchers in that he advocates two components for this dimension: Ambition (initiative, surgency, ambition, and impetuous) and Sociability (exhibitionist, expressive, and sociable) (Barrick & Mount, 1991).

Stelmack (1997) reported that studies reveal that extraverts are more active in athletic activities (Eysenck, Nias, & Cox, 1982), are more active and restless in restricted environments (Gale, 1969), have greater preference for
physical activity (Furnham, 1981), and speak more frequently in interview situations. Campbell and Rushton (1978) provided support for the self-reported descriptions that Eysenck and Eysenck (1975) reported.

Barrick and Mount (1991) also determined that Extraversion is a significant predictor of training proficiency ($r = .26$). They attribute this finding to the fact that many training programs are highly interactive and require a considerable energy level among participants—characteristics that are highly compatible with traits associated with Extroverts (Barrick & Mount, 1991). Citing Burris’ (1976) review of literature, Barrick and Mount (1991) wrote, “research and experience suggest overwhelmingly that learning is more effective when the learner is active rather than passive. However, it seems logical that these relations would not exist in training programs that do not involve social interaction (e.g., lectures, computer-assisted instruction, video tapes)” (p. 20).

Costa and McCrae (1992) maintained that portrayal of introversion characteristics is more difficult than portrayal of extraversion.

In some respects, introversion should be seen as the absence of extraversion rather than what might be assumed to be its opposite. Thus, introverts are reserved rather than unfriendly, independent rather than followers, even-paced rather than sluggish. Introverts may say they are shy when they mean that they prefer to be alone: they do not necessarily suffer from social anxiety. Finally, although they are not given to the exuberant high spirits of extraverts, introverts are not unhappy or pessimistic. Curious as some of these distinctions may seem, they are strongly supported by research and form one of the most important conceptual advances of research on the five-factor model (Costa & McCrae, 1980a; McCrae, 1987). Breaking the mental sets linking such pairs as “happy-
unhappy,’ ‘friendly-hostile,’ and ‘outgoing-shy’ allows important new personality (Costa & McCrae, 1992, p.15).

**Neuroticism**

Labels such as Emotional Control (Fiske, 1949), Emotional Stability (Guilford, 1975; Lorr, 1986), Affect (Peabody & Goldberg, 1989), Anxiety (Cattell, 1957), Adjustment (Hogan, 1986), Negative Emotionality (Tellegen, 1985), Emotional (Norman, 1963), Emotionality (Tupes & Christal, 1961; Borgatta, 1964; Buss & Plomin, 1984) and Neuroticism (Eysenck, 1970; Costa & McCrae, 1985) have been applied to this second dimension of personality. Neuroticism and self-esteem are considered to be antithetical. “People with low self-esteem are reported to worry, to feel self-doubt and depression, and to be nervous and sleepless. These are the exact symptoms of those high on the neuroticism scale” (Judge et al., 1997, p. 163). Costa and McCrae (1988) asserted that neurotic individuals are more susceptible to feelings of anxiety. These feelings are manifested in susceptibility to feelings of helplessness and dependence and a fear of novel situations. Goldberg (1990, 1991) associates adjectives such as submissiveness, insecurity, lethargy and indecisiveness with Neuroticism; and, Wiggins (1996) determined that individuals with high levels of neuroticism have a tendency to be rigid, timid, and unadaptable. Barrick and Mount (1991) also associated characteristics such as anger, embarrassment, worry, and insecurity with Neuroticism/Emotional Stability. Such individuals are likely to be to have higher levels of anxiety exhibited in tendencies to be fearful of novel
situations and circumstances to feelings of helplessness and dependence on others (Wiggins, 1996). Other researchers examining this personality construct have found short- and long-term changes create psychological distress for these individuals (Ormel & Wohfarth, 1991), and these individuals find it hard to complete decision-making tasks (Forgas, 1989).

Salgado (1998) conducted an analysis of personality dimensions' validity with European army samples. His findings indicated that Emotional Stability showed a true validity of .45. He cautioned, however, that “this result should be interpreted on taking into account that all studies were carried out with pilot samples and training proficiency as criterion. Therefore, the validity found should not be generalized with regard to other army occupations because there are no data available” (Salgado, 1998, p. 278). This finding established the importance of Neuroticism as a valid predictor of job performance and indicated that the construct may be used in both American and European studies (Salgado, 1998).

Agreeableness

This dimension of the taxonomy has been labeled Conformity (Fiske, 1949), Likeability (Borgatta, 1964), Sociability (Buss & Plomin, 1984), Friendliness (Guilford & Zimmerman, 1949), Social Conformity (Fiske, 1949), Love (Peabody & Goldberg, 1989), and Agreeableness (Tupes & Christal, 1961; Norman, 1963; Costa & McCrae, 1985). Courtesy, flexibility, trust, tolerance, soft-heartedness, and forgiveness are traits associated with this personality factor (Barrick & Mount, 1991). Attributes such as altruism,
warmth, generosity, trustworthiness, and cooperation are also associated with this personality factor (Costa & McCrae, 1992). The opposite pole, low Agreeableness should not be viewed as intrinsically better or worse than high agreeableness. As Costa and McCrae stated:

It is tempting to see the agreeable side of this domain as both socially preferable and psychologically healthier, and it is certainly the case that agreeable people are more popular than antagonistic individuals. However, the readiness to fight for one's own interests is often advantageous, and agreeableness is not a virtue on the battlefield or in the courtroom. Skeptical and critical thinking contributes to the accurate analysis in the sciences (Costa & McCrae, 1992, p. 15).

Zuckerman, Kuhlman, Joireman, and Teta (1993) found a negative correlation between Agreeableness and aggression and hostility, and a positive correlation between Agreeableness and cooperation. Digman (1990) contends that Agreeableness "seems tepid for a dimension that appears to involve the more human aspects of humanity—characteristics such as altruism, nurturance, caring, and emotional support at the one end of the dimension, and hostility, indifference to others, self-centeredness, spitefulness, and jealousy at the other" (pp. 423-424).

Conscientiousness

Researchers have not reached a consensus regarding the basis of this dimension (Barrick & Mount, 1991). Also called Conformity or Dependability (Fiske, 1949; Hogan, 1983), the fourth dimension is most commonly referred to as Conscience or Conscientiousness (Botwin & Buss, 1989; Hakel, 1974; John, 1989; McCrae & Costa, 1985; Noller et al., 1987;
Norman, 1963). Barrick and Mount (1991) pointed out that this factor has also been labeled Will to Achieve (Digman, 1989; Digman & Takemoto-Chock, 1981; Smith, 1967; Wiggins, Blackburn, & Hackman, 1969) and Work (Peabody & Goldberg, 1989) “because of its relationship to a variety of educational achievement measures and its association with volition” (p. 4).

Dependability, carefulness, dutifulness, self-discipline, organization, responsibility, deliberation, thoroughness, and planning are among the attributes that have been linked to Conscientiousness. Costa and McCrae (1992) also associated traits such as ambition, practicality, persistence, scrupulousness, carefulness, and neatness with the Conscientiousness factor. However, as Barrick and Mount (1991) and Digman (1990) pointed out, there is considerable evidence to support the association between Conscientiousness and volitional variables such as hardworking, perseverance, and achievement-orientation (Bernstein, Garbin, & McClelland, 1983; Borgatta, 1964; Conley, 1985; Costa & McCrae, 1988; Digman & Inouye, 1986; Digman & Takemoto-Chock, 1981; Howarth, 1976; Krug & Johns, 1986; Lei & Skinner, 1982; Lorr & Manning, 1978; McCrae & Costa, 1985, 1987, 1989; Norman, 1963; Peabody & Goldberg, 1989; Smith, 1967). In fact, Digman and Takemoto-Chock (1981) felt the relationship between achievement orientation and this personality dimension was so strong, they labeled the construct “Will to Achieve.”

Individuals who score low on this dimension are not necessarily devoid of moral principles (Costa & McCrae, 1992). They are, however, “less
exacting in applying them, just as they are more lackadaisical in working toward their goals" (Costa & McCrae, 1992, p. 16).

As mentioned previously, the work of Barrick and Mount (1991) and Hough et al. (1990) indicates that Conscientiousness is a valid predictor of all occupational types and all job-related criteria investigated (Mount, Barrick, & Strauss, 1994). These findings were supported by a U.S. Army Selection and Classification Study (Project A: McHenry, Hough, Toquam, Hanson, & Ashworth, 1990) which revealed that two specific facets of Conscientiousness, dependability and achievement, were the best predictors of job performance. Individuals who rate high on the Conscientiousness factor (i.e., those who are dependable, thorough, careful, organized, reliable, persistent, hardworking and achievement oriented) generally have higher job performance levels in most occupations (Barrick et al., 1994). Mount et al. (1994) and Mount and Barrick (1998) stated that Conscientiousness has emerged as perhaps the most important trait motivation variable in personnel psychology (Mount, Barrick, & Strauss, 1993; Schmidt & Hunter, 1992).

Findings of Digman and Takemoto-Chock (1981) and Smith (1967) indicated that there is some evidence of consistent correlations between Conscientiousness scores and educational achievement (Barrick & Mount, 1991). These researchers contended that Conscientiousness is the best predictor of academic achievement and job performance (Mount & Barrick, 1995). And, Barrick and Mount (1991) found Conscientiousness to be a significant predictor of training proficiency ($r = .23$) across all occupational
groups studied. These researchers speculated that a possible explanation for this finding relates to an individual's attitude upon entering a training program (Barrick & Mount, 1991). Individuals who rate high on the Conscientiousness factor, because of attributes such as intelligence, curiosity, and broad-mindedness, are more likely to have positive attitudes toward learning experiences in general (Barrick & Mount, 1991). Barrick and Mount (1991) cited the research efforts of Sanders and Vanouzas (1983), Goldstein (1986), and Ryman and Biersner (1975) to support this contention. Ryman and Biersner (1975) found a link between individuals' attitudes prior to participation in a training program and graduation from a Navy School for divers; and Sanders and Vanouzas (1983) revealed that attitudes and trainee expectations influence the likelihood of positive training outcomes (Barrick & Mount, 1991). Goldstein (1986) wrote, “. . . it is also clear that individuals who are motivated upon entry into the training program have an advantage from the very beginning” (p. 70). Thus, this personality dimension has important implications for motivation to improve work through learning/training.

Researchers have also investigated whether Conscientiousness adds predictive validity to that found for general mental ability (GMA) (Schmidt & Hunter, 1997). These researchers found a .60 multivariate validity for GMA plus Conscientiousness to predict job performance. This represents a .09 (27%) gain in validity resulting from the inclusion of Conscientiousness.
Barrick and Mount (1991) highlight the importance of Conscientiousness as a predictor for job related criterion across various occupational groups.

... this aspect of personality appears to tap traits which are important to the accomplishment of work tasks in all jobs. That is, those individuals who exhibit traits associated with a strong sense of purpose, obligation, and persistence generally perform better than those who do not. Similar finding have been reported in educational settings where correlations between scores on this dimension and educational achievement (Digman & Takemoto-Chock, 1981; Smith, 1967) and vocational achievement (Takemoto, 1979) have consistently been reported in the range of .50 to .60 (p. 18).

Openness To Experience

Various researchers have interpreted this personality dimension as Openness (Costa & McCrae, 1985), Culture (Tupes & Christal, 1961; Norman, 1963), Independent (Lorr, 1986), or as Intellect, Inquiring Intellect, Intelligence, or Intellectence (Borgatta, 1964; Cattell, 1957; Digman & Takemoto-Chock, 1981; Fiske, 1949; Hogan, 1983; John, 1989; Peabody & Goldberg, 1989). Individuals determined to have high levels of Openness to Experience are typically considered imaginative, broadminded, intelligent, unconventional, creative, independent, cultured, curious, original and divergent thinkers (McCrae, 1987; Costa & McCrae, 1992). Judge and Cable (1997) reported findings of Woodman, Sawyer, and Griffin (1993) and stated that a "recent review of the literature on organizational literature creativity indicated that the profile of a creative individual is someone who places value
on esthetic qualities in experience, has broad interests, is attracted to complexity, and displays independence of judgment and autonomy” (p. 365).

Individuals who score low on this dimension generally have a conservative outlook and behave in a conventional manner (Costa & McCrae, 1992). “They prefer the familiar to the novel, and their emotional responses are somewhat muted... [I]t seems likely that closed people simply have a narrower scope and intensity of interests. Similarly, although they tend to be socially and politically conservative, closed people should not be viewed as authoritarians” (Costa & McCrae, 1992, p. 15).

In their 1991 meta-analysis, Barrick and Mount hypothesized that this personality dimension would be a valid predictor of training proficiency because it assesses traits that are typically associated with positive attitudes toward learning experiences. Their findings indicated that “Openness to Experience predicted the training proficiency criterion relatively well (r = .25)” (Barrick & Mount, 1991, p. 14).

Affectivity Domain

Positive Affectivity And Negative Affectivity

In a very general sense, there are two independent dimensions that characterize the structure of moods – positive (PA) and negative (NA) affectivity (Bradburn, 1969; Costa & McRae, 1980; Diener & Emmons, 1985; Diener, Larsen, Levin, & Emmons, 1985; Fry & Heubeck, 1998; Tellegen, 1985; Larsen & Diener, 1985; Watson, Clark, & Tellegen, 1984, 1988; Watson & Tellegen, 1985; Zevon & Tellegen, 1982). Research indicates that
the two dimensions have different antecedents (Costa & McCrae, 1980; Warr, Barter, & Brownbridge, 1983) and different correlates (Bradburn, 1969; Cherlin & Reeder, 1975; Costa & McCrae, 1980; Harding, 1983; Warr, 1978; Watson & Clark, 1984). Negative affectivity (NA) has been defined as the tendency to experience negative or aversive emotional states and positive affectivity (PA) as the tendency to experience positive ones (Judge et al., 1997; Watson & Clark, 1984). Meyer and Shack (1989) stated:

In recent years a consensus has formed that a two-dimensional structure adequately describes self-rated affect at its broadest level (Diener, Larsen, Levine, & Emmons, 1985; Larsen & Diener, 1985; Watson, Clark, & Tellegen, 1984; Watson & Tellegen, 1985; Zevon & Tellegen, 1982). In a similar fashion, within the study of personality there is agreement on (at least) a two-dimensional structure that adequately describes “normal” personality in its broadest representation (H.J. Eysenck, 1981; H.J. Eysenck & Eysenck, 1985; Gray, 1972, 1981). (p. 691).

The idea that the tendency for individuals to experience positive or negative affect represents a relatively stable dispositional trait was proposed by Watson and Clark (1984) (Levin & Stokes, 1989). Watson and Clark (1984) and Watson and Tellegen (1985) conducted an extensive review of research studies in personality and subjective emotional experience, and theorized that the tendency to experience positive or negative affect represents a stable dispositional trait. These researchers discovered consistently high inter-corelations between measures of negative emotions such as anxiety, irritability, neuroticism, and self-depreciation (Levin & Stokes, 1989). Their assertion was that the various scales, though diverse, were measuring components of a more global trait – negative affectivity. Subsequently, the
concepts of PA and NA have been widely researched with respect to work-related behaviors and attitudes (George, 1989; George & Brief, 1992; Levin & Stokes, 1989; Staw & Barsade, 1993; Watson & Clark, 1984; Watson, Clark, & Tellegen, 1988; Watson & Slack, 1993).

Empirical studies have supported this two-factor mood structure. For instance, research efforts of Watson and Clark (1984) and Diener and Emmons (1985) support the notion that trait-positive affect and trait-negative affect are relatively independent. Watson (1988a) and Watson et al. (1988) also found evidence of stability in the constructs, and Tellegen et al. (1988) and George (1992) determined that positive and negative affect are partially inherited. “This two-factor structure of mood also holds for data collected in various nations (e.g., Almagon & Ben-Porath, 1989; Gotlib & Meyer, 1986; Watson, Clark, & Tellegen, 1984)” (Cronanzano, James, & Konovsky, 1993, p. 596).

In 1985 an extensive re-examination of nine affective dispositional studies was conducted by Watson and Tellegen. In their re-analysis, Watson and Tellegen (1985) found that in orthogonal rotations, positive and negative affect consistently appeared as the first two varimax rotated dimensions or the first two second-order factors from oblique solutions. “The first factor, Positive Affect, represents the extent to which a person avows a zest for life. The second factor, Negative Affect, is the extent to which a person reports feeling upset or unpleasantly aroused” (Watson & Tellegen, 1985, p. 221).
NA is fundamentally an emotion-based trait dimension (Clark & Watson, 1988, 1989, 1990), and has been found to be a unitary dimension despite the fact that it has several aspects (Watson & Clark, 1984). Individuals with higher levels of negative affectivity tend to focus more on negative aspects of themselves, others, and the world in general, while individuals with higher levels of positive affectivity exhibit a more positive focus. Individuals scoring high on NA also have a tendency to more negatively interpret ambiguous stimuli (Necowitz & Roznowski, 1994), and "tend to dwell on their mistakes, disappointments and shortcomings and to focus more on the negative aspects of the world in general" (Levin & Stokes, 1989, p. 753).

Anger, anxiety, guilt, sorrow, nervousness, etc. are feelings that typically characterize individuals with high NA scores. "[N]egative affectivity represents a general syndrome of negative functioning incorporating both affective and cognitive dimensions" (Necowitz & Roznowski, 1994, p. 271). In other words, high levels of NA are related to a type of cognitive bias or a lens through which individuals approach and understand their life experiences. "This affective tendency and cognitive style may influence how people experience and evaluate their jobs" (Levin & Stokes, 1989, p. 753). Regardless of situational factors, individuals with high NA are also more likely to report distress, discomfort, and dissatisfaction over time, even in the absence of any apparent or objective source of stress (Watson & Clark, 1984). It is important to note, however, that "low self-esteem, feelings that life is not
satisfying or fulfilling, and general unhappiness may all be a far cry from full-blown clinical depression or anything like it (Coyne, 1994), but they can have negative implications for an individual's quality of life" (Furr & Funder, 1998, p. 1580).

Individuals with low NA scores are often characterized as calm and content. These individuals are typically not prone to being distressed and experiencing negative emotions and moods (George, 1996). "They do not tend to view conditions and events from a negative point of view and are less likely to think and behave in ways that promote negative affective experiences" (George, 1996, p. 147).

Watson and Clark (1985) point out that NA is not an indication of psychological health. High-NA does not necessarily imply that the individual is psychologically unhealthy despite the fact that many high-NA individuals are sometimes considered poorly adjusted. Similarly, a high-NA level is not an implication that the individual cannot or does not experience positive emotional mood states (i.e., happiness and joy). Watson and Clark (1984) stated, "NA is unrelated to an individual's experience of positive emotions; that is, a high-NA level does not necessarily imply a lack of joy, excitement, or enthusiasm" (p. 465). But, just as high NA scores do not indicate the absence of PA, high PA scores are not indicative of the absence of NA tendencies. These two are conceptually different. It is important to note that PA and NA are independent trait dimensions (Diener & Emmons, 1985), which means that an individual's level of PA does not dictate his or her level
of NA (Watson & Tellegen, 1985; George, 1992). Or, as Cropanzano et al. (1993) stated, "... an individual can be high on both, low on both, or high on one and low on the other" (p. 596). Individuals who do score high on both PA and NA would be inclined to be emotional (Cropanzano et al., 1993).

In contrast to NA, which is primarily an emotion-based trait dimension, there is a stronger association between situational variables and PA (Clark & Watson, 1988, 1989, 1990). This is especially true of social and physical activity (Clark & Watson, 1988, 1989, 1990). Individuals with high PA scores typically demonstrate a general enthusiasm for life and are often described as energetic, joyous, eager, sociable, zestful, and exhilarated. Tellegen (1982, 1985) characterized individuals high on the PA dimension as having a general sense of well-being, viewing the self with pleasure and effectively engaged in terms of both interpersonal relations and achievement (George & Brief, 1992).

Low PA scorers are often considered to be apathetic and indifferent. They also do not see themselves as pleasurably engaged, have a weak overall well-being, and do not have high self-efficacy (Tellegen, 1985). As George (1992) and Tellegen (1985) stated, individuals who are low on PA are also less likely to experience positive emotions and moods. However, they are not necessarily "unhappy" people: they simply lack some of the positiveness and enthusiasm of individuals high on PA (George, 1996).

Positive affectivity has also been found to influence an individual's responsiveness to incentives (Gouaux & Gouaux, 1971), heighten the level of
generosity extended to others (Isen & Levin, 1972), and enhance learning speed (Masters, Barden & Ford, 1979). Wright and Mischel (1982) found that positive affectivity also results in heightened expectations, greater estimates of past successes, and more favorable self-assessments.

George and Brief (1992) make a clear distinction between PA as a trait and positive moods as affective states.

PA is an enduring personality trait that predisposes people to experience positive emotions and moods as well as to have a positive outlook and orientation. Positive moods, on the other hand, refer to more transient affective states: positive moods are determined by both personality and situational factors. The fact that a person is high in PA does not ensure that the person will experience positive moods in a given context (e.g., work), just as the fact that a person is low in PA does not necessarily imply that he or she will not experience positive moods in a given context. All else equal, high-PA persons do tend to experience more positive moods than low-PA persons. However, note that PA as a trait is quite distinct from positive mood as a state (George & Brief, 1992, p. 318).

Watson and Pennebaker (1989) suggest that positive mood can be measured as a state or a trait. There is a temporal aspect to the state dimension in that state represents an individual’s feelings at given points in time. States can change over time and across situations (George, 1992). Traits, in contrast, “represent stable individual differences in the level of positive mood generally experienced. Hence, a positive mood as a state refers to moods that are experienced in the short run and fluctuate over time, whereas the trait (i.e., PA) refers to stable individual differences in levels of positive affect” (George & Brief, 1992, p. 318). Thus, traits endure over time (George, 1992). The differential test-retest found from measures of the positive affectivity trait and
the positive mood (Meyer & Shack, 1989) state indicate the trait longevity and state variability (George & Brief, 1992).

It is important to note, however, that despite the fact that traits influence states, states are the direct antecedents to behavior (George, 1991b). "Hence, if we want to understand the cause of some specific behavior, states (and not traits) are the constructs we should be concerned with" (George, 1992, p. 193). But, because the influence of traits on states is so great, it is important to gain a better understanding of traits as well.

The Relationship Between NA And PA And Personality Type

The relationship between personality and mood has been the focus of a great deal of research over the years. Among the investigators who have examined the relationship between personality factors and moods are Clark and Watson (1988); Costa and McRae (1980); Diener and Emmons (1984); Emmons and Diener (1985, 1986); Hotard, McFatter, McWhirter, and Stegall (1989); Kendell, Mackenzie, West, McGuire, and Cox (1984); Larsen and Ketelaar (1989, 1991); Meyer and Shack (1989); Warr, Barter, and Brownbridge (1983); Watson and Clark (1984); and Williams (1990). Much of the research conducted in this area has been based upon the assumption that there is a direct causal relationship between emotional states and personality traits (Fry & Heubeck, 1998). Accordingly, correlational analyses are widely used to investigate the relationship (e.g., Clark & Watson, 1988; Emmons & Diener, 1985, 1986; Meyer & Shack, 1989). These researchers have concluded that neuroticism measures tend to be more strongly associated with
NA and extraversion measures tend to be more strongly associated with PA (McFatter, 1994). Meyer and Shack contended that there exists enough evidence for certain general conclusions that warrant broad consensus (Meyer & Shack, 1989). As McFatter writes, “one of these general conclusions is that for both personality and mood indicator domains, a two-factor structure seems to account for most of the variance (e.g., Bradburn, 1969; Eysenck & Eysenck, 1985; Watson & Tellegen, 1985)” (McFatter, 1994, p. 570).

As Larsen and Ketelaar (1991) stated, the association between personality and affective dimensions is highlighted by Tellegen’s (1985) work. Tellegen viewed certain personality dimensions and certain affective tendencies to be so closely related that he considered the most powerful second-order dimensions to emanate from his program of personality scale construction as positive and negative emotionality (Larsen & Ketelaar, 1991). Emotionality is the term that Tellegen uses to describe the interaction between personality and affectivity: the term is not synonymous with either personality or affectivity. This neurotic trait cluster “appears to foster negative emotional experiences” (Larsen & Ketelaar, 1991, p. 132). It is important to note that Tellegen did not assert that the constructs (i.e., extraversion-positive affective and intraversion-negative affectivity) are the same. Rather, Tellegen’s work indicates that there is a relationship between the constructs.

Other researchers have also found that neuroticism is closely related to trait NA (cf. Meyer & Shack, 1989; Watson & Clark, 1984). More specifically, the work of Costa and McRae (1980) indicated that NA is
associated with neuroticism and PA is associated with extraversion. Costa and McRae (1980) found that extroverted individuals are predisposed toward positive affect, whereas neurotic individuals are predisposed toward negative affect. According to Costa and McRae (1991), “extraversion and neuroticism most likely play a temperamental (i.e., direct) role in fostering positive and negative affect, respectively, whereas other traits (e.g., conscientiousness and agreeableness) most likely play an instrumental (i.e., indirect) role in fostering the creation of life circumstances that, in turn, promote positive affect and minimize negative affect” (Larsen & Ketelaar, 1991, p. 133). Watson, Clark and Tellegen’s work (1988) also indicates that PA is related to extraversion (Judge et al., 1997). The personality trait positive affectivity tends to be associated with traits such as sociability, extraversion, and social boldness (Costa and McCrae, 1984; Emmons, 1986). Findings of the relationships between extraversion and positive affectivity and neuroticism and negative affectivity have been consistently replicated in research studies (Larsen & Ketelaar, 1991).

After factor analyzing mood and personality items together, Meyer and Shack (1989) determined that “a two-dimensional mood-personality space (with PA and E sharing a common dimension and NA and N sharing another common dimension) described the relation between mood and personality. A 45-degree rotation of the E-PA and N-NA axes reflected the other commonly reported (e.g., Diener et al., 1985; Russell, 1979; Watson & Tellegen, 1985)
mood dimensions of engagement-disengagement (or activation) and pleasantness-unpleasantness” (McFatter, 1994, p. 570).

**Biological Basis Of Dispositional Differences**

Staw and Ross (1985) posited a biological basis for the explanation of dispositional tendencies. Several researchers have provided empirical evidence to support the biological or physiological theories of dispositional tendencies (Maas, Dekirmenjian, & Fawcett, 1974; Shapiro, 1965). For instance, Tucker and Williamson (1984) posited a hemispheric specialization model that suggests that the experience of positive affectivity is associated with the noradrenegic (right-lateralized) arousal system and the experience of negative affectivity is associated with the dopaminergic (left-lateralized) activation system. Depue, Luciana, Arbisi, Collins, and Leon (1994) followed this biological basis line of reasoning as well and also suggested that PA may be related to differences in brain dopamine activity.

Jang, Livesley, and Vernon (1996) assessed the genetic and environmental etiology of the Big 5 taxonomy using 123 pairs of identical twins and 127 pairs of fraternal twins. Their results indicated “broad genetic influence on the five dimensions of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness was estimated at 41%, 53%, 61%, 41%, and 44%, respectively” (1996, p. 577). Similarly, Bouchard et al. (1990) reported that on measures of personality and temperament, monozygotic twins reared apart are about as similar as those reared together.
Arvey, Bouchard, Segal, and Abraham (1989) extended Staw and Ross' premise and suggested the possibility of a genetic explanation. Genetic approach researchers contend that dispositions are innate (Lykken & Tellegen, 1996). Arvey et al. (1989) studied 34 pairs of monozygotic twins who were raised apart. After administering the Minnesota Satisfaction Questionnaire, the researchers examined the intraclass correlation for the twins' satisfaction levels to approximate the proportion of phenotypic variance accounted for by genetic factors, or the hereditability. The result was stronger hereditability of intrinsic factors than hereditability of extrinsic ones (Arvey et al., 1989). Tellegen et al. (1988) studied fraternal and identical twins who were raised together and apart. Their results indicated that genetic factors accounted for approximately 55 percent of the variance in NA and approximately 40 percent of the variance in PA.

Similar results were found in a replication of the study using monozygotic and dizygotic twins, (Arvey et al., 1994) though the researchers found hereditability estimates below .20. Using both twin types allowed for a comparison of subjects who share all genetic components (MZ twins) with those who on average share approximately 50% of genetic composition (DZ twins). This study, however, used twins who were not necessarily reared separately. Hereditability was estimated on the basis of the comparisons between the correlations for the MZ twins and the correlations between the DZ twins.
Other researchers have also investigated the origins of PA and NA. For instance, Viken, Rose, Kaprio, and Koskenvuo (1994) conducted a twin study measuring PA and NA levels in the same respondents of varying ages (ranging from eighteen to fifty-nine) at two separate intervals. Their findings indicated that despite the fact that heritabilities dropped slightly depending on the age of respondents, there exists strong evidence of a genetic basis for PA and NA. The heritabilities in this study were comparable to those found in Tellegen et al. (1988).

As George (1996) contends, knowing that an individual’s PA and NA levels are, in part, rooted in his or her genetic composition logically leads researchers to conclude that PA and NA are enduring traits that are not likely to change significantly in the short or long run. The findings of Costa and McRae (1988) support this conclusion. These researchers found that measures of PA and NA had test-retest correlations of .82 and .83. As George (1996) states, this does not mean that PA and NA are invariant over the life, but that they tend to be stable traits.

Criticisms Of The Dispositional Perspective

The dispositional approach to studying organizational behavior is not without criticism and controversy. In fact, dispositional studies have been the target of much criticism and debate (Cropanzano & James, 1990; Davis-Blake & Pfeffer, 1989; Gerhart, 1987; Gutke & Winter, 1992; Peterson, 1968). "Most of these criticisms have been based on the methodological inadequacies of the studies (Judge, 1992)" (Judge, Locke, & Durham, 1997, p. 153). Davis-
Blake and Pfeffer (1989) and Gerhart (1987), for example, charged that previous dispositional research lacked controls necessary to rule out alternative explanations of the results. Numerous methodological flaws resulted from the researchers’ use of preexisting data sets and others stemmed from the lack of a coherent definition of what the dispositions are (Judge & Hulin, 1993).

There are other criticisms as well. Mischel stated, “data that demonstrate strong generality in the behavior of the same person across many situations are critical for trait and state personality theories; the construct of personality itself rests on the belief that individual behavior consistencies exist widely and account for much of variance in behavior” (1968, p. 13). In a survey of the literature, he found very little evidence for the existence of cross-situational correlation coefficients that exceeded .30 (Monson, Hesley, & Chernick, 1989). Thus, Mischel (1968) concluded that personality traits account for very little of the variability in individual behaviors across situations (Staw & Ross, 1985). Judge and Hulin noted that empirical evidence linking personality variables to “organizationally relevant attitudes and behavior have been, for the most part, disappointing (Bernardin, 1977; Guion & Gottier, 1965; Salancik & Pfeffer, 1978; Schmitt, Gooding, Noe, & Kirsch, 1984; Weiss & Adler, 1984; White, 1978)” (Judge & Hulin, 1993). Bern and Allen (1974) have countered that attack with their findings indicating that there is consistency across situations in the behavior of some (though not all) individuals. Weiss and Adler (1984, p. 42) stated that, with
regard to organizational research, personality constructs had a “tarnished reputation” as a result of “years of research with has produced comparatively little insight into organizational behavior.” Davis-Blake and Pfeffer (1989) contended that “some of the research of the new dispositionalists contains important conceptual and empirical flaws that must be addressed if this line of research is going to be more fruitful than the research reviewed by Weiss and Adler” (1989, p. 386). Davis-Blake and Pfeffer (1989) continued by stating that in order to produce more insightful findings than previous work in the area, the new studies in dispositional effects must “reexamine some of the basic conceptual, empirical, and practical problems that confront a dispositional approach to organizational behavior” (p. 386).

Some of the other arguments included the following:

Block (1977) has noted that in-depth assessments of personality by trained specialists are much more predictive than the paper-and-pencil measures of traits that are commonly used. McGowan and Gormly (1976) and Aries, Gold, and Weigel (1983) have noted that personality traits are more predictive of multiple instances of behavior than in a single situation. Monson, Hesley, and Chernick (1982) have noted that personality is more predictive of behavior in ambiguous situations than in settings where role demands are so strong that behavior is externally determined regardless of personality dispositions. And, finally, Funder and Ozer have argued that the statistical magnitude of many of the most famous situational effects (e.g., forced compliance, bystander intervention, and obedience) is no greater than that achieved by the more heavily criticized dispositional research (Staw & Ross, 1985, p. 470).

Davis-Blake and Pfeffer (1989) also noted that there are two conceptual problems with the dispositional approach. These are the
suggestion that dispositions have an important main effect on an individual’s attitude and behavior in an organizational setting (thus, disregarding the impact of strong situational organizational settings on individual attitudes and behaviors) and, the implication that individuals are stable and nonadaptive. There are two inherent problems associated with this second implication. “First, in order to convincingly argue that individuals are relatively stable and nonadaptive, it is necessary to identify and describe the mechanisms that create the stability . . . . A second, and more serious, problem with arguing that individuals are nonadaptive is the growing body of evidence that suggests that an individual’s dispositions are changed by the organization in which he or she participates” (Davis-Blake Pfeffer, 1989, pp. 388-389).

Despite the criticisms of the dispositional approach, it has emerged as an important research topic. More recent research and meta-analyses have countered many of the criticisms leading to new insights about the dispositional approach. This has led many researchers to adopt this approach to the study of organizational behavior.

Value Domain

Introduction

The concept of values is a broad-based, hierarchically arranged construct that encompasses a multitude of more narrowly defined concepts or domains. For instance, values are related to beliefs that an individual holds about religious and moral issues, social and political topics, and work-related issues – to name but a few related constructs. Within each of these subsets
are concepts that are even more narrowly defined. Work ethic, for example, is a construct that falls within the work-values domain. Other examples of work values can assume a more instrumental nature. For instance, an individual who regularly volunteers at a homeless shelter may value his or her work role for the social good it provides. Or, a teenager with a part-time job at a fast food restaurant may value the monetary rewards associated with his or her position rather than valuing any benefits the work role may provide to society. This relationship between values, work values and work ethic is illustrated in Figure 2.1, which depicts three concentric circles. Each circle emanates from the same point, thereby representing the centrality of the domain; however, the circles expand as they become more general in scope. Just as work ethic occupies the center of this illustration, it also serves as the core value of this investigation.

![Figure 2.1: Relationship Between Values and Work Ethic](image)

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This section is organized according to this foundational perspective in order to systematically examine the work ethic construct. In other words, values will be discussed first, then work values, and finally work ethic. A distinction between work attitudes, work behaviors and work values is presented in the discussion of the value domain. This distinction is important because attitudes fall outside of the domain of personality dispositions. Yet, because values affect attitudes, there is a strong relationship between attitudes and values that must be considered. This is consistent with the Conceptual Model of the Dispositional Perspective presented earlier.

The concepts of values and work values serve as the foundation for work ethic. Therefore, it will be necessary to discuss each of the three constructs in some detail. Doing so will not only provide insight into the interrelatedness of the three constructs, it will also reinforce the establishment of the dispositional quality of work ethic. Other issues that will be introduced and addressed include: reasons that researchers have made efforts to investigate values, work values, and work ethic; definitions provided by researchers and theorists for each of the three terms; results of research studies specifically related to values, work values and work ethic; measures of the constructs; and theoretical foundations of work ethic.

**Justification For The Study Of Values, Work Values, And Work Ethic**

Because it is generally recognized that values have an affect on behavior in that they encourage individuals to act in accordance with their values (Rokeach, 1973; Williams, 1979), it is easy to conceive the magnitude
of the role that an individual’s values play in his or her attitudes and behaviors. Undeniably, the consequences of an individual’s values are far-reaching. Rokeach (1973) made this same point when he stated that values are manifested in all phenomena that social scientists might consider worth studying, including individuals’ work-related choices. Thus, the study of values spans a wide variety of disciplines including psychology, sociology, economics, management, etc. Meglino and Ravlin (1998) cited Rokeach and Ball-Rokeach (1989, p. 775) when they stated that values are, in fact, “among the very few social psychological concepts that have been successfully employed across all social science disciplines.” To further emphasize their point, they wrote: “Values are believed to have a substantial influence on the affective and behavioral responses of individuals (Locke, 1976; Rokeach, 1973), and changing values are frequently evoked as explanations for a variety of social ills (Etzioni, 1993), employee problems in the workplace (Nord, Brief, Atieh, & Doherty, 1988), and a purported increase in unethical business practices (Mitchell & Scott, 1990)” (Meglino & Ravlin, 1998, p. 351).

Values also serve as “the basis for self-regulating cognitions and provide the basis for judging the utility of extrinsic reinforcers (Brown and Crace, 1996, p. 211). A subset of values “represent these perspectives as applied to work settings” (Judge & Bretz, 1992, p. 261). This suggests that not all values should be categorized as work values – the concept is much broader. Values serve as determinants of the way individuals meet their needs in familial structures, work-roles, and in the community and societal structures.
As values are developed, individuals store them in their memories as interrelated (Anderson, 1984), hierarchically arranged entities that can be reorganized in accordance with environmental circumstances (Chusmir & Parker, 1991). Values function both to ensure that biological needs are met and to facilitate human interaction (Rokeach, 1973).

Through an increased level of understanding of values, researchers are better able to grasp the multiple aspects of work behavior. Because work behaviors are a chief concern of organizations, investigations of the underlying value structures affecting behaviors have increasingly been attracting attention in both academic and practitioner circles. Accordingly, the topic of work values, and work ethic in particular, has increasingly become the focus of many research studies.

Values Defined

Rokeach (1973, p. 5) defined a value as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.” It is important to note that Rokeach used the term enduring, thereby emphasizing the stability and dispositional nature of the belief. Empirical evidence supports this stability. Specifically, Lusk and Oliver (1974) found that through life events and experiences, individuals establish relatively stable values. They further contended that organizational socialization is unlikely to modify the basic value structure an individual brings to the organization. McCracken and Falcon-Emmanuelli’s study (1994)
also indicated that, both in society and in individuals, values have been shown to be quite stable. Additional support of an impressive stability in American value priorities is provided in the results of repetitive surveys conducted over a 13-year period (Rokeach & Ball-Rokeach, 1989).

In their attempt to further define the construct of values, Rokeach and Ball-Rokeach (1989) have more recently used the notion that values are standards of conduct, and have drawn from Kluckhohn's (1951) definition of values as desirable means and ends of action (McCracken & Falcon-Emmanuelli, 1994). Lofquist and Dawis (1978) define values within the framework of their theory of work adjustment and contend that they are broad reference dimensions for the description of needs. More specifically, these researchers referred to values as “standards of importance for the individual” (Dawis & Lofquist, 1984, p. 4). England and Lee (1974, p. 412) offered still another definition, stating that values are “basic interests and motives” or “evaluative attitudes.”

Values as a construct is a comprehensive, though frequently misunderstood concept (Dawis, 1991). Dawis (1991) explains that researchers have previously considered values to be beliefs (Allport, 1961; Rokeach, 1973), needs (Maslow, 1954), interests (Allport, 1961; Perry, 1954), attitudes (Campbell, 1963), preferences (Katzell, 1964; Rokeach, 1973), standards or criteria (Rokeach, 1973; Rosenberg, 1957; Smith, 1969), and a conception of the desirable (Dewey, 1939; Kluckhohn, 1951; Rosenberg, 1957; Smith, 1969).
One of the distinguishing characteristics of values is that they "are tied to the normative structure of the social institutions (e.g., family, school) where they are acquired" (Brown & Crace, 1996, p. 211). In addition, values transcend objects and situations (Rokeach, 1973; Schwartz & Bilsky, 1987), and are applied as normative standards to judge and to choose among alternative modes of behavior (Schwartz & Bilsky, 1987). In short, values underlie attitudes and behavior (Rokeach, 1973; Schein, 1985). It is in this regard that the constructs differ. As an example, consider altruism – a commonly held value among school counselors. Altruism serves to influence counselors' functioning in many situations and with various objects (Brown & Crace, 1996). Interests may also become "cognized representations of needs" and, as such, serve as a guide to action and a point of comparison between individuals. However, interests cannot be considered internalized standards against which people may judge their own actions or their attainment of idealized end states or goals (Rokeach, 1973). Another point to consider is the fact that an individual typically develops a relatively small number of values but potentially develops many more interests (Feather, 1992; Rokeach, 1973). As the above definitions indicate, both researchers and theorists have offered a multitude of definitions for values. Despite variance in these definitions, a fundamental component of many, if not all of these definitions, is the longitudinal stability of the construct. In other words, researchers generally agree that values are relatively stable constructs. Because of the
enduring nature of values, they are considered to be part of an individual’s disposition.

The Value-Behavior Relationship

Values refer to the beliefs upon which people act by preference (Allport, 1961), and are “the termini of our intentions” (Allport, 1955, p. 90). Allport (1961) also considered values, when combined with interests, to be appropriate motives — a broader, yet closely related, type of trait than attitudes. Values play a role as individuals “select stimuli, guide inhibitions and choices, and have much to do with process of adult becoming” (Allport, 1955, p. 89). As such, values serve as long-range intentions that “guide learning, productivity, and the satisfaction of the worker on the job” (Allport, 1955, p. 90). Thus, Allport (1955) clearly links the schemata of values with personality dispositions, attitudes, motives, and behavior.

According to Allport’s conceptualization, values serve as an active schemata for conduct, and influence adult behavior and motivations for behavior (Allport, 1955). “In agreement with such schemata [an individual] selects his perceptions, consults his conscience, inhibits irrelevant or contrary lines of conduct, drops and forms subsystems of habits . . . [if] they are dissonant or harmonious with his commitments. In short, in proportion as active schemata for conduct develop they exert a dynamic influence upon specific choices” (Allport, 1955, pp. 75-76). Or, more simply stated, the linear relationship proceeds as follows: values are embedded in an individual’s
disposition; attitudes are derived from values; attitudes effect motives, and motives influence behavior.

Value-Related Research


- attitude ambivalence (Katz & Hass, 1998);
- persuasion (Maio & Olson, 1995);
- the function of attitudes (Maio & Olson, 1994, 1995b);
- cultural truisms (Maio & Olson, 1998); and
- prejudicial behavior (Esses, Haddock, & Zanna, 1993; Maio, Esses, & Bell, 1994).

Examples of work value research include: Shapira and Griffith's (1990) study of the work values of engineers as compared to managers, clerical and production workers and Fouad and Kammer's (1989)
investigation of the work values of women with different gender orientations. Other researchers have conducted cultural or cross-cultural studies of work values (Elizur, Borg, Hung, & Beck, 1991; Loscocco & Kalleberg, 1988; Vondracek, Shimizu, Schulenberg, Hostetler, & Sakayanagi, 1990).

Values Relating To Work

Work values have been a variable of both theoretical and empirical interest for decades. Super (1980) perhaps best describes the importance of studying work values. Super maintains that work values play a particularly weighty role in an individual’s life because, from adolescence to retirement, work is an individual’s main life task and the workplace is the chief “theatre” of his or her life. In addition, “work values have long been recognized as a critical concept in career planning and development, with significant implications for theory and practice” (Pine & Innis, 1987, p. 280). Researchers have recognized the importance of studying work values and have amassed considerable evidence to suggest that values influence work-related decisions (Dawis & Lofquist, 1984; Judge & Bretz, 1992; Knoop, 1991; Ravlin & Meglino, 1987). Thus, it is important to study the factors that determine and affect the crystallization of work values.

Work Values Defined

Work values have been defined as “an individual’s needs and priorities and consequent personal dispositions and orientation to work roles that have the perceived capacity to satisfy those needs and priorities” (Pine & Innis, 1987, p. 280). It is important to note that the concept of work values refers to
the general attitudes regarding the meaning that an individual attaches to his or her work role rather than feelings associated with a specific job (Wollack, Goodale, & Wijting, 1971). "A value does not correspond to a particular object or situation; whereas attitudes are attached to specific objects. Values are standards, but attitudes are not" (Dose, 1997, p. 220). Thus, work values differ from job satisfaction, which is an attitude toward one's own job.

Values relating to work have been defined as work values, occupational values, and career values (Pine & Innis, 1987). Despite variation in use of descriptors – career, work, or occupational – the prevailing thought is that values generally describe an individual's belief about modes of conduct (instrumental values) and end states of existence (terminal values) (McCracken & Falcon-Emmanuelli, 1994; Rokeach, 1968).

The question of whether there is a genetic or dispositional component of work values has been examined (Keller, Bouchard, Arvey, Segal, & Dawis, 1992). Using a sample of a total of 43 pairs of twin, raised in separate environments, these researchers found 40% of the variance in work values was genetically or dispositionally related. The remaining 60% of the variance was environmentally placed. "In particular, the work values of achievement, comfort, status, safety, and autonomy were observed to be significantly heritable" (Sagie, Elizur, & Kowslosky, 1996, p. 505). Thus, work values are also considered to be dispositional, at least partly.
Streams Of Work Value Research

Sagie, Elizur, and Koslowsky (1996) note that research on work values “can be divided into three main streams: (1) structure, (2) correlates, and (3) cultural differences” (p. 503). The structure stream focuses on both defining the underlying components of the work values domain and testing hypotheses relating to its structure. Correlational techniques as a method of studying work values in relation to other personal, social or organizational variables comprise the second research stream. In the third and final stream, researchers analyze the impact of national culture on the pattern and level of work values (Sagie, Elizur, & Koslowsky, 1996).

The structure of work values: The primary goal of the structural approach is to identify the fundamental components of a specified construct. By utilizing this structural approach, the researcher is able to consider seemingly unrelated items in an integrated framework consisting of a finite number of rudimentary factors. A definitional framework of its domain and an empirical test of the definition are inherent in this approach. “This is particularly important in the field of work values, which includes diverse and fragmented items such as pay, health conditions, enjoyment, and achievement” (Sagie, Elizur, & Koslowsky, 1996, p. 504).

Facet analysis maps and locates variables in a multidimensional space. This technique has historically been the preferred method used to test hypothesized structures (Guttman, 1968). Using a dichotomous classification of either intrinsic or extrinsic is the most widely used structural approach in

97
research efforts (Herzberg, 1966; Wollack, Goodale, Wijting & Smith, 1971). However, there exists a problem with this approach: researchers sometimes use different definitions for the terms ‘intrinsic’ and ‘extrinsic’ (Billings & Cornelius, 1978).

Elizur (1984) assumed a different approach. He “distinguished between two basic facets of work values: (a) modality of the work outcome (i.e., whether it is instrumental - obtains a desired end such as pay for performance), cognitive (a belief system regarding appropriate behavior such as achievement), or affective (such as enjoyment of application); and (b) performance contingency, (i.e., whether the outcome is contingent upon performance or upon membership in the organization”) (Sagie, Elizur, & Koslowsky, 1996, p. 504). These two underlying components of work values can be used to describe work values of both genders in various cultural environments (Elizur, 1994; Elizur et al., 1991).

The structural approach of work values is not without limitations. One such limitation is its apparent failure to consider streams of research on personal values in other life domains (Sagie, Elizur, & Koslowsky, 1996; Schwartz, 1992, 1994; Triandis, 1995). Personal values relate to work, family life, culture, and religion (Sagie, Elizur, & Koslowsky, 1996). Despite the relationship between personal values and these other domains, there exists only a relatively small number of studies (e.g., Krau, 1989; Levy, 1990) that analyze the interrelationships among values in the various areas of life.
Correlates of Work Values: Research indicates that many factors are related to work values (McCracken & Falcon-Emmanuelli, 1994). Pine and Innis (1987) delineated some of these factors. They include economic, historical, and sociological factors (Pine & Innis, 1987); sex roles (DeVito, Carlson & Krens, 1984; Dillard & Campbell, 1982; Drummond, McIntyre, & Skaggs, 1978; Fine-Davis, 1983; Fretz, 1972; Lee, 1984; Yankelovich, 1979); historical cohorts (Coffield & Buckalew, 1984; DeVito et al., 1984; Mucowski, 1979; Perrone, 1973; Schwarzweller, 1960; Super & Mowry, 1962; Yankelovich, 1979; Wrenn, 1964; Yankelovich, 1979; Yogev, 1983); familial relationships and experiences (Holland, 1973; Perrone, 1965; Vroom, 1964) and economic conditions of beliefs, aspirations, and expectations and affect the formation of individual work values (Dillard & Campbell, 1981, 1982; Fine-Davis, 1981; Wrenn, 1964; Yankelovich, 1979) (Pine & Innis, 1987). Still other factors that affect work values include age (Krau, 1989), teachers, peers and significant others (Dillard & Campbell, 1981; Krau, 1989; Wijting, Arnold, & Conrad, 1978), and socioeconomic status (Drummond et al., 1978; Hale & Fenner, 1972; Perrone, 1973; Super & Mowry, 1962; Yankelovich, 1979; Yogev, 1983). Research also indicates that for adults specifically, work values are related to factors such as age, social class, and occupation (Centers, 1949; Friedlander, 1965, 1966; Goodale & Hall, 1976; Kohn & Schooler, 1969; Morse & Weiss, 1955; Shappell, Hall & Tarrier, 1971; Wollack, Goodale, Wijting, & Smith, 1971).
In a study conducted by Cherrington, Conde, and England (1979), age, education, and seniority were found to be correlates of work values. Specifically, these researchers found that these factors were correlated with the following work values: moral importance of work, pride in one's craftsmanship, and the importance of money. In addition, gender has also been found to affect work values: in general, men are typically more “concerned with instrumental values and women with affective ones” (Sagie, Elizur, & Kowslosky, 1996, p. 506).


In their attempts to study the role of national culture in shaping work values, Elizur et al. (1991) found that “while the underlying multifaceted structure was invariant across several cultural samples, some differences existed in the rank order or importance of certain work-value items” (Sagie, Elizur, & Koslowsky, 1996, p. 509). In comparing job interest levels of Western respondents from the United States, Holland, Germany, China, and
Hungary, these researchers found that job interest was the most important value for Western respondents from the United States, Holland, and Germany. In contrast, job interest was only modestly important to the respondents from China and Hungary (Sagie, Elizur, & Koslowsky, 1996).

In a study of subjects from 11 national cultures conducted by Ruiz-Quintanilla and England (1996), respondents varied in their definitions of work activities. Some participants responded in terms of individual costs, some in terms of social contribution, and others in terms of benefits. The Loscocco and Kalleberg (1981) study, like the Vondracek et al. (1990) study and the Engel (1988) study, compared Japanese and Americans. Loscocco and Kalleberg (1981) found “more commitment to work among older men than among younger men in both American and Japanese samples, the same pattern of commitment in American women, and greater contrast in the importance placed on good pay between younger and older American workers” (Lebo, Harrington, & Tillman, 1995, p. 351).

The Relationship Between Work Values And Attitudes

Researchers contend that the work-related constructs value attainment, attitudes and moods potentially have influential effects on each other (George & Jones, 1996). Thus, as Hochwarter, Perrewé, and Brymer (1998) asserted, “simultaneously considering values, attitudes, and moods (i.e., positive and negative affectivity) will enhance our ability to both predict and understand the complexity of the work experience” (p. 3). For instance, in their research, Mobley et al. (1979) found that values affect job satisfaction. Similarly,
Steers and Mowday (1981) suggested that values and job expectations, in combination, influence attitudes such as job satisfaction which ultimately lead to turnover intentions (Lee & Mitchell, 1994). Further evidence is provided by Lee and Mowday (1987) who proposed that job expectations and values influence job satisfaction, organizational commitment, and job involvement, which then influence turnover intentions. In their study of the relationship between the three constructs, George and Jones (1996) hypothesized and found that the relationship between job satisfaction and turnover intentions is moderated by both value attainment and positive mood.

Environmental or situational factors may also influence the impact of work values on outcomes (Sagie et al., 1996). In work environments that are structured with ambiguous goals (Weick, 1996), work values play a critical role in outcomes. "[I]n an organization where performance standards and behavior-reward contingency are not clearly defined, work values may bridge the gap and have a greater impact on behavior" (Sagie et al. 1996).

Work Ethic

Employers frequently mention one work value, work ethic (also termed Protestant Work ethic) as a desirable characteristic of employees (Hill, 1995). Coupled with employability skills, work ethic is often cited as an attribute that is desirable or necessary for employment success (Custer & Claiborne, 1991; Hill, 1992). Employability skills, as defined by Lankard (1990) include personal image, interpersonal skills, and good habits and attitudes. "In essence, the employability skills needed for the high-
performance workplace are a tangible expression of the underlying work ethic . . .” (Hill, 1995). Thus, as Ali and Azim (1995) wrote, this construct has attracted the attention of numerous researchers, especially with respect to organizations’ economic success (Furnham, 1984, 1991).

Work ethic is a multi-dimensional construct that has social, economic, and political implications (Furnham, 1990). Because work ethic is an abstract concept, there exists a multitude of both definitions and measurement techniques. Countless researchers have offered definitions, many of which build upon each other. It is important to discuss several of these definitions as each adds an important dimension to the construct and helps clarify its significance. Greenberg (1977), for instance, identifies work ethic as a personality construct, and Morrow (1983) defines the term as the extent to which one intrinsically values work as an end in and of itself. “Stated differently, it is the extent to which a person believes in the importance of work itself. Depending on the specific conceptualization and measure chosen, ideas related to the importance of independence, self-sufficiency, frugality, paid employment, and explicit rejection of leisure are also part of the definition” (Morrow, 1993, p. 1).

Other researchers extended their conceptualizations of the work ethic past the notion of intrinsic value and introduced personal accountability and responsibility for the work that an individual performs into the definition of work ethic (Cherrington, 1980; Colson & Eckerd, 1991; Yankelovitch & Immerwahr, 1984). Cherrington (1980) enumerated eight characteristics of
work ethic that also addressed the accountability and responsibility aspects of
work ethic:

1. People have a normal and religious obligation to fill their lives
with heavy physical toil. For some, this means that hard work,
effort, and drudgery are to be valued for their own sake;
physical pleasures and enjoyments are to be shunned; and an
ascetic existence of methodical rigour is the only acceptable
way to live.

2. Men and women are expected to spend long hours at work,
with little or no time for personal recreation and leisure.

3. A worker should have a dependable attendance record, with
low absenteeism and tardiness.

4. Workers should be highly productive and produce a large
quantity of goods or service.

5. Workers should take pride in their work and do their jobs well.

6. Employees should have feelings of commitment and loyalty to
their profession, their company, and their work group.

7. Workers should be achievement-oriented and constantly strive
for promotions and advancement. High-status jobs with
prestige and the respect of others are important indicators of a
‘good’ person.
8. People should acquire wealth through honest labour and retain it through thrift and wise investments. Frugality is desirable; extravagance and waste should be avoided (p. 20).

There are numerous other characteristics attributed to individuals with high levels of work ethic. As defined by Weber (1958), the principle aspects of the Protestant Work Ethic include: individualism, asceticism, and industriousness. Of these three, industriousness probably represents the most critical aspect of the Protestant Work Ethic (Wollack, Goodale, Witjing, & Smith, 1971). Furnham (1990) provides more detailed descriptions of the characteristics associated with the construct. Some of these characteristics are a high internal locus of control (Furnham, 1987; Lied & Pritchard, 1976; Waters, Bathis, & Waters, 1975); conservative attitudes and beliefs (Furnham & Bland, 1982; Joe, 1974; MacDonald, 1971), individualistic attribution styles (Furnham, 1982; Feather, 1984); and a high need for achievement (McClelland, 1961; Furnham, 1987). Furnham (1990) also contends that high PWE scorers are independent-minded, competitive, and hard working.

Representing a set of values related to work, work ethic generally seems to refer to a commitment to work which is stronger than just providing a living (Babash, 1983). It is “a conviction that work is a worthwhile activity in its own right, not merely . . . the means to material comfort or wealth” Lenski, 1961, pp. 4-5). Thus, the Protestant Work Ethic, according to Aldag and Brief (1975), Rim (1977), and Wannous (1974) also serves other
functions — patterning and regularity of working hours, intrinsic work satisfaction, and role-identity with the task.

Andrisani and Parnes (1983) maintain that there are both broad and narrow conceptual definitions of work ethic as a latent variable. The narrow approach involves defining and measuring work ethic with respect to one of its many aspects. That particular aspect is the variety of attitudes and beliefs that in some sense reflect “a positive attitude about work” (Cherrington 1980, p. 19). From a broader perspective, the term has been defined through a combination of a variety of:

... responses to attitudinal questions have been combined into a single measure that purports to be a collective representation of the work ethic. The individual components typically include, for example, beliefs about the moral superiority of hard work over leisure, craft pride over carelessness, sacrifice over profligacy, earned over unearned income, and positive over negative attitudes toward work. (Andrisani & Parnes, 1983, p. 102).

The concept of work ethic has also been defined for “an individual (or for a more or less homogeneous group of individuals) as a value or belief (or a set of values or beliefs) concerning the place of work in one’s life that either (a) serves as a conscious guide to conduct or (b) or is simply implied in manifested attitudes and behavior” (Siegel, 1983, p. 28). This definition is an important one because it applies to a wide variety of groups: it is culture-free, neutral to a historical context, to location, and to nonwork interests. It is also “positive” as opposed to being “normative,” and allows room “for all the composite work ethics that have been described or sponsored in a vast corpus.
of sociological, political, and religious literature – Protestant, Calvinistic, Puritan, Primitive, Christian, monastic, feudal, Talmudic, Buddhist, utopian, communist, etc” (Siegel, 1983, p. 28).

As the above definitions illustrate, there is no fixed definition of the construct. One of the primary reasons for this is the fact that work ethic is multidimensional and is associated with aspects of economic, political and social life. In this study, work ethic is considered to be a personal value. Regardless of the definition adopted, however, researchers generally agree that work as the core of a moral life is the central premise of the work ethic concept (McCracken & Falcon-Emmanuelli, 1994, p. 5). “Work makes people useful in a world of economic scarcity: It staves off the doubts and temptations that preyed on idleness; it opened the way to deserved wealth and status; it allowed one to put the impress of mind and skill on the material world” (Rodgers, 1978, p. 14).

Theoretical Foundations Of The Protestant Work Ethic

Regardless of the definition used to describe the term, researchers attribute the origin of the construct to sociologist Max Weber’s (1994-1905, 1958) Protestant Work Ethic (PWE) theory (i.e., Barbash, 1983). Weber’s (1904-1905) treatise maintained that the work ethic involved an entire philosophy of life (Cherrington, 1980), related business success to religious beliefs, and first introduced the concept of the Protestant Work Ethic. Weber wrote, “Labour must be performed as if it were an absolute end in itself, a calling” (1958, p. 62). According to Weber (1947), “the holder of the
Protestant Ethic is committed to the values of hard work, to the work itself as an objective, and the work organization as the inevitable structure within which those internalized values can be satisfied” (Kidron, 1978, p. 240).

The Protestant Work Ethic emerged from Calvinistic and Quaker individualism and asceticism (Maccoby, 1983). Weber recognized this, and described the Calvinist tradition of frugality, hard work, conservatism, success and its contribution to capitalism (1904-1905, 1958). “Unlike the Lutheran view of a calling as one’s fate that should be accepted with good grace, the Calvinistic-Puritan view demanded constant work at one’s ‘calling,’ as proof of one’s faith and membership in God’s elect. Citing the parable of the talents (Matthew 25), the Puritan was urged to prosper: ‘You may labor to be rich for God, though not for the flesh or sin’ (Maccoby, 1983, p. 183).

Though the origin of the concept had religious affiliations, the current conceptualization is much more a secularized construct (Hill & Petty, 1995). The underlying attitudes and beliefs that have contributed to and supported hard work have been incorporated into Western cultural mores and are no longer solely connected with a particular religious sect (Hill & Petty, 1995; Rodgers, 1978; Rose, 1985). However, many of the characteristics associated with the construct are still applicable today.

Studies Relating To Work Ethic

Furnham and Koritsas (1990) write that much of the research effort relating to work ethic have been focused on devising psychometrically sound measures of the PWE; examining the relationship between PWE beliefs and
other work and non-work behavior; and investigating the relationship between
the PWE beliefs and other individual difference measures of personality,
Furnham (1990a), for instance, content analyzed seven work ethic scales. He
found that items from PWE fit into six possible categories. These include:

1. work as an end in itself,
2. hard work and success,
3. leisure,
4. money/efficiency,
5. spiritual/religious, and
6. morals.

Examples of the work and non-work behavioral studies include studies
conducted by Merrens and Garrett (1975), Bruhn (1982), Greenberg (1977,
1979), Aldag and Brief (1975), Buchholz (1983), and Albee (1978). The
breadth of these studies, however, demonstrates the fact that researchers have
attempted to link work ethic with a host of variables.

A study that more directly relates to the purposes of this investigation
is one designed to examine the relationship between work behavior and the
PWE. Merrens and Garrett (1975) predicted and found that individuals with
high PWE scores performed better and longer on tasks designed to provide
low motivation and interest levels. Also related to the purposes of this study
is Greenberg's (1977) study that investigated the relationship between
performance evaluations and PWE scores. His findings indicated that
negative performance evaluations resulted in performance improvement among individuals with high PWE scores and a decrease in performance levels among individuals with low PWE scores. Greenberg (1979) also found a relationship between equity perceptions and PWE scores. High PWE scorers had a tendency to take both productivity levels and duration of work into consideration when making decisions regarding the allocation of money to hypothetical workers. In contrast, individuals with low PWE scores used the duration as the only criterion in deciding how to distribute funds.

Other correlates of PWE include higher order strength needs, authoritarianism, and internal locus of control (Morrow, 1983). The construct has also been studied with regard to job design variables (Ganster, 1980; Sekaran, 1989), psychological distress (Jackson et al., 1983; Stafford et al., 1980), days off (Koslowsky et al., 1990), sick days (Koslowsky et al., 1990), employment status (Stafford et al., 1980), mental health (Stafford et al., 1980), occupational rank (Dickson & Buchholz, 1977), religion (Buchholz, 1977) and job satisfaction (Morrow & McElroy, 1987). Morrow (1993) also reported:

A composite measure of professionalism and five constituent subscales . . . demonstrated correlations with PWE ranging between nonsignificant and $r = .34$ (Morrow & Goetz, 1988) while job involvement . . . and PWE correlations ranged between $r = .24$ (Sekaran, 1989) and $r = .41$ (Morrow & McElroy, 1986). Organizational commitment . . . and PWE correlations were between $r = .28$ (Morrow & Goetz, 1988) and $r = .42$ (Morrow & McElroy, 1986) (Morrow, 1993).
PWE has also been investigated in several different cultures (Tang, 1993). Tang (1993) lists these as Great Britain (Furnham, 1984a, 1984b, 1989; Furnham & Muhiudeen, 1984), Malaysia (Furnham & Muhiudeen, 1984), Taiwan (Ma, 1986; Ma & Smith, 1985; Tang, 1990; Tang & Bumeister, 1984), Hong Kong (Ma, 1987); New Zealand (Poulton & Ng, 1988), the Caribbean islands (Gonsalves & Bernard, 1983), East Africa (Munroe & Munroe, 1986), and South Africa (Bluen & Barling, 1983).

This diversity in foci of studies gives testimony to the fact that researchers generally attribute great significance to the strength of the work ethic to pervade many aspects of life.

Work Ethic And Disposition

It is relatively easy to follow the line of logic that has led many researchers to conclude that work ethic is a dispositional characteristic. The most fundamental argument supporting the dispositional nature of work ethic focuses on the fact that work ethic is considered a value. The stability of values (i.e., values are enduring beliefs) and the fact that values are generally “not specifically linked to situations” (Furnham, 1990, p. 35), supports the dispositional underpinnings of values. Because work ethic is a value, it is thus a dispositional component.

Allport (1955) associated an individual’s value-system with his or her individual philosophy of life and cited the German school of Verstehendepsychologie’s insistence that this philosophy is the major characteristic of any personality or disposition. These value-systems
dynamically orient future behavior and act as "intentional characteristics"—representing the individual's primary modes of addressing himself to the future (Allport, 1955, p. 89). This orientation or tendency toward a given direction is important as it serves as a "broad intentional disposition" (Allport, 1955, p. 92). In fact, Allport believed that the value schemata was so ingrained in an individual's dispositional characteristics that it guides all future thoughts and behaviors.

The dispositional nature of work ethic is also evident in Morrow's (1993) conceptual model of work commitment that uses concentric circles to depict a multifaceted approach to defining and measuring the construct. As Blau (1997, 1998) wrote, Morrow indicated that work ethic was the innermost circle, followed by career commitment, continuance then affective organizational commitment, and job involvement as the outermost circle. Blau (1998) cited Morrow (1993) as he explained that the "inner circle facets are more dispositional and cultural and thus more stable, while outer circles are more situationally determined and subject to change" (p. 447).

Further evidence of Morrow's belief in the dispositional nature of the work ethic can be noted in her 1983 work. She wrote:

In the case of Protestant work ethic endorsement, determinants are felt to be primarily a function of personality and secondarily a reflection of culture. The personality link is based on observations that ethic endorsement covaries with other stable personality traits (e.g., higher order need strength—Brief & Aldag, 1977; Wannous, 1974; locus of control—McDonald, 1972; Waters et al., 1975; authoritarianism—Greenberg, 1977; MacDonald, 1972); and demographic traits
Osipow also recognized the dispositional nature of values. He wrote:

Values are assumed to be different from needs, yet influence behavior in similar ways. The primary difference between needs and values seems to lie in their origin: needs seem to be fundamentally intrinsic to individuals, though they have some social aspect, whereas values are predominantly social though they are built upon one’s fundamental personality structure (1968, pp. 152-153).

Thus, values cannot be separated from personality. As such, values — and work ethic, by extension — are an integral part of an individual’s disposition.

There are also other associations between work ethic and dispositional characteristics. One such example is evident in the achievement-related research. Personality theorist Murray (1938) conducted a vast amount of research on need for achievement or achievement motivation, and included achievement as one of his twenty basic needs (Furnham, 1990). Based upon his studies, he defined achievement as follows: the desire to accomplish something difficult; to master, manipulate, or organize physical objects, human beings, or ideas; to do this as rapidly and independently as possible; to overcome obstacles and attain a high standard; to excel one’s self; and, to rival and surpass others (164). “These needs were seen to be largely unconscious, dispositional tendencies” (Furnham, 1990, p. 35).

McClelland (1961) drew heavily upon Murray’s work and became a pioneer in the attempt to conduct a psychological analysis of the PWE (Furnham, 1990). His efforts were primarily directed at examining the
relationships between an individual’s need for achievement (\( n \text{Ach} \)) – which is considered a dispositional or psychological individual difference variable—and economic growth. McClelland “focuses on psychological and sociological factors that determine need for achievement as well as the economic consequences for these beliefs in national exhibits” (Furnham, 1990, p. 25). Based on McClelland’s studies, Furnham (1990) concluded that \( n \text{Ach} \) “is clearly a major component of the PWE though these overlapping concepts are not identical. The latter is multi-dimensional, while the former unidimensional” (p. 29). Furnham (1990) listed characteristics associated with persons possessing a high need for achievement that clearly illustrate the fact that the PWE subsumes need for achievement:

1. Exercise some control over the means of production and produce more than they consume
2. Set moderately difficult goals
3. Maximize likelihood of achievement satisfaction
4. Want concrete feedback on how well they are doing
5. Like assuming personal responsibility for problems
6. Show high initiative and exploratory behaviour
7. Continually research the environment
8. Regard growth and expansion as the most direct signs of success
9. Continually strive to improve (p. 35).
Attitude Domain

Introduction

Attitudes exemplify another type of individual difference that impacts behavior in organizations, but they differ from dispositional characteristics. Individual differences are personal characteristics — either physical, psychological, or emotional — that vary from individual to individual. Dispositional qualities (such as traits, affects, and values) also differ among individuals, but there is an enduring nature or stability across situations, which is associated with these attributes. While this is sometimes true of individual differences (and work-related attitudes), it is not always the case. For instance, at any given moment under a specific set of circumstances, an individual may hold certain attitudes about employee benefits, his or her supervisor, the food in the company cafeteria, the production levels of coworkers, etc. Considering the fact that changes in the circumstances associated with these attitudes may occur (i.e., employee benefit packages can be improved, a new chef may be hired for the cafeteria, etc.), such attitudes can be transitory rather than stable in nature. Zanna et al. (1980) addressed this cross-situational issue and wrote, “Although attitude-behavior consistency is increased when certain factors are taken into account (c.f., Calder & Ross, 1973; Fishbein & Ajzen, 1975; Norman, 1975), the assumption that a stable cross-situational relation necessarily exists between attitudes and behaviors has generally not been supported (c.f., Deutscher, 1973; Festinger, 1964; Wicker, 1971) (p. 432). This lack of endurance across
situations puts attitudes within the individual differences domain rather than the dispositional domain.

Wright and Doherty (1998) also added insight into the nature of job attitudes:

While it is possible for attitudes to have a significant affective or feeling component, typically they do not (Weiss & Cropanzo, 1996). At best, an attitude such as job satisfaction is only partially affective in nature, and even this depends on the particular measure used. As Gordon (1987) proposed, the concept of attitude is linked to the object of the emotion, not the emotion itself. Thus, happiness refers to an individual's feelings, while job satisfaction points to aspects of a person's evaluations of a job. Conceivably, a person may be happy, but view their job negatively, or be unhappy, but view their job positively (p. 482).

Researchers have for decades maintained that there is a multidimensional nature associated with the attitude construct (Brief & Roberson, 1989), and numerous researchers have argued that there are benefits associated with studying its various components (Allport, 1935; Harding, Kutner, Proshansky, & Chein, 1954; Katz & Stotland, 1959; Krech, Crutchfield, & Ballachey, 1962; Norman, 1975; Rosenberg & Hoveland, 1960; Thurston, 1928). Psychologists and sociologists, however, recognize that studying attitudes in context is the most useful method of analysis. Allport, in his classic article, argued that the concept of attitude is indispensable not only to social psychology, but also to the psychology of personality (1935). Thus, the concept is frequently studied "as a component of the personality of individuals, as serving functional or adjustive ends, or as
a descriptive concept characterizing a prevailing mode of thought of the members of a category or subgroup" (Secord & Backman, 1976, p. 503).

Attitudes act as mediator between dispositional attributes and behavior. This relationship is depicted in the conceptual model illustrated in Chapter 1. As previously stated, an individual's disposition is comprised of factors such as personality, affectivity, and values. These factors serve as contributors to the attitudes that an individual adopts. These dispositional factors act through attitudes to affect an individual's motivational intentions and behavior.

Definition Of The Attitude Construct

Like many other concepts regarding organizational behavior, there exists a multitude of definitions regarding the concept of attitudes depending upon the applied orientation. For instance, Cattell (1964), in his prolific writings, addressed the topic of attitudes and clearly explains the object-centered nature of attitudes. Cattell's taxonomy of attitudes is founded on the premise that attitudes express an individual's strength of interest in assuming a particular course of action. Attitudes are "the individual bricks in the house of the total dynamic structure. From these final measurable manifestations we must arrive, by experimental measures and statistical processes, at a picture of the total structure" (Cattell, 1965a, p. 173). He also wrote:

The attitude is a prototype of all dynamic traits, in that it involves an intended direction of action with respect to an object and is aimed ultimately at satisfying certain basic drives. Any attitude needs to be defined initially by five aspects, which can be summarized in the paradigm: "(I) In these
circumstances; (II) I; (III) want so much; (IV) to do this; (V) with that' (1964, p. 197).

The first element of the paradigm serves to define the stimulus situation; the second identifies the “organism bearing the attitude” (p. 197); the third element indicates the strength of the interest; the fourth element specifies the kind of action; and the fifth component identifies “the object with which the attitude is concerned” (p. 197).

More recent definitions, and the perspective utilized in this study, see attitudes as influencing actions, but not encompassing intent to act. “An attitude is a positive or negative feelings or mental state of readiness, learned and organized through experience, that exerts specific influence on a person's response to people, objects, and situations” (Gibson, Ivancevich, & Donnelly, Jr., 1991, p. 70). Moorhead and Griffin (1995) also contended that attitudes have been defined as complexes of beliefs and feelings that people have about specific ideas, situations, or other people. They are learned inclinations about the world – evaluative statements or judgments concerning objects, people or events. It is this environmental component of attitudes and their transient nature that distinguishes attitudes from values.

Work Attitudes Defined

Despite the fact that researchers and theorists define work attitudes in several different ways, there exists a common belief that attitudes play a significant role in an individual’s expression of feelings (Moorhead & Griffin, 1995). These attitudes refer to the knowledge structures that organize and
summarize the array of feelings and thoughts that arise from actual work experiences with a particular job (Anderson & Armstrong, 1989; Kruglanski, 1989; Olson & Zanna, 1993). Such attitudes are generally defined as “positive or negative evaluations about one’s work environment” (O’Reilly, 1990, p. 435). As George and Brief (1996) asserted, work-related attitudes are associated with specific jobs or organizations and encapsulate an individual’s beliefs and feelings about the nature of those jobs and organizations. Attitudes are context specific in that they are linked to a specific job or organization whereas values have a more global application and are more enduring in nature.

Work attitudes are a frequently investigated topic within the organizational behavior arena (O’Reilly, 1991). Examples of research in this area, as described by O’Reilly (1991), include studies to develop and validate attitude measures (e.g., Ironson et al., 1989), determine antecedents and outcomes (e.g., Frone & McFarlin, 1989; Meyer et al., 1989), and the link between work outcomes and moods (e.g., Meyer & Shack, 1989; Sinclair, 1988).

Components Of Attitudes

Attitudes can be subdivided into three basic components (Rosenberg & Hovland, 1960) that act in conjunction with each other, rather than functioning independently (Gibson, Ivancevich, & Donnelly, 1991). These are:

1. an emotional or affective component — the feelings, sentiments or emotions — either positive, negative, or neutral — an individual
holds about a particular person, group, event, idea, object, etc. Typically, the emotional or affective component of attitude is learned from parents, teacher, and other peers.

2. a cognitive or informational component — the beliefs, opinions, knowledge, and information — either accurate or inaccurate — an individual holds about a particular person, group, event, idea, object, etc. The evaluative beliefs that the individual holds are an important element of the cognitive or informational component of attitudes.

3. a behavioral component — an individual’s propensity to behave in a particular way in response to a particular person, group, event, idea, object, etc.

Thus, an attitude is the function of an individual’s emotions, information, and behavioral propensities toward a particular person, group, event, idea, object, etc. The basis for the attitude is grounded in the informational or cognitive component. The emotional or affective component constitutes the attitude itself, and the behavioral component exemplifies the individual’s intention to act in response to the object, etc. The resulting behavioral act is an interplay of beliefs, attitudes, behavioral intentions, and various other factors.

Structure Of An Individual Attitude

Research suggests that an individual’s attitude structure has particular, identifiable characteristics (Thompson & Hunt, 1996). As Thompson and
Hunt (1996) stated, these include: (1) the assumption that attitudes have a structure that resembles other cognitive or knowledge structures (Judd, Drake, Downing, & Krosnick, 1991); (2) the assumption that attitudes are hierarchically structured (Wilcox & Williams, 1990), (3) this hierarchical structure allows for the determination of the overall evaluation of an attitude object (Pratkanis & Greenwald, 1989); and, (4) attitude structures are assumed to have an associative network and spreading activation (Feldman & Lynch, 1988; Tourangeau, Rasinski, & D’Andrade, 1991). Calder and Schurr (1987, p. 287) related attitudes to beliefs by maintaining that attitudes are “a generalized evaluative summary of more elementary cognitive units – called beliefs.”

Thompson and Hunt (1996) proposed a model that indicates that attitudes have a structure similar to other cognitive or knowledge structures. Knowledge categories, according to Rosch’s theory (1978), provide three levels of cognitive categories. These are superordinate, basic, and subordinate. In the model that Thompson and Hunt presented, “each of these levels provides qualitatively different information, and each one differs in terms of the cognitive efforts required to access and utilize the information of the structure” (Thompson & Hunt, 1996, p. 657). The overall attitude that contains the overall positive or negative evaluation of the attitude object is positioned at the superordinate level. Beliefs are positioned at the basic level. Beliefs can either be good or bad (evaluative) or true or false (non-evaluative) (Fishbein, 1965), and are defined as the perceived relationship between two
objects, or a characteristic attributed to the object (Bem, 1970). Values, the comparison standard for beliefs, are positioned at the subordinate level. “Values . . . provide abstract ideas and long range concerns, . . . and serve as criteria by which objects, actions or events are evaluated” (Bar-Tal, 1990, p. 51).

**Function Of Attitudes**

Attitudes, according to Pratkanis and Turner (1994), serve two functions that relate individuals to their social context. “First, attitudes are used to make sense of the world and to operate on the environment. The evaluative summary is used in the appraisal of objects (a heuristic function) and the knowledge structure in organizing and guiding memory and complex action toward the object (a schematic function). Second, attitudes (object label, evaluative summary, and knowledge) are used to define and maintain self-worth via strategies designed to elicit positive evaluations from various social audiences” (Pratkanis & Turner, 1994, p. 1551).

Understanding the function of attitudes is important in the study of attitude-behavior relationship. “In short, depending on the representational components that are activated and the functions that are relevant, attitudes may influence a wide variety of cognitive processes. Moreover, attitudes are related to behavior under specifiable conditions drawn from the model” (Pratkanis & Turner, 1994, p. 1551).

Pratkanis and Turner (1994) also identify attitudinal effects that have implications for job-related behaviors. Among these are the following:
1. Attitudes influence social judgments. Vroom’s 1960 study exemplifies this heuristic. His survey of 1676 electronic manufacturing company employees assessed their attitudes both toward the company and the company’s goals concerning the general atmosphere, supervisory methods and product planning. Results indicated a correlation between employee attitudes and perceptions of organizational goals. “[E]mployees with positive attitudes toward the firm perceived that their goals for the organization were more similar to the actual goals for the organization than did employees with negative attitudes toward the company” (Pratkanis & Turner, 1994, p. 1552).

2. Attitudes affect expectations and inferences. Similar to the halo effect, this heuristic is manifested through the characteristics that individuals ascribe to others. More positive characteristics are typically ascribed to individuals perceived to possess characteristics that are similar to our own and vice versa. As a result, hiring and promoting decisions are usually made in favor of those individuals who most closely resemble the subgroup occupying the power positions within the organization.

3. Attitude similarity increases liking. The work of Peters and Terborg (1975) indicates that higher ratings are generally assigned to job applicants with attitudes that most closely resemble those of
the interviewer. As a result, these individuals have a greater likelihood of being hired.

4. Attitudes are used to interpret and explain social events. Salancik and Pfeffer (1978) found that ambiguous work-related events (i.e., hiring additional employees, redesigning the office, etc.) are more negatively interpreted by dissatisfied workers.

5. Attitudes can lead to selective fact identification. Facts that support an individual's attitude are more likely to gain his or her attention and endorsement than those that contradict them.

6. Attitudes are used to predict future events. "Employees with positive work attitudes are likely to believe that their future with the firm is a bright one (i.e., career advancement is probable, the organization will achieve valued goals) whereas employees with negative attitudes are likely to assume their future is gloomy (Pratkanis and Turner, 1994, p. 1553).

7. Responses to persuasive communications (i.e., support and counter-arguing) can be directed by attitudes. In their 1983 study, Smith, Organ and Near found a correlation ($r = .21$) between job satisfaction and "the compliance component of organizational citizenship behavior" (Pratkanis & Turner, 1994, p. 1553).

8. Attitudes can produce a selective reconstruction of the past. Reconstruction of historical organizational events, stories, and myths are more positively interpreted by employees with a positive
attitude. This is evidenced by the work of Eberhard and Bauer (1941) which indicated that individual recollections of a labor-management riot differed for individuals for pro- and anti-labor sentiments.

9. Attitudes affect estimates of personal behavior. Bem and McConnell (1970) found that employees who perceived themselves to be satisfied had a greater tendency to “overestimate the extent to which they engage in organizational citizenship behaviors” (Pratkanis & Turner, 1994, p. 1553).

10. Attitudes influence estimates of others’ behavior. Ross, Green, and House (1977) found that individuals’ estimate of the level of agreement that others have with their own attitudes is often inflated. “Job attitudes can lead to the assumption that others share those attitudes, thus potentially influencing both subsequent attempts at collective action and biasing perceptions of groups and organization culture (see Vroom, 1960 for a discussion of inappropriate consensus effects on organizational goals). Managers may come to assume that their own “bright ideas” are eagerly shared by others” (Pratkanis & Turner, 1994, p. 1553).

11. Attitudes influence reasoning. The thought processes by which an individual evaluates information are influenced by the attitudes he or she holds.
Attitude-Motivation-Behavior Relationship

Are attitudes predictors of behavior? This question has been extensively researched (Abelson, 1988; Kraus, 1991; Peterson & Dutton, 1975; Pratkanis & Turner, 1994; Raden, 1985; Sample & Warland, 1973), however, the answer has not always been clear. Historically, many researchers have assumed that attitudes do, in fact, predict behaviors (Allport, 1935; Campbell, 1950). Yet, Bagozzi and Burnkrant (1979) contend that disappointing results have come from many studies directed toward the attitude-behavior relationship (Berg, 1966; Bray, 1950; Kutner, Wilkins, & Yarrow, 1952; La Piere, 1934; Nemeth, 1970).

The work of Fishbein and Ajzen (1975; Ajzen & Fishbein, 1980) provided an influential model for specifying when attitudes will predict a behavior (Pratkanis & Turner, 1994), and is perhaps one of the most important contributions to the understanding of the relationship between attitudes and behavior. These researchers proposed a behavioral intentions model as an explanation of the attitude-behavior relationship. The underlying premise of this model is that focusing on an individual’s intentions to behave in a certain manner, as opposed to focusing on his or her attitudes about that behavior, provides a better prediction of behavior. These intentions translate to motivation and then to behavior. More directly stated, an individual’s intent to act is affected by his or her attitudes. In turn, these intentions serve as predictors of behavior. (See Figure 2.2.)
Figure 2.2: Fishbein and Ajzen's Behavioral Model


Becker et al. (1995) provided a concise explanation of the Fishbein and Ajzen (1975) model:

[Fishbein and Ajzen] rejected the assumption that there is a direct link between an attitude toward an object and any given action with respect to that object. They argued that consideration of attitudes toward objects, such as organizational commitment, does not enhance the prediction of behavior beyond that made possible by the variables contained within the theory of reasoned action. If such extraneous variables have an impact, the effect is indirect – mediated through major components of the model or the weighing of those components (p. 618).

This model is consistent with the three-component conceptualization of attitudes. The beliefs depicted in the model (beliefs about behavior/outcome relationships and beliefs about group/society norms) correspond to the cognitive component of attitudes. The attitudes and
perceptions (attitudes toward behavior and perceptions of norms) correspond to the emotional component; and, the intentions are related to the behavioral component. These intentions describe how an individual is likely to act in response to the object.

According to Becker et al. (1995) Fishbein and Ajzen’s conceptual model was tested by Hom and his colleagues (Hom and Hulin, 1981; Hom, Katerberg and Hulin, 1979). “Using National Guard members as a sample, they demonstrated the comparative effectiveness of the theory of reasoned action over commitment in predicting intent to reenlist and actual reenlistment (Becker et al., 1995, p. 618).

Other research efforts have ranged from finding appropriate terms to “express the strength dimension of an attitude (e.g., accessibility, afferent-strength, certainty, confidence, conviction, crystallization, extremity, intensity, magnitude, salience, stability, etc.) to studying the variance in the ability to predict behavior from the intensity of the attitudes” (Pratkanis & Turner, 1994, p. 1563). “For example, Sample and Warland (1973) found attitudes predicted student voting only when students were certain of their attitudes. Peterson and Dutton (1975) reviewed seven relevant studies to find that extreme and intense attitudes were more predictive of behavior. Fazio (1986) has repeatedly demonstrated that highly accessible attitudes (whether assessed via reaction time or experimentally manipulated) are consistently more predictive of behavior” (Pratkanis & Turner, 1994, p. 1563).
Work Commitment

Commitment, as a work attitude construct, has been one of the most heavily researched organizational behavior topics during the past few decades. Many researchers have examined the concept, and various conceptualizations and measures have been proposed and tested (Meyer & Allen, 1991; Mowday, Porter, & Steers, 1982). "Research interest in worker commitment has been so high as to generate over 25 concepts/measures since 1956 (Morrow, 1983)" (Morrow & McElroy, 1986, p. 139). Morrow (1983) thus emphasizes the numerous work commitment concepts and notes that there are 30 different forms of work commitment. (See Table 2.3.)

Table 2.3: Forms of Work Commitment

<table>
<thead>
<tr>
<th>FORMS OF WORK COMMITMENT</th>
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<tr>
<td><strong>Value Focus:</strong> Focuses on the intrinsic values of work as an end to itself</td>
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<tr>
<td><strong>Definition:</strong> Extent to which a person feels that personal worth results only from self-sacrificing work or occupational achievement</td>
</tr>
<tr>
<td>Protestant work ethic endorsement (Blood, 1969)</td>
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<tr>
<td>Protestant work ethic endorsement ((Mirels &amp; Garrett, 1971)</td>
</tr>
<tr>
<td>Conventional ethic (pride in work) subscale of survey of work values (Wollack, Goodale, Witting, &amp; Smith, 1971)</td>
</tr>
<tr>
<td>Work ethic (Buchholz, 1978)</td>
</tr>
<tr>
<td><strong>Career Focus:</strong> Focuses on perceived importance of one’s career</td>
</tr>
<tr>
<td><strong>Definition:</strong> The importance of work and a career in one’s total life</td>
</tr>
<tr>
<td>Career commitment (Quadagno, 1978)</td>
</tr>
<tr>
<td>Career Salience (Greenhaus, 1971)</td>
</tr>
<tr>
<td>Career salience (for women) (Almquist &amp; Angrist, 1971)</td>
</tr>
<tr>
<td>Commitment to a profession (Sheldon, 1971)</td>
</tr>
</tbody>
</table>

(table continued)
| **Job Focus:** Focuses on 1) the degree of daily absorption in work activity; 2) the degree to which the total job situation is central aspect of life  
**Definition:** 1) the degree to which a person is identified psychologically with his work; degree to which work performance affects self-esteem; 2) CLI measures whether a respondent is job oriented, nonjob oriented, or neutral |
|---|
| **Job Involvement:** (personal identification with work dimension, four items from Lodahl and Kejner, 1965; popularized by Lawler and Hall, 1970)  
**Job orientation** (Eden & Jacobson, 1976)  
**Job attachment** (Koch & Steers, 1978)  
**Job involvement** (Patchen, 1970)  
**Ego-involvement** (Slater, 1959; Vroom, 1962)  
**Work as a central life interest** (Dubin, 1956) |
| **Organization Focus:** Focuses on devotion and loyalty to one's employing firm  
**Definition:** Extent to which a person (a) has a strong desire to remain a member of the organization, (b) is willing to exert high levels of effort for the organization, (c) believes and accepts the values and goals of the organization  
**Organizational commitment** (calculative, moral dimensions) (Mowday, Steers, & Porter, 1979)  
**Organizational commitment** (calculative dimension) (Hrebiniak & Alutto, 1972; Stevens, Beyer, & Trice, 1978)  
**Organizational identification** (moral dimension) Hall, Snyder, & Nygfren, 1970)  
**Organizational commitment** (moral dimension) (Buchanan, 1974) |
| **Union Focus:** Focuses on devotion and loyalty to one's bargaining unit  
**Definition:** Extent to which a person (a) has a strong desire to remain a member of the union, (b) is willing to exert high levels of effort for the union, (c) belief in the objectives of organized labor  
**Union Commitment** (Gordon, Philpot, Burt, Thompson, & Spiller, 1980)  
Various attitudes toward union scales could be construed as commitment measures |
| **Combined Dimensions of Commitment**  
**Job involvement** (6 and 20 item versions) (Lodahl & Kejner, 1965)  
**Work values** (Cherrington, Condie, & England, 1979)  
**Occupational involvement** (Faunce, 1959)  
**Willingness to accept an annuity** (Kaplan & Tausky, 1977)  
**Career orientation** (Gannon & Nedrickson, 1973)  
(table continued)
Job involvement (Green, 1967; used by Reitz & Jewell, 1979)
Other subscales of survey of work values (Wollack et al., 1971)
Organizational involvement (alienative, calculative, moral dimensions)
(Etzioni, 1961; Gould, 1979)
Organizational identification (Miller, 1967)


Through her influential work on the topic, Morrow posited a “facet design describing the theoretical and empirical relations among . . . forms of work commitment” (Blau, Paul, & St. John, 1993, p. 298). These facets include value, career, job, affective organizational commitment, and continuance organizational commitment with the corresponding measures being Protestant work ethic, career salience, job involvement/central life interest and organization commitment, respectively.

Subsequent to the initial theoretical and empirical analysis of the commitment concept, numerous researchers have conducted reviews of commitment theory and research (Irving, Coleman, & Cooper, 1997; Mathieu & Zajac, 1990; Meyer & Allen, 1991; Morrow, 1983). These reviews attest to the fact that commitment is a relatively complicated construct, rather than the unidimensional construct posited by early researchers. Meyer and Allen (1991), for example assert that commitment manifests itself in different forms, and Becker (1992) and Reichers (1985) contend that the construct has different foci. Thus, researchers have expanded the conceptualization of commitment to include commitment to foci such as careers (Blau, 1988),
professions (Becker, Billings, Eveleth, & Gilbert, 1996; Gouldner, 1957, 1958; Morrow & Wirth, 1989), unions (Fullagar & Barling, 1989; Gordon, Beauvais, & Ladd, 1984; Gordon, Philpot, Burt, Thompson, & Spiller, 1980; Magenau et al., 1988; Tetrick et al., 1989), occupations (Becker, 1992; Meyer, Allen, & Smith, 1993; Reichers, 1986), organizations (Mowday, Porter, & Steers, 1982), as well as to supervisors and colleagues (Becker, 1992; Reichers, 1986). Commitment has also been shown to be empirically divergent from other work related constructs such as job satisfaction (Brooke et al., 1988; Glisson & Durick, 1988; Meyer et al., 1989). Research also indicates that distinguishing among individual foci and bases of commitment helps to explain variance in key dependent variables listed above and beyond that explained by commitment to organizations (Becker, 1992).

Organizational Commitment

Organizational commitment has been a variable of interest for many organizational theorists and researchers (Allen & Meyer, 1990; Bielby, 1992; Buchanan, 1974; Harrison & Hubbard, 1998; Hrebinak & Allutto, 1972; Kanter, 1965; Kidron, 1978; Meyer & Allen, 1984, 1988; Morrow, 1983; Mowday, Porter, & Steers, 1982; O'Reilly & Chatman, 1986; Salancik, 1977). In fact, Morrow (1993) contended that organizational commitment has “attracted more attention than any of the other forms of work commitment” (p. 71). Accordingly, several different approaches have been assumed in the attempt to define of the construct of organizational commitment (Allen & Meyer, 1990; Becker, 1960; Bielby, 1992; Brown, 1969; Buchanan, 1974;
Grusky, 1966; Hall, Schneider, & Nygren, 1970; Hrebiniak & Allutto, 1972; Kanter, 1968; Mowday, Porter, & Steers, 1979; O'Reilly & Chatman, 1986; Salancik, 1977; Sheldon, 1971. (See Table 2.4 for a timeline of organizational commitment related studies.) However, no consensus has been reached.

Table 2.4: Selected Organizational Commitment Related Studies

<table>
<thead>
<tr>
<th>Researcher(s) Conducting Study</th>
<th>Year</th>
<th>Focus of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hrebiniak and Allutto</td>
<td>1972</td>
<td>Calculative Organizational Commitment</td>
</tr>
<tr>
<td>Porter, Steers, Mowday, and Boulian</td>
<td>1974</td>
<td>Attitudinal Organizational Commitment</td>
</tr>
<tr>
<td>Bartol</td>
<td>1979</td>
<td>Attitudinal Organizational Commitment</td>
</tr>
<tr>
<td>Martin and O’Laughlin</td>
<td>1984</td>
<td>Attitudinal Organizational Commitment</td>
</tr>
<tr>
<td>Meyer and Allen</td>
<td>1984</td>
<td>Continuance Organizational Commitment</td>
</tr>
<tr>
<td>Meyer and Allen</td>
<td>1984</td>
<td>Affective Organizational Commitment</td>
</tr>
<tr>
<td>McGee and Ford</td>
<td>1987</td>
<td>Continuance Organizational Commitment</td>
</tr>
<tr>
<td>McGee and Ford</td>
<td>1987</td>
<td>Affective Organizational Commitment</td>
</tr>
<tr>
<td>Morrow and McElroy</td>
<td>1987</td>
<td>Attitudinal Organizational Commitment</td>
</tr>
<tr>
<td>Blau</td>
<td>1988</td>
<td>Attitudinal Organizational Commitment</td>
</tr>
</tbody>
</table>

*(table continued)*
<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Organizational Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blegen, Mueller, and Price</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Brooke, Russell, and Price</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Glisson and Durick</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Meglino, DeNisi, Youngblood, and Williams</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Meyer and Allen</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Morrow and Goetz</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Mottaz</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Penley and Gould</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Randall</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Steffy and Jones</td>
<td>1988</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Blau</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Blau and Boal</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Dornstein and Matalon</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Gaertner and Nollen</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
</tbody>
</table>

(table continued)
<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Type of Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Mathieu and Hamel</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Meyer, Paunonen, Goffin, and Jackson</td>
<td>1989</td>
<td>Continuance</td>
</tr>
<tr>
<td>Meyer, Paunonen, Goffin, and Jackson</td>
<td>1989</td>
<td>Affective</td>
</tr>
<tr>
<td>Morrow and Wirth</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Ornstein, Cron, and Slocum</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Putti, Aryee, and Liang</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Shore and Martin</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Withey and Cooper</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Witt</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Witt</td>
<td>1989</td>
<td>Calculative</td>
</tr>
<tr>
<td>Zaccaro and Dobbins</td>
<td>1989</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Allen and Meyer</td>
<td>1990a</td>
<td>Continuance</td>
</tr>
<tr>
<td>Allen and Meyer</td>
<td>1990b</td>
<td>Attitudinal</td>
</tr>
</tbody>
</table>

(table continued)
<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen and Meyer</td>
<td>1990b</td>
<td>Normative</td>
</tr>
<tr>
<td>Allen and Meyer</td>
<td>1990b</td>
<td>Continuance</td>
</tr>
<tr>
<td>Barling, Wade, and Fullager</td>
<td>1990</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Cohen and Lowenberg</td>
<td>1990</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Colarelli and Bishop</td>
<td>1990</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Jamal</td>
<td>1990</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Koslowsky</td>
<td>1990</td>
<td>Calculative</td>
</tr>
<tr>
<td>Koslowsky</td>
<td>1990</td>
<td>Affective</td>
</tr>
<tr>
<td>Koslowsky et al.</td>
<td>1990</td>
<td>Affective</td>
</tr>
<tr>
<td>Mathieu and Kohler</td>
<td>1990a</td>
<td>Affective</td>
</tr>
<tr>
<td>Mathieu and Kohler</td>
<td>1990b</td>
<td>Affective</td>
</tr>
<tr>
<td>Mathieu and Zajac</td>
<td>1990</td>
<td>Calculative</td>
</tr>
<tr>
<td>McGinnis and Morrow</td>
<td>1990</td>
<td>Affective</td>
</tr>
<tr>
<td>Meyer, Allen, and Gellaty</td>
<td>1990</td>
<td>Continuance</td>
</tr>
</tbody>
</table>

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Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Among the definitions that researchers have posited for commitment is that presented by Bielby (1992) who contended that commitments are related to "sustained lines of activity across situations" (p. 281). A more specific subset of the commitment domain -- work or employee commitment -- has been defined as the psychological attachment that workers feel toward their workplaces (Allen & Meyer, 1990; O'Reilly & Chatman, 1986). Kanter (1968) viewed it as "the willingness of social actors to give energy and loyalty to the organization" (p. 499) and "the attachment of an individual's fund of activity to the group" (p. 507). Hrebiniaxk and Allutto (1973) saw it as the unwillingness to withdraw from the organization for pay increments, status elevation, professional freedom or more intense collegial friendship. Butler and Vodanovich (1992), however, argued that the definition provided by Mowday et al. (1979) is perhaps the most popular. These researchers
described commitment within the work context on the basis of three related factors: “a) strong belief in and acceptance of the organization’s goals and values; b) a willingness to exert considerable effort on behalf of the organization; and c) a strong desire to maintain membership in the organization” (p. 226).

On the most basic level, organizational commitment refers to an attitude that represents an individual's identification with and attachment to the organization (Moorhead & Griffin, 1995). Individuals with high levels of commitment consider themselves to be true members of the organization, and more readily overlook minor sources of dissatisfaction associated with the organization. These individuals also see themselves as ongoing organizational members. Individuals with lower levels of organizational commitment have a greater tendency to consider themselves to be outcasts or outsiders of the organization. They also express dissatisfaction and see their membership within the organization as short-term only (Moorhead & Griffin, 1995).

Researchers have investigated whether an individual's values shape his or her feelings about an organization. For instance, research efforts of Putti, Aryee and Liang (1989) indicated that work values are more associated with organizational commitment than are instrumental values. Koslowski and Elizur (1990) found that organizational commitment was positively related to cognitive work value items, but not with affective or instrumental values. Such cognitive values include job interest, independence, and use of instrumental or affective items.
With respect to organizational commitment, research efforts are typically focused on three types of commitment — affective commitment, continuance commitment, and normative commitment (Allen & Meyer, 1990; Meyer & Allen, 1984). Allen and Meyer defined affective commitment as an "emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in, the organization" (1990, p. 2). In other words, employees stay with the organization because they want to. The alternate concept, continuance commitment, is "a tendency to 'engage in consistent lines of activity' (Becker, 1960, p. 33) based on the individual's recognition of the costs (or lost side bets) associated with discontinuing the activity" (Allen & Meyer, 1990, p. 33). More simply stated, continuance commitment refers to the fact that an employee stays with the organization because he or she needs to. Normative commitment is defined as the perceived obligation to remain with the organization (Irving, Coleman, & Cooper, 1997). This means that an employee remains a member of the organization because he or she feels obligated to do so. As Shore and Wayne (1993) maintained, researchers have amassed a great deal of information indicating the uniqueness of Meyer and Allen's (1984) Affective Commitment Scale (ACS) and Continuance Commitment Scale (CCS) (Allen & Meyer, 1990; McGee & Ford, 1987; Meyer, Allen, & Gellatly, 1990). Similarly, there is also much evidence attesting to the differential relationships each has with antecedents and

**Antecedents And Outcomes Of Organizational Commitment**

The positive organizational outcomes of committed employees have stimulated continued interest in organizational commitment for a number of years (Becker, Randall, & Riegel, 1995). There have been several studies that have explored the antecedents as well as the outcomes of organizational commitment (O'Reilly, 1990). Generally, the findings both support the proposed association between organizational commitment and desirable employee behaviors, and indicate that both individual attributes (i.e., career stage, demographic factors, early work experiences, education levels, staff/line distinctions, work values) (Brooks & Seers, 1991; Dornstein & Maalon, 1989; Ferris & Aranya, 1983; Lynn, Cao, & Horn, 1996; Koslowksy, 1990; Mathieu & Hamel, 1989; Meyer, Irving, & Allen, 1998; Morris & Sherman, 1981; Mowday, Porter, & Steers, 1982) and organization attributes (i.e., structure, human-resource practices, reward systems, internal mobility practices, and leadership) may influence an individual’s level of organizational commitment (Anderson, Milkovich, & Tsui, 1981; DeCotoris & Summers, 1987; Glisson & Durick, 1988; Johnston, Griffeth, Burton & Carson, 1993; Luthans et al., 1987; Mottaz, 1988; O'Reilly, 1990; Schwarzwald, Koslowsky & Shalit, 1992). Blau et al. (1993) described other relations that have been investigated. These include:
- normative values (working in organizations meaningful to society) (Popper & Lipshitz, 1992);
- instrumental values (working in organizations providing benefits) (Popper & Lipshitz, 1992);
- organizational support (Eisenberg, Fasolo, & Davis-LaMastra, 1990);
- organization cultures (O'Reilly, Chatman & Caldwell, 1991); and
- recruitment and selection procedures (Caldwell, Chatman, & O’Reilly, 1990).

Others have noted that socialization practices (Galanter, 1989; O’Reilly, 1989; Staw & Ross, 1989), tenure (Gregersen & Black, 1992; Hackett, Bycio & Hausdorf, 1994; McFarlin & Sweeney, 1992; Schechter, 1985; Stevens et al., 1978) and employee-ownership of the organization (Oliver, 1990b) have also been investigated in relation to organizational commitment.

Morrow’s 1983 work addressed the antecedents of organizational commitment and related the construct to dispositional factors and other individual differences. Citing work of Steers (1977), Welsh and LaVan (1981), and Morris and Sherman (1981), Morrow contended that organizational commitment “is a function of personal characteristics including individual need for achievement, which is considered a dispositional quality. Other personal qualities that fall within the individual differences domain include age, tenure, and education” (Morrow, 1983).
Meyer, Irving, and Allen (1998) conducted another important study regarding the effects of work values on organizational commitment. These researchers hypothesized that "the influence of early work experiences on organizational commitment would be moderated by the value employees placed on those experiences" (1998, p. 29). Their findings revealed an interaction between the prediction of affective commitment and normative commitment, but that the nature of the interaction varied in accordance with different work value/experience combinations. Recent research has also demonstrated that employee organizational commitment, as a work-related attitude, can be predicated upon disparate motives (Allen & Meyer, 1990; Caldwell, Chatman, & O'Reilly, 1990; O'Reilly & Chatman, 1986).

Even though overall commitment to organizations is seemingly unrelated to job performance, there exists a possible relationship between commitment as a multi-faceted construct and performance (Becker, Billings, Eveleth, & Gilbert, 1996). The research findings of Meyer, Paunonen, Gellatly, Goffin and Jackson (1989) illustrated this point. These researchers found that an individual’s involvement and identification with an organization – his or her affective commitment – had a correlation coefficient of .15 with a composite measure of performance. In contrast, an individual’s tendency to engage in consistent lines of activity because of the perceived cost of doing otherwise – his or her continuance commitment – had a correlation coefficient of -.25 with performance.
According to other research efforts (Mottaz 1988; Putti, Aryee, & Liang, 1989), intrinsic values may be more influential to work values than extrinsic values. These researchers perceived commitment as an exchange process between the organization's work rewards and the employee's personal values and goals. An employee's commitment will be high in cases when the intrinsic or extrinsic rewards presented by the organization are congruent with an employee's values (Butler & Vodanovich, 1992).

Multiple studies have focused on the relationship between organizational commitment and employee turnover (Angle & Perry, 1981; Arnold & Feldman, 1982; Bluedorn, 1982; Cohen, 1993; Cotton & Tuttle, 1986; Farkas & Tetrick, 1989; Farrell & Rusbult, 1981; Meyer & Allen, 1988; Michaels & Spector, 1982; Mathieu & Zajac, 1990; Mobley, Griffeth, Hand, & Meglino, 1979; O'Reilly & Chatman, 1986; Porter, Steers, Mowday, & Boulian, 1974; Shore & Martin, 1989; Stumpf & Hartman, 1984) and absenteeism (Steers & Rhodes, 1978, 1984). Becker et al. (1995) wrote that researchers have argued that employees who value organizational membership should eschew withdrawal behaviors, such as tardiness and absenteeism (Clegg, 1983; Cotton & Tuttle, 1986). Findings from studies examining this issue indicated that higher levels of commitment are inversely proportional to turnover intentions (Shore & Martin, 1989). Cotton and Tuttle (1986) also reported that organizational commitment was a highly significant ($p < .0005$) negative correlate of turnover, as did Mathieu and Zajac (1990).
Another key area of interest for organizational researchers focuses on investigating the positive effects associated with organizational commitment. Among the benefits associated with commitment are altruism (Becker et al., 1995), conscientiousness, job satisfaction and organizational citizenship behavior. Job satisfaction and organizational citizenship, have been extensively researched, both in terms of being an antecedent or outcome of organizational commitment and their measurement, have been extensively researched (Bateman & Stasser, 1984; Brooke, Russell, & Price, 1988; Cramer, 1996; Farkas & Tetrick, 1989; Mathieu & Farr, 1991; Mowday, Porter, & Steers, 1982; Romzek, 1989; Shore & Wayne, 1993; Williams & Hazer, 1986). Romzek (1989), like Bateman and Stasser (1984) and Mowday et al., (1982), found that the outcomes of employee commitment were positive. Their work thus supports the idea that psychological attachment to an organization may produce personal benefits, and challenges the notion that individuals must pay a high price for high levels of organizational commitment. Williams and Hazer (1986) and Farkas and Tetrick (1989) respectively developed and retested a causal model relating personal and organizational attributes to satisfaction, satisfaction to commitment, and commitment to turnover intention. The results indicated that the relationship between commitment and satisfaction may either be cyclical or reciprocal.

Wallace (1993) conducted a meta-analysis of correlational data from 15 studies in an attempt to examine the relationship between professional and organizational commitment. (Professional commitment is defined “in terms
of identification with the profession: commitment and dedication to the profession and to the professional career; and acceptance of professional ethics and goals") (Lachman & Aranya, 1986, p. 228). Her analysis revealed a moderately strong, positive correlation between organizational commitment and other work commitment foci. Specifically, she reported the following correlations:

- Professional commitment: $r = .375$
- Occupational commitment: $r = .430$
- Career commitment: $r = .286$
- Career salience: $r = .338$.

**Job Involvement**

Much of the foundational work on job involvement was conducted decades ago by researchers such as Lodahl and Kejner (1965) and Dubin (1961). Edwards and Waters (1980), Rabinowitz and Hall (1977), Saleh and Hosek (1976), Gom and Kanungo (1980), and Kanungo (1979; 1981; 1982) have conducted subsequent research regarding job involvement. However, it is Kanungo who has perhaps provided the most influential and pervasive work in the field.

Lodahl and Kejner defined job involvement as “the internalization of values about the goodness of work or the importance of work in the worth of the person and perhaps it thus measures the ease with which the person can be further socialized in an organization” (1965, p. 24). Lodahl and Kejner cited Dubin (1961) to further emphasize this point:
In the work organization the adult learns the motivation system that is specific to that institutional setting. There is real continuity between childhood experiences in the society and adult experiences in the work organization. The work organization builds its motivational systems on societal foundations. What happens at work, however, is that these social motivation patterns are made more specific. They are also made more appropriate to the work performed (p. 53).

Lawler and Hall (1970) offered a definition that is closely related to both the Lodahl and Kejner (1965) and the Dubin (1961) definitions of job involvement. They defined the job involvement construct as the degree to which the job is a central feature of the individual and his or her psychological identity (Lawler & Hall, 1970).

Pinder (1984) provided a broader definition of job involvement (Blau, 1985). "A person is said to be involved in his job if he: (1) actively participates in it (2) holds it as 'a central life interest' (3) perceives performance as central to his self-esteem; and (4) sees performance on it as consistent with his self-concept" (Pinder, 1984, p. 107). According to Blau (1985), the participative component is rooted in Allport's (1943) work and supported by Wickert (1951) and Bass (1965). Allport's conceptualization of participation was closely linked to self-esteem or ego-involvement. This performance-self-esteem contingency is also evident in the work of French and Kahn (1962) and Vroom (1962). Allport (1947) defined ego-involvement as the situation in which the individual "engages the status-seeking motive" (p. 123) in his or her work.
Job involvement leads to an "individual's tendency to exceed the normal expectations associated with his or her job" (Moorhead & Griffin, 1995, p. 65). The motivation for employees with lower levels of job involvement tends to be extrinsic (i.e., the job is viewed primarily as a paycheck). Such employees have low levels of interest in performance improvement techniques. In contrast, the motivational factors for employees with high levels of job involvement are typically more intrinsic in nature. Subsequently, these employees are often quite interested in performance improvement techniques.

Antecedents And Outcomes Of Job Involvement

Like organizational commitment, job involvement has garnered increasing interest from organizational researchers in recent years (Keller, 1997). Brown, in a meta-analysis of research on job involvement (1996), stated that there have been "hundreds of empirical studies relating it to a variety of personal and situational characteristics in a diversity of work settings" (p. 235). Table 2.5 provides a partial chronology of studies related to job involvement its measurement.

Table 2.5: Studies With Job Involvement Concepts and Measures

<table>
<thead>
<tr>
<th>Researcher(s) Conducting Study</th>
<th>Year of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodahl and Kejner</td>
<td>1965</td>
</tr>
<tr>
<td>Farrell and Rusbult</td>
<td>1981</td>
</tr>
<tr>
<td>Kanungo</td>
<td>1982</td>
</tr>
<tr>
<td>Gould and Werber</td>
<td>1983</td>
</tr>
<tr>
<td>Rusbult and Farrell</td>
<td>1983</td>
</tr>
<tr>
<td>Parasuraman and Alutto</td>
<td>1984</td>
</tr>
</tbody>
</table>

(table continued)
Given the relatively high number of studies on the topic, it is easy to see that theorists and researchers generally agree that job involvement is an important factor for understanding and predicting work behaviors such as turnover and absenteeism. Other researchers have begun to investigate the relationship between job involvement, organizational commitment and job performance (Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989). Lawler (1986) assumed a more fundamental approach and believed job involvement to be a key component in employee motivation, and Lawler (1992) and Pfeffer (1994)

considered the construct essential in the attempt to gain a competitive advantage in business markets (Brown, 1996).

Brown (1996) presented a conceptual framework that classifies antecedents, correlates, and consequences of job involvement. (See Figure 2.3.) As the model illustrates, several personality/individual difference variables are related to job involvement. These include work ethic endorsement (from the values domain), locus of control, self-esteem, and growth need strength. Situational characteristics such as job characteristics, supervisory variables, and role perceptions are also included in the model.

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![Figure 2.3: Antecedents, Correlates, and Consequences of Job Involvement](image)

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Brown stated, “Personality [dispositional/individual differences] research illustrates the view that job involvement is primarily an individual difference construct whose origins are deeply rooted in individual disposition and socialization” (1996, p. 237). However, situationists contend that the situational influences rather than the dispositional factors determine the level of an individual’s job involvement (Brown, 1996). Interactionists, on the other hand, take the position that an interrelationship between personality and situational factors influence the level of job involvement (Rabinowitz & Hall, 1977). Research studies stemming from each of these three perspectives have been conducted with respect to job involvement. Results of these research efforts indicated strong support "for the conceptualization of personal and situational variables as antecedent influences on job involvement" (Brown, 1996, 247). Brown further maintained, “It is likely that unidentified psychological and behavioral linkages (e.g., emotion, motivation, effort, creativity, cooperation, teamwork, and isolation) mediate relationships between job involvement and work outcomes” (1996, p. 247).

A number of researchers have been intrigued by the potential relationship between a particular individual difference -- Protestant work ethic -- and job involvement, and have presented theoretical models and empirical analyses of this relationship. Based on the work of Weber (1958) which emphasized the inherent value of work, the majority of these studies serve as examples of the individual difference perspective (Brown, 1996). Among these researchers are Brief and Aldag (1977), Brockner, Grover, and Blonder

Blau (1987) deviated from the individualists’ perspective and adopted the interactionist approach in his study of the relationship between work ethic endorsement and job involvement. He added job scope, a situational factor, as another variable of interest in his attempt to predict job involvement. His study, like the ones stemming from the individual difference perspective, also revealed an interaction between work ethic endorsement and job scope. Or, as Brown stated, “the combination of high work ethic endorsement and high job scope resulted in substantially higher job involvement than other combinations” (1996, p. 238).

Though she assumed more of an interactionist approach, Morrow (1983) also made an important point about job involvement and individual
difference attributes. She investigated the job involvement construct within the demographic and personality context and work situation context. Based on her research efforts on the topic, she wrote:

The consensus appears to be that job involvement is a function of personality/individual differences (i.e., it is related to age, locus of control, higher order need strength, Protestant [work] ethic endorsement) and the work situation (i.e., participation in decision making, job stimulation). The impact of culture and socialization is held to be minimal. Only community size has been identified as a replicable correlate, and job involvement findings similar to those yielded from American workers have been duplicated cross-culturally (Reitz & Jewell, 1979; Sekaran & Mowday, 1981) (as cited in Morrow, 1983a, p. 88).

The research of Steers (1977) was also based on individual and situational factors. Their findings indicated that age, tenure, employees' perceptions of job security, and role in the decision-making processes of the organization serve to intensify levels of job involvement and organizational commitment. Other individual and situational factors to which researchers have linked job involvement include education, kinship responsibility, career commitment, professional behaviors, locus of control, job scope, higher order need strength, and participation in decision making (Morrow, 1983b).

Brown (1996) addressed an issue that is conceptually related to higher-order need strength - growth need strength. He stated that “growth need strength is also likely to be positively related to job involvement because those with greater growth needs are likely to engage themselves more fully in job activities as a means of achieving satisfaction of higher order psychological needs” (Brown, 1996, p. 237). His meta-analysis indicated a .212 correlation
between the constructs (1996). Because achievement striving is a facet of the Conscientiousness dimension of the Five Factor Model of personality types, Brown's conceptualization is particularly relevant to this study.

Of particular significance to this study are investigations of the relationship between motivation and involvement. Several researchers have investigated this topic (Bagozzi 1992; Bagozzi, Baumgartner, & Pieters, 1995; Clark, 1990; Lazarus, 1991; Naylor et al., 1980; Rabinowitz, 1981; Smith & Brannick, 1990). Many of them have embraced the notion that "involvement is the key that unlocks the power of human motivation" as the foundational premise for their research efforts (Brown, 1996, p. 250).

Brown directly addressed this work motivation/job involvement relationship from the three research perspectives (individual difference, situationist, and interactionist) in his meta-analysis, and concluded that there was a link between the constructs (1996).

The individual-difference perspective regards motivation primarily as an antecedent. Individuals who are high in personality traits indicative of work motivation (e.g., work ethic endorsement, growth need strength, self-esteem, and internal motivation) should be predisposed to be more job involved, regardless of circumstances (Brown, 1996).

Situationists, however, assume a different perspective and contend that work motivation is a consequence, not an antecedent, of job involvement (Brown, 1996). Lazarus (1991), Naylor, Pritchard, and Ilgen (1980), and Pinder (1984) are among the researchers who have conducted research in this area. Viewed from this perspective, "the potential for motivation is latent
within the individual, and the extent of its activation depends on the nature of
the individual's appraisal of the job's need-satisfaction potential" (Brown,
1996, p. 238). Brown noted, however, that "the preponderance of available
study effects relate a measure of internal, or dispositional, motivation to job
involvement" (1996, p. 238). A statistically significant (r = .531) relationship
was revealed through Brown's 1996 meta-analysis. He concluded that work
motivation could be either an antecedent or outcome of job involvement
(1996). However, the order of the relationship between the two constructs in
affected by the theoretical underpinnings that the researcher adopts (Brown,
1996).

Still other researchers have studied the relationship between job
involvement and training. Mathieu and Martineau (1997) cited the work of
Clark (1990) and Hensey (1987) as examples of research with this focus.
Clark (1990) found that, across a diverse set of training programs, there were a
positive relationship between training motivation and job involvement.
Hensey (1987), using training programs designed to increase the productivity
of two maintenance districts, found that the effectiveness of training programs
suffered in the district with workers who were less job involved.

The Relationship Between Job Involvement And Organizational
Commitment

The relationship between organizational commitment and job
involvement is also of interest with respect to this study. Correlational studies
between job involvement and organizational commitment reported the
following findings: \( r = .37 \) (Maurer, 1968); \( r = .56 \) (Mowday et al., 1979). Meta-analysis of 71 studies with a cumulative sample size in excess of 26,000 respondents indicated a .496 correlation between organizational commitment and job involvement (Brown, 1996). When classified as either affective commitment (Cook & Wall, 1980; Mathieu & Zajac, 1990; Mowday, Steers, & Porter, 1979) or calculative commitment (Becker, 1960), the correlations indicated that the relationship between job involvement and affective commitment is stronger than the relationship between calculative (continuance) commitment and job involvement (Brown, 1996). More specifically, the affective commitment correlations were .511 using the Organizational Commitment Questionnaire (OCQ) developed by Mowday et al., (1979) and .514 using Cook and Wall's (1980) instrument. In contrast, the calculative commitment correlation was much lower \( (r = .287) \) using Hrebeniak and Alutto's scale (Brown, 1996). Thus, the relationship between job involvement and affective commitment is much stronger than the relationship between calculative commitment and job involvement.

Although researchers generally agree that there is a correlation between the two constructs, there is some uncertainty over the classification of organizational commitment as an antecedent or outcome of job involvement. Mowday, Porter, and Steers (1982) contended that an individual's familiarity with and involvement in a particular job precedes his or her commitment to the organization (Brown, 1996). Based upon results of empirical analyses,
Brown regarded organizational commitment as a consequence of job involvement, but conceded that it may also be an antecedent (1996).

Brown's meta-analysis (1996) also encompassed other work behaviors and job attitudes including performance, absenteeism, turnover, job satisfaction and turnover intentions. His findings revealed the following attitudinal and behavioral correlations:

- Absenteeism  \( r = -0.137 \)
- Turnover  \( r = -0.134 \)
- Effort  \( r = 0.246 \)
- Work satisfaction  \( r = 0.534 \)
- General satisfaction  \( r = 0.451 \)
- Turnover intentions  \( r = -0.310 \).

Based on the meta-analysis by Brown and other empirical studies, it is reasonable to assume that both individual and situational factors influence an individual's level of job involvement.

Motivation Domain

Motivation To Improve Work Through Learning

As stated in Chapter 1, training and the effectiveness of employee training programs figures prominently in an organization's ability to maintain a competitive advantage. Employees are often required to learn new methodologies and more efficient processes to enhance the productivity and profitability levels of an organization. Learning within the organizational setting typically involves employee development programs or learning

156
interventions. These development opportunities, according to London (1989), can include workshops, courses, seminars, and "assignments that influence personal and professional growth" (Noe & Wilk, 1993, p. 291), but require employee participation. As such, an individual's motivation to improve work through learning is a factor that contributes to the success of organizational learning initiatives.

Goldstein (1992) broadly defined training programs as learning events "that are systematically planned and related to the work environment" (p. 508). Training activity has been defined as the planned learning experience designed to bring about permanent change in one's knowledge, attitudes or skills (Campbell, Dunnette, Lawler, & Weick, 1970). Accordingly, "the fundamental purpose of training is to help people develop skills and abilities which, when applied at work, will enhance their average job performance" (Tziner, Haccoun, & Kadish, 1991, p. 167). The benefits of employee training programs are almost axiomatic. It is readily apparent that employee training programs can increase job satisfaction, eliminate or reduce job-related accidents, decrease the incidents of employee absences, reduce turnover, and increase production levels. Noe and Schmitt (1986) further delineate the rewards of employee training, and maintain that "positive trainee reactions, learning, behavior change, and improvements in job related outcomes are expected from well-designed and well-administered training programs" (p. 498). The key to achieving these benefits, however, lies in the quality of the design and the proper implementation of the programs.
For decades, researchers have recognized that a fundamental premise of training professionals is that effective training must employ basic learning principles. For instance, McGehee (1958) outlined the following sequence of events:

1. The learner is motivated; he or she wants to attain a particular goal or goals.
2. The learner reacts or responds in ways designed to attain these goals. However, his or her initial responses are restricted by the “givens” which he or she brings to the learning situation.
3. The learner practices behavior designed to meet goal attainment.
4. As the learner practices behavior, he or she receives continuous feedback regarding the consequences of his or her responses.
5. Learning has occurred when the learner can attain his or her goals with responses that were not previously part of his or her arsenal of behavior.

Because organizational training programs almost exclusively consist of adults, it is also necessary for organizations to consider adult learning principles and theories. One of the fundamental theories posited by adult learning researchers asserts that adults will learn only what they feel a desire to learn (Knowles, Holton, & Swanson, 1998; Scheer, 1979). In addition, in order to develop and institute an effective training program for adults, it is imperative that the organization attend to the various dimensions and
characteristics of the learning situation: the developmental goals and objectives, the individual and situational differences, and the core principles of adult learning (Knowles, Holton, & Swanson, 1998). Education/training facilitators must firmly grasp the complexities of: a) the nature of the intended outcomes; b) the training activities and experiences that can lead to these outcomes; c) internal and external influences that potentially affect these outcomes; and, the ways learners vary individuals and groups (Tomlinson, Edwards, Finn, Smith, and Wilkinson, 1992). Such a comprehension will aid the facilitator(s) in forming the basis for recognizing and employing teaching strategies and methodologies that fit the learners, desired outcomes, and learning context.

**Trainability Factors**

Learning within the organizational context is contingent upon the trainability of participants. Because it is generally recognized that motivation to learn/train influences the acquisition of knowledge (Hicks 1984; Keller, 1983; Tziner, Haccoun, & Kadish, 1991), the concept of trainability is thus defined as a function of the trainee’s ability and motivation \[\text{Trainability} = f(\text{Ability, Motivation, Environmental Favorability})\] (Noe, 1986). This function represents an expansion of Wexley and Latham’s (1981) conceptualization which stated that \[\text{Trainability} = f(\text{Ability, Motivation})\]. Thus, the motivational levels of trainees is a foundational component of the effectiveness of organizational training programs.
Goldstein (1992, 1993) also reiterated the importance of motivation. He wrote:

Before trainees can benefit from any form of training, they must be ready to learn; that is, (a) they must have the particular background experience necessary for the training program, and (b) they must be motivated (p. 541).

The perspectives of both Noe (1986) and Goldstein (1992) correspond to the first element in McGehee's (1958) sequential model of learning — motivation is a requirement of the learning process. Porter and Lawler (1968) also maintained that there exists considerable evidence in the behavioral sciences literature to suggest that motivation is an important influence on individual performance. And, Maier (1973) asserted that even if an individual does possess the necessary ability to learn the course content, if his or her motivational level is low, performance will most likely suffer.

Stewart, Carson, and Cardy also recognized that "person factors" such as individual characteristics can contribute to the training effectiveness of employees (1996, p. 146). They noted that research regarding the relationship between personality and training has focused on how individual differences (P) influence the effect of training (E) on behavior (B). This focus is represented in Bandura's (1986) Model of Triadic Reciprocality. (See Figure 2.4.) The fundamental principle of the Triadic Reciprocality is that an individual's behavior (B), cognitive and other personal factors (P), and environmental influences (E) mutually influence one another (Bandura, 1986). Personal factors can include ability, motivation, dispositional characteristics,
attitudes, etc.; and employee training programs fall within the environmental influence framework (E). The tacit assumption of this perspective is that individuals with higher motivational levels benefit the most from training (Stewart et al., 1996).

\[ \text{Behavior} \]
\[ \text{Linkage 1} \]
\[ \text{Linkage 2} \]

\[ \text{Environmental Influences} \]
\[ \text{Linkage 3} \]
\[ \text{Cognitive and Personal Factors} \]

\[ \text{[B]} \]

\[ \text{[P]} \]

\[ \text{[E]} \]

**Figure 2.4: Bandura’s (1996) Model of Triadic Reciprocity**


**Other Factors Affecting Motivation To Train**

Other researchers have examined the relationship between training motivation and other variables. For instance, Clark Dobbins, and Ladd (1993) hypothesized that the following variables indirectly influenced training motivation: the trainee’s involvement in the training decision; the credibility of the individual that recommends training; and the supervisor’s and group’s
support for training. Their study indicated that "(a) perceived job utility of training significantly predicted training motivation, (b) decision involvement resulted in higher perception of job and career utility, (c) decision-maker credibility affected job and career utility, and (d) supervisor training transfer climate affected anticipated job utility" (Clark, Dobbins, and Ladd, 1993, p. 292). Baldwin, Magjuka, and Loher (1991) also found that the level of motivation to learn was higher for trainees having a choice of training.

**Motivation Defined**

There are a multitude of definitions of motivation. For instance, it is defined as the conditions responsible for variations in intensity, quality, and direction of ongoing behavior (Vinacke, 1962). Reykowski (1965) defined the term as a hypothetical mechanism that controls goal-directed behavior; and, Vroom (1964) defined it as "intra- and interindividual veritability in behavior not due solely to individual differences in ability or to overwhelming differences environmental demands that coerce or force action" (Kanfer, 1990, p. 78). Katzell and Thompson (1990), however, provided a narrower definition of motivation as it relates to work situations: it is a "broad construct pertaining to the conditions and processes that account for the arousal, direction, magnitude, and maintenance of effort in a person's job" (p. 144). From these descriptions, it is easy to see that theories of work motivation do not differ substantially from general theories of human motivation.

Motivation to learn and motivation to engage in learning activities are constructs that are both closely related to each other and closely related to
work motivation. According to Noe (1986), motivation to learn is defined as the trainee’s desire to learn the content of training and development activities. With regard to training, motivation acts at the force that energizes or creates enthusiasm for the program (energizer); is a stimulus that guides and directs learning and content mastery (director); and, it influences and promotes the application of newly acquired skills and knowledge (maintenance) (Noe, 1986).

Noe and Wilks asserted that “motivation to learn, motivation to transfer, and evaluation of previous development experiences have a direct effect on employee’s participation in development activities” (1993, p. 292). In 1993, these researchers developed and tested a conceptual model of development activity that was based on studies conducted by Dubin (1990), Farr and Middlebrooks (1990), and Kozlowski and Farr (1988). Their study found that motivation to learn, perception of benefits, and work environment perceptions had significant unique effects on employee development activity. Research efforts of Baldwin, Magjuka, and Loher (1991), Hicks and Klimoski (1987), Mathieu, Tannenbaum, and Salas (1992), Quinones (1995), Ryman and Biesner (1975), and Tannenbaum, Mathieu, Salas, and Cannon-Bowers (1991) also indicated that there is a relationship between motivation to learn, learning, and completion of training programs (Noe & Wilk, 1993). As Smith-Jentsch et al. (1996) stated, “trainees who are motivated to do well in training are more likely to learn the content or the principles of a training program than are less motivated participants” (p. 110).
Despite these studies, motivation to learn is a training variable that has been largely neglected in training-related research (Clark, Dobbins, & Ladd, 1993). Similarly, motivation to engage in training activities is a construct that has also been greatly neglected by researchers. Yet, many researchers readily recognize and acknowledge the importance of the constructs. Recently, however, Ford et al. added to that body of knowledge and suggested that “efforts to improve trainee motivation during training (i.e., allowing for mastery goals) may lead to better transfer” (1998, p. 230). As Clark et al. (1993) maintained, even the most sophisticated and well-designed training programs cannot be effective without the presence of motivation to learn in the trainees. They argued that “it is important that the training literature develop a better understanding of the motivation-to-learn construct and the factors that affect it” (Clark et al., 1993, p. 293).

Factors Affecting Training Effectiveness

One of the most rudimentary concepts regarding individuals focuses on the uniqueness of humans: each individual has specific characteristics or traits that distinguish him or her from others. As trainees, individuals can differ in terms of: demographics; knowledge, skills, and abilities; learning style; cognitive ability; locus of control; motivation; personality; interests; needs; drives; and attitudes. Fleishman and Mumford (1989) maintained that these individual characteristics are among the most important determinants of training outcomes or effectiveness. Mathieu and Martineau (1997) also recognized the significance of these variables and stated that “these
characteristics seem to predispose certain people to be ‘ready’ for training” (1997, p. 207).

The exact relationship between motivation to train and dispositional traits or individual differences is not known. In fact, it is not even clear whether there is a causal or correlational relationship between the constructs. With the exception of locus of control (which has failed to yield significant correlations), personality variables have been almost totally overlooked in training related research (Lied & Pritchard, 1976; Noe & Schmitt, 1986). Colquitt and Simmering (1998) acknowledged the need for additional research in this area and asserted that there is only limited or atheoretical research linking dispositional personality variables to motivation. They also argued that researchers have not adequately investigated the types of learners who continually exhibit high levels of motivation throughout the learning process (Fedor, 1991; Phillips & Gully, 1997). In closely related comments, Barrick, Mount and Strauss noted that conscientiousness “may be the most important trait-motivation variable in the work domain” (1993, p. 721). Yet, as Colquitt and Simmering (1998) argued, both conscientiousness and goal orientation — another potentially promising variable for training applications (Button, Mathieu, & Zajac, 1996; Farr et al., 1993) -- are conspicuously absent from most training research.

Other researchers echo the sentiments described above and reiterate the need for addition research. Noe (1986) and Noe and Schmitt (1986), for instance, maintained that little attention has been paid to either individual
influences (i.e., such as motivational factors) or environmental influences on training, but contended that “trainee attitudes, interest, values, and expectations may attenuate or enhance trainee effectiveness” (Noe & Schmidt, 1986, p. 498). Researchers such as Campbell (1988, 1989) and Tannenbaum and Yukl (1992) have also maintained that additional research is required using variables such as trainees’ attitudes and motivation levels. However, as previously mentioned, motivation to train/learn has also not received a great deal of attention from researchers. Identifying the particular individual attributes that mediate the effectiveness of training is of primary importance “in order to understand how to increase the likelihood that behavior change and performance improvement will result from participation in training programs” (Noe & Schmitt, 1986, p. 498).

Antecedents And Consequences Of Trainee Motivation

Mathieu, Tannenbaum, and Salas (1992) are among the few who have investigated the relationship between training and individual characteristics. They developed a model depicting the influence of individual characteristics and situational constraints on trainees’ motivation to learn and actual performance. “Their study of 106 university employees found reactions to training mediated the impact of assignment method and training motivation on actual performance” (Blau et al., 1993, p. 135). Sanders and Yanouzas (1983) also studied the relationship between individual characteristics and training. In an investigation of the trainers’ ability to socialize trainees to the learning environment, they stated that individuals enter the training situation with
certain attitudes and expectations that may either positively or negatively impact the learning process (Sanders & Yanouzas, 1983).

Various aspects of the trainees' role are presented in Table 2.6. Individuals with "expectations that are positive and supportive of these types of activities are more likely to be ready for training. If attitudes are generally negative . . . learning is not likely to occur" (Goldstein, 1993, p. 90).

Table 2.6: Indicators of Trainee Readiness

<table>
<thead>
<tr>
<th>Indicators of Trainee Readiness</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>As a student in this class, my role is to...</strong></td>
<td></td>
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</tr>
<tr>
<td>1. Accept personal responsibilities for becoming involved in learning experiences.</td>
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<tr>
<td>2. Be willing to participate actively in classroom analysis of learning activities.</td>
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<tr>
<td>4. Be willing to learn from classmates.</td>
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<tr>
<td>5. Believe that information learned will be useful in the future.</td>
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<tr>
<td>6. Complete assignments and readings prior to class.</td>
<td></td>
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</tbody>
</table>

The Relationship Between Motivation To Train And Training Effectiveness

On an intuitive level, motivation to learn seems to be an important precondition of learning. Goldstein (1993) pointed out that individuals who are motivated when they approached the training situation have a greater advantage than those with a lower level of motivation followed this line of reasoning and investigated the relationship between trainees' motivation and learning. More specifically, Noe and Schmitt (1986), Hicks and Klimoski (1987), and Mathieu, Tannenbaum, and Salas (1990) found a positive relationship between scores on learning measures and an individual's motivation to learn (Goldstein, 1993). In still another study of the relationship between motivation to learn and learning, Ryman and Biersner (1975) studied a Navy School for Divers. They found that trainees who strongly agreed with training-confidence scale items were more likely to graduate. Sample items included statements such as:

If I have trouble during training, I will try harder.

I will get more from this training than most people.

I volunteered for this training as soon as I could.

Even if I fail, this training will be a valuable experience.

Warr and Bunce (1995) viewed motivation to learn as a two-tiered construct - distal and proximal. In distal terms, "individuals vary in the favorability of their attitudes to training as a whole. More proximally, those general attitudes are reflected in specific motivation about a particular set of
training activities” (p. 349). They studied 106 junior managers over a seven-month period. They hypothesized that there would be a significant positive relationship associated with learning score and general attitude, specific motivation, learning self-efficacy, analytic and behavioral learning strategies, and educational qualifications. A significant association was found for distal and proximal motivation ($r = .33$ and $r = .25$, respectively).

Mathieu and Martineau (1997) recognized the importance of motivation in training effectiveness and stated that training programs will be unsuccessful if trainees are not motivated to transfer information they have learned back to their jobs. “Individuals who are motivated to learn initially (pretraining motivation) are also likely to be motivated to apply the skills they develop during training once back on the job” (Mathieu & Martineau, 1997, p. 196). They developed a conceptual framework (illustrated in Figure 2.5) depicting the relationship between trainees’ motivation and traditional training criteria. (Mathieu & Martineau, 1997). As they stated:

"... training programs are viewed as existing in a larger organizational context, subject to the influences of individual and situational factors ... Trainees come the programs with a history of organizational experiences and a knowledge of what they will confront when they return to their jobs. In short, participants enter and leave training with varying levels of motivation that will likely influence how much they learn, whether they transfer learning to the job, and ultimately how successful the program is. It is important to consider the roles of individual and situational influences on trainees’ motivation (1997, p. 193)."
Figure 2.5: Conceptual Model of Training Motivation


Motivation To Improve Work Through Learning Defined

As the studies above illustrate, research efforts to date have focused on either motivation to learn or motivation to train as the dependent variable. However, the work improvement process does not entirely consist of nor does it end with either learning or training. The primary desired outcome of organizational training programs is not learning, but improvements in work outcomes. Therefore, using motivation to train or motivation to learn as a
dependent variable may be too limited for organizational learning environments.

The process of improving work through learning also involves an employee's willingness to transfer any knowledge acquired through such training programs to his or her own work processes. Following this logic, this study proposes and utilizes an entirely new construct — Motivation to Improve Work Through Learning. It is presumed that an individual's motivation to improve work through learning is a function of his or her motivation to train and motivation to transfer. Or stated mathematically, \[ \text{Motivation to Improve Work Through Learning (MTIWL) = } f(\text{Motivation to Train, Motivation to Transfer}) \]. Figure 2.6 depicts this relationship.

![Figure 2.6: Motivation to Improve Work Through Learning](image-url)
Relationship Between Achievement Motivation And Training

Results of empirical studies indicate that achievement motivation exhibits positive influences on outcomes of training programs implemented in competitive settings (Mathieu and Martineau, 1997). In a 1988 study of ROTC cadets, Mathieu reported two significant findings that relate to this study (Mathieu, 1988). He found that those with high achievement motivation perceived the training environment as less stressful and more positive than did those with lower achievement levels. Another finding focused on the correlation between the achievement motivation and commitment: there was a positive correlation between achievement motivation and the cadets' commitment to the program.

Other studies involving achievement motivation were conducted by Mathieu et al. (1993) and Sharpley and Pain (1987) (Mathieu and Martineau, 1997). Mathieu et al. (1993), using a physical education course as the training event, found that achievement motivation exhibited a positive effect on the participants' self-efficacy development. Sharpley and Pain (1987) “found that achievement motivation evidenced a positive effect on individuals' performance beyond that attributable to previous performance” (Mathieu & Martineau, 1997, p. 203). The assumption that achievement motivation is a significant contributor to training effectiveness is thus supported by these findings. Because need for achievement is a facet of the Big Five dimension Conscientiousness, these findings suggest that Conscientiousness influences trainee motivation.
Personality/Training Relationship

While the direct relationship between personality variables and training proficiency has not been extensively studied, the findings of Barrick and Mount (1991) are particularly meaningful to this study. Using the Big Five taxonomy, they found that training proficiency could be predicted for individuals falling within the following personality dimensions -- conscientiousness, extraversion and openness to experience. Mathieu and Martineau (1997) offered an explanation of these findings:

The dimensions that are associated with being outgoing, having a stronger sense of purpose and persistence, and a willingness to take risks and try new things seem to lead individuals to high levels of training performance. Given that training is often a new experience that involves taking risks in front of other people who may not be familiar to the trainee, these findings are intuitively appealing (p. 204).

Also particularly relevant to this study is the work of Colquitt and Simmering (1998) which investigated the relationship between personality variables and motivation to learn. Their study integrated conscientiousness and goal orientation with motivation to learn. Using Kanfer's (1991) distal-proximal framework for investigating personality effects, Colquitt and Simmering viewed conscientiousness and goal orientation as distal variables that influenced learning through motivation to learn, the more proximal mechanism. They investigated how conscientiousness and goal orientation correlated to motivation to learn through the expectancy and valence model.
The research hypotheses of Colquitt and Simmering were as follows:

1. Conscientiousness will be positively related to motivation to learn, both initially and after performance feedback is given, an effect that will be mediated by expectancy and valence.

2. Learning orientation will be positively related to motivation to learn, both initially and after performance feedback is given, an effect that will be mediated by expectancy and valence.

3. Performance orientation will be negatively related to motivation to learn, both initially and after performance feedback is given, an effect that will be mediated by expectancy and valence.

4. The relationship between performance levels at the time feedback is given and subsequent (a) expectancy and (b) valence will be moderated by conscientiousness, such that lower performance will be less associated with lower expectancy or valence for highly conscientious learners.

5. The relationship between performance at the time feedback is given and subsequent (a) expectancy and (b) valence will be moderated by learning orientation, such that lower performance will be less associated with lower expectancy or valence for highly learning-oriented learners.

6. The relationship between performance at the time feedback is given and subsequent (a) expectancy and (b) valence will be
moderated by performance orientation, such that lower performance will be less associated with lower expectancy or valence for less performance-oriented learners.

7. Initial motivation to learn will be positively related to prefeedback learning: postfeedback motivation to learn will be positively related to postfeedback learning (1998, pp. 656-658).

Their findings indicated a positive relationship between motivation to learn and conscientiousness and learning after orientation both initially and after performance feedback was given. "Personality variables explained an incremental 28% of the variance in prefeedback motivation to learn ($p < .001$), with both conscientiousness ($\beta = .33, p < .001$) and learning orientation ($\beta = .38, p < .001$) having significant independent relationships. Personality variables explained an incremental 27% of the variance in postfeedback motivation to learn ($p < .001$), again with both conscientiousness ($\beta = .28, p < .001$) and learning orientation ($\beta = .40, p < .001$) having significant independent relationships" (1998, p. 661). They noted that the positive relationships of Conscientiousness and learning orientation with motivation to learn were the most important contributions made by their study.

Noe's study, conducted in 1986, indirectly linked factors affecting motivation to attributes closely associated with conscientiousness. He maintained that:

it is important that trainees believe that program participation and mastery of content are related to the attainment of desired
outcomes such as prestige, horizontal and vertical career movement, enhancement of self-confidence or salary increases. . . [Motivation to learn is influenced by the extent to which trainees value good job performance, identify psychologically with the their job, and engage in career exploration behavior including self-assessment of interests, skill strengths and weaknesses, and career planning (Noe, 1986, p. 739).

Attitudes And Motivation To Improve Work Through Learning

Noe also established a link between job attitudes and motivation to train (1986). He suggested that training programs are “more salient to individuals who are highly involved with their jobs” (1986, p. 739). He continued by stating that “trainee’s motivation to improve work-related skills may be influenced by the extent to which they are involved in their jobs (i.e., the degree to which the individual identifies psychologically with the work, or the importance of the work for the person’s total self-image, Lodahl and Kejner, 1965)” (Noe, 1986, p. 742). Participation in job-related training programs can increase skill levels, improve job performance, and increase an individual’s sense of self-worth (Noe & Schmitt, 1986). These are outcomes that are valued by highly involved, conscientious employees.

Facteau et al. (1995) and Tannebaum et al. (1991) examined the association between commitment and motivation to train. Facteau et al. (1995) examined the extent to which trainees’ attitudes and beliefs influenced their pretraining motivation. They predicted that employees with higher levels of organizational commitment would be more motivated to learn during training. Their findings indicated that individuals who were committed to the
values and goals of the organization had higher levels of pretraining motivation.

Tannenbaum et al. argued that "employees' organizational commitment levels are likely to predispose them to view training as more or less useful, both to themselves and to the organization. . . . When viewed in this way, organizational commitment can be considered as an influence on training effectiveness" (1991, p. 760). In a study conducted at a U.S. Naval Recruit Training facility, they found a high correlation ($r = .53$) between commitment and motivation to learn.

**Goal Orientation/Training Relationship**

Goal orientation is another characteristic that has been found to influence training motivation. A relatively stable dispositional variable, goal orientation relates to whether individuals view situations as learning opportunities (mastery orientation) or opportunities to exhibit their capabilities (performance orientation) (Colquitt & Simmering, 1998; Mathieu & Martineau, 1997). Colquitt and Simmering (1998) cited Button et al. (1996) and argued that the construct has qualities of both a state and a trait. Button et al. (1996) maintained that individuals have dispositional goal orientations that predispose them to certain action in a given situation, but situational cues can affect those predispositions.

Findings of studies centering on this topic (Ames & Archer, 1988; Farr, Hofmann, & Ringenback, 1993; Farr & Middlebrooks, 1990) indicated that higher motivation levels are present in individuals who perceive task
situations as opportunities to learn. In addition, these trainees will find greater enjoyment in the training event than will those with performance oriented goals. More specifically, individuals with a strong performance orientation interpret forced participation in training programs as management’s opinion that their job performance is deficient in the training area (Farr, Hofmann, & Ringenback, 1993; Farr & Middlebrooks, 1990). As a result, their motivation to both participate and excel in training programs can suffer.

Affectivity And Motivation

Ashforth and Humphrey (1995) argued that current theoretical perspectives of work motivation do not emphasize the role of affectivity. George and Brief (1996) cited the reviews of Pinder (1984) and Kanfer (1991) as evidence of their assertion. However, they noted that a gradual shift toward the role of emotions, mood, and feelings is beginning. “Pekrun and Frese (1992) for example, opened a recent ‘review’ on work and emotions by noting ‘we are convinced that industrial and organizational psychologists ought to take the issue of emotions at work more seriously’; but, they also observed ‘there is little research that speaks directly to the issue of work and emotion’ (p. 153). Additionally, research by Staw and colleagues has focused on affect as it relates to actual performance (Staw & Barsade, 1993; Staw, Sutton, & Pelled, 1994)” (George & Brief, 1996, p. 79).

Motivational attention refers to the “allocation of cognitive resources to a possible self, to the pathways leading to that end, and to the consequences of arriving there” (Brief & George, 1996, p. 79). Affective characteristics can
serve as information that guides and directs an individual's motivational attention (Brief & George, 1996). George and Brief relied on the work of Klinger (1982) to describe the role of affectivity within this context:

The flow of attention and thought content seems to be steered from moment to moment by the mental and environmental flow of concern-related cues. Thus, as each cue is sensed, it appears nonconsciously to be accorded a kind of priority that determines the likelihood of its being processed further. . . . It seems very likely that what determines the priority accorded a concern-related cue is the capacity to elicit an affective response. . . . Thus, it appears that attentional mechanisms are themselves steered in part by emotional response, which is in turn anchored in goal striving (pp. 139-140).

Brief and George (1996) argued that affective characteristics impact the nature of motivation. They cite Clark (1982) and Morris and Reilly (1987) as support for this contention. Clark stated that "there is now little doubt that subtle feeling states, or . . . moods, are capable of influencing a wide variety of judgments and behaviors" (1982, p. 264). The pervasiveness and nonspecific nature of moods are part of the reason that moods appear to have such extensive effects on cognitions and development (Morris & Reilly, 1987).

According to propositions asserted by Brief and George (1996), "positive mood enhances distal motivation by facilitating initial involvement, interest, and enthusiasm for work tasks. Moreover, once a worker is in the process of performing a task, positive mood also enhances proximal motivation in that it results in a worker, for instance, persisting" (p. 89).
Theories Of Motivation

Need-Motive-Value Approaches: Kanfer (1991) conducted a thorough review and analysis of motivation theories and created the classification, “Need-Motive-Value Approaches” which include both need and expectancy theories. She maintained that “individual differences in needs and values, as well as activation of commonly held intrinsic motives, are posited to influence the mediating cognitive processes that result in behavioral variability” (1991, p. 83). Thus, need theories propose that innate human needs stimulate an individual’s behavior and that these needs direct behavior toward the satisfaction of unfulfilled needs. It is in this way that need theories contribute to motivation models (Ronen, 1991).

Like Kanfer (1991), Alderfer also saw an association between need and expectancy theories. He proposed that these two theoretical streams are associated with need satisfaction models of job attitudes (Alderfer, 1977). As Ronen (1991) noted, several researchers have noted the complementary nature of need and expectancy theories (Campbell, Dunnette, Lawler, & Weick, 1970; Hackman & Oldham, 1976; Porter & Lawler, 1968). Alderfer (1977) and Campbell and Pritchard (1976) explained the relationship by positing that expectancy models are generally considered process theories of motivation, while need theories are considered content theories. Process theories “seek an explanation of how behavior is energized, directed, sustained, and stopped” (Goldstein, 1992, p. 542). In contrast, content theories focus on the characteristics or attributes within the individual or the environment that
stimulate or sustain behavioral actions. “The valence associated with the outcomes produced in performing an act may be viewed as the link between the two theories. Need theory provides input to the determination of the type and level of the valence associated with an act, while expectancy theory adds the perceived probability of outcomes” (Ronen, 1991, p. 247).

Maslow’s Theory: Maslow’s need hierarchy theory (1943) is undoubtedly the most popular theory within the need theory schemata. According to Maslow it was an effort to integrate into a single theoretical structure the partial truths he saw in Freud, Adler, Jung, D.M. Levy, Fromm, Horney, and Goldstein (1987). This theory postulates that all individuals are driven by a basic set of needs consisting of the following:

1. Physiological needs — basic needs or drives satisfied with food, water, sleep, etc.
2. Safety needs — need to produce a safe and secure environment that is free from threats to existence
3. Love needs — interpersonal needs that reflect an individual’s desire to be accepted by others
4. Esteem needs — an individual’s need to occupy a position of which he is capable. This need surpasses the love needs because the affection of peers is not sufficient to meet this need.
5. Self-actualization needs — need for self-fulfillment.

Lower order needs must be satisfied before the individual can attempt to fulfill higher order needs. The move up the hierarchy is a very systematic
process: individuals strive to meet the physiological needs, then safety needs, then love needs, etc. The fifth need, self-actualization, is not satiable.

Despite the popularity of Maslow’s theory, researchers (Herman & Hulin, 1973; Imperato, 1972; Payne, 1970; Roberts, Walter & Miles, 1971; Water & Roach, 1973) using factor analytic approaches have been unable to produce the groupings representative of Maslow’s proposed categories (Ronen, 1991). In addition, Miner and Dachler (1973), Wahba and Bridwell (1976), and Campbell and Pritchard (1976) have determined that there is not evidence for the five categories that Maslow postulates. Even Maslow recognized the verification and support issues associated with his model:

It is fair to say that this theory has been quite successful in a clinical, social and personological way, but not in a laboratory and experimental way. It has fitted very well with the personal experience of most people, and has often given them a structured theory that has helped them to make better sense of their inner lives. It seems for most people to have a direct, personal, subjective plausibility. And yet it still lacks experimental verification and support (Maslow, 1987, xix).

Furnham (1989) recognized the possible association between individual differences and Maslow’s motivation theory. Accordingly, he postulated the following hypotheses that support the notion that an individual’s motivational level can be influenced by the characteristics and attributes that are unique to the individual. Furnham’s (1989) hypotheses included:

1. Individual differences are more noticeable in the higher-level needs (growth needs) than in the lower-level needs.
2. Neurotics, those with external locus of control, and those with conservative values have difficulties fulfilling self-esteem needs.

3. Definitions of personality are a function of personality itself.

_Alderfer’s ERG Theory:_ Alderfer (1969, 1972) set out to devise a new model that delineated three sets of needs: existence, relatedness, and growth. He (Alderfer, 1969, 1972) proposed the ERG theory that states that individuals are driven by three basic sets of needs:

1. Existence needs – relate to material existence and satisfied by environmental factors such as food, water, pay, working conditions, etc.

2. Relatedness needs – relate to the maintenance of interpersonal relations with others – family, friends, coworkers, etc.

3. Growth needs – relate to the individual’s attempt to seek opportunities for unique personal development

Unlike Maslow’s taxonomy, Alderfer theorized that “the three needs may operate simultaneously and, furthermore, that the dynamic of attributing importance to the need is such that it may shift from a frustrated need, the fulfillment of which is perceived to be unattainable by the environment, to either a lower-lever (regression) or upper-level need” (Ronen, 1991, p. 244).

Furnham (1989) offered the following hypotheses:

1. Extraverts have stronger relatedness needs than introverts.

Neurotics are most obsessed by, and find it more difficult to, achieve growth needs than non-neurotics.
2. Growth needs are less stable over time than the other needs.

**Murray's Needs:** In 1938, Murray devised an extensive list of individual needs that influence the behavior of individuals. (See Table 2.7.) Of these, achievement, dominance, and affiliation have gained the most attention from researchers (Mathieu & Martineau, 1997). "Individuals high in achievement motivation generally aspire to accomplish difficult tasks and to maintain high standards of performance. They prefer performance to depend on their efforts, and generally like to receive a great deal of feedback about their progress toward their goals" (Mathieu & Martineau, 1997, p. 203).

**Table 2.7: Murray's Taxonomy of Needs**

<table>
<thead>
<tr>
<th></th>
<th>Abasement (nAba)</th>
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<tbody>
<tr>
<td></td>
<td>Defined as: to submit passively to external force, to admit inferiority, to seek pain, punishment, misfortune</td>
</tr>
<tr>
<td>2.</td>
<td>Achievement (nAch)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to accomplish something difficult, to master, to excel, to rival and surpass others, to overcome obstacles and attain a high standard</td>
</tr>
<tr>
<td>3.</td>
<td>Affiliation (nAfi)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to draw near and enjoyably cooperate or reciprocate with an allied other, to adhere and remain loyal to a friend</td>
</tr>
<tr>
<td>4.</td>
<td>Aggression (nAgg)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to overcome opposition forcefully, to fight, to revenge an injury, to attack, injure or kill another, to oppose forcefully</td>
</tr>
<tr>
<td>5.</td>
<td>Autonomy (nAuto)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to get free, to resist coercion and restriction, to be independent and free to act, to avoid or quit activities prescribed</td>
</tr>
<tr>
<td>6.</td>
<td>Counteraction (nCnt)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to master or make up for a failure by restriving, to maintain self-respect, to maintain self-respect and pride on a high level</td>
</tr>
<tr>
<td>7.</td>
<td>Defendance (nDfd)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to defend the self against assault, criticism, and blame, to conceal or justify a misdeed, failure, or humiliation</td>
</tr>
<tr>
<td>8.</td>
<td>Deference (nDef)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to admire and support a superior, to yield eagerly to the influence of an allied other, to emulate an exemplar, to conform to custom</td>
</tr>
<tr>
<td>9.</td>
<td>Dominance (nDom)</td>
</tr>
<tr>
<td></td>
<td>Defined as: to control one's human environment, to influence or direct the behaviors of others by suggestion, seduction, persuasion or command</td>
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*(table continued)*
<table>
<thead>
<tr>
<th></th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>Exhibition (nExh) Defined as: to make an impression, to be seen and heard, to excite, amaze, fascinate, entertain, amuse, or entice others</td>
</tr>
<tr>
<td>11.</td>
<td>Harmavoidance (nHarm) Defined as: to avoid pain, physical injury, illness, and death, to take precautionary measures, to escape from a dangerous situation</td>
</tr>
<tr>
<td>12.</td>
<td>Infavoidance (nInf) Defined as: to avoid humiliation, quit embarrassing situations that may lead to belittlement from others, to refrain from action because of fear of failure</td>
</tr>
<tr>
<td>13.</td>
<td>Nurturance (nNur) Defined as: to give sympathy and gratify the needs of a helpless object such as an infant or any object that is weak, disabled, tired, lonely, sick, dejected, to feed, help support, console, protect, comfort others</td>
</tr>
<tr>
<td>14.</td>
<td>Order (nOrd) Defined as: to put things in order, to achieve cleanliness, arrangement, organization, balance, neatness, tidiness and precision</td>
</tr>
<tr>
<td>15.</td>
<td>Play (nPlay) Defined as: to act for fun without further purpose, to seek enjoyable relaxation of stress, to like to laugh and make jokes, to participate in games and sports</td>
</tr>
<tr>
<td>16.</td>
<td>Rejection (nRej) Defined as: to separate oneself from an object, to exclude, abandon, expel or remain indifferent to an inferior object</td>
</tr>
<tr>
<td>17.</td>
<td>Sentience (nSen) Defined as: to seek and enjoy sensuous impressions</td>
</tr>
<tr>
<td>18.</td>
<td>Sex (nSex) Defined as: to form and further an erotic relationship to have sexual intercourse</td>
</tr>
<tr>
<td>19.</td>
<td>Succorance (nSuc) Defined as: to have one's needs gratified by the sympathetic aid of an allied object, to be nursed, supported, protected, loved, advised, to always have a supported</td>
</tr>
<tr>
<td>20.</td>
<td>Understanding (nUnd) Defined as: to ask or answer general questions, to be interested in theory, to speculate, formulate, analyze, and generalize</td>
</tr>
</tbody>
</table>


According to Furnham (1989), possible hypotheses include the following:

1. Extraverts are likely to have greater affiliation, exhibition and play needs than introverts.
2. Neuroticism is associated with abasement, defendance and harm avoidance needs.

3. Needs for achievement and dominance are associated with particular forms of business success.

4. Successful, caring professionals have high nurturance needs while successful academics rate high on need for understanding.

McClelland's Need Theory: Closely related to learning theory, David McClelland's (1951, 1961, 1965) need theory is grounded in the premise that "needs were learned or acquired by the kinds of event people experienced in their culture. These learned needs represented behavioral predispositions that influence the way individuals perceive situations and motivate them to pursue a particular goal" (Steers & Porter, 1991, p. 39). McClelland proposed that, by virtue of having been associated with past success or failure, certain environmental cues or stimuli acquire motivational properties (Landy, 1989).

There are three needs described in this theory: achievement (nAch), affiliation (nAff), and power (nPow). Porter and Steers (1991) write that high need achievers are classified by McClelland according to the following characteristics:

1. High-need achievers have a strong desire to assume personal responsibility for performing a task or finding a solution to a problem. Consequently, they tend to work alone rather than with others. If the task requires the presence of others, they
tend to choose coworkers based upon their competence rather than their friendship.

2. High-need achievers tend to set moderately difficult goals and take calculated risks.

3. High-need achievers have a strong desire for performance feedback. These individuals want to know how well they have done, and they are anxious to receive feedback regardless of whether they have succeeded or failed (Porter and Steers, 1991, p. 39-40).

Lawler (1994) summarized research on achievement motivation and contended that motivation levels are heightened for these individuals when moderately challenging tasks must be performed, in competitive situations, in situations that require performance feedback, and in situations where performance is perceived to depend upon some valued or important skill. These individuals also "seek out situations in which they can achieve, and they tend to find successful performance attractive once they are in these situations" (Lawler, 1994, p. 28).

The need for affiliation is defined as "the desire to establish and maintain friendly and warm relations with other individuals" (Porter & Steers, 1991, p. 41). These individuals, who seek work-related opportunities to satisfy their needs, are characterized by the following traits:

1. They have a strong desire for approval and reassurance from others.
2. The have a tendency to conform to the wishes and norms of others when they are pressured by people whose friendships they value.

3. They have a sincere interest in the feelings of others.

These individuals also perform better when support and approval are associated with performance (Chung, 1977).

Atkinson (1981) addressed the need for achievement as well. He wrote:

The explanation of achievement-oriented action requires reference to individual differences in abilities, in motives, and in beliefs or conceptions (Atkinson, 1974; Atkinson & Raynor, 1978). These three descriptive categories or dimensions of personality correspond to central interests in three separate fields of our fragmented psychology: educational psychology and mental measurement, clinical psychology, and social psychology (p. 119).

McClelland (1970) also extensively studied the need for power. This construct was defined as the “need to control others, to influence their behavior, and to be responsible for them” (Porter & Steers, 1991, p. 42). The following characteristics typify these individuals:

1. A desire to influence and control somebody else.

2. A desire to exercise control over others.

3. A concern for maintaining leader-follower relations.

Valence, Instrumentality, and Expectancy Theory: Cognitive expectancies of outcomes that occur as a result of an individual’s behavior serve as the foundation for Vroom’s process theory of motivation (1964). There are three fundamental components of this theory — valence,
instrumentality, and expectancy. Valence is a component that characterizes “the attracting and repelling capabilities of psychological objects in the environment and has much the same dynamic meaning as the valence of an element in chemistry” (Landy, 1989, p. 381). Peak’s (1955) work served as the impetus for the instrumentality component which addresses the question of “what’s in it for me?” (Landy, 1989). And, the expectancy component relates to the odds that a particular outcome will occur.

Vroom’s theory, which stemmed from the work of Edwards (1961), Lewin, Dembo, Festinger & Sears (1944), Tolman (1932) and others, is based on the assumption that individuals will ask themselves three specific questions. These include the following:

1. Does the action in question have a high probability of leading to an outcome (expectancy)?
2. Will the outcome yield other outcomes (instrumentality)?
3. Are the other outcomes valued (valence)? (Landy, 1989).

Vroom’s theory is particularly relevant to employee training programs (Noe, 1986). “Trainees have preferences among the various outcomes (e.g., promotion, recognition) resulting from participation in the program (valences)” (Noe, 1986, p. 740). Trainees also have certain expectations that any efforts expended in the training event will result in the mastery of training content (expectancy) (Noe, 1986).

Recently, adult education theorists have begun to recognize the implications of expectancy theory for the field of adult education (Howard,
1989). For instance, Rubenson and Hoghielm (1976, 1978) adapted the theory to predict dropout rates from adult education programs, and Borgstrom (1980) subsequently refined their adaptation. The model described Vroom's force of motivation as a result of valence and expectancy. In other words, the extent to which the learner perceives a course as a fruitful means of satisfying perceived needs and the extent to which the individual feels capable of completing or coping with a course determines whether or not the individual will complete the course (Howard, 1989).

Colquitt and Simmering (1998) argued that "[a]n Expectancy x Valence approach would be helpful in linking these personality variables to motivation to learn, as evidenced by similar efforts in the goal commitment literature (Gellatly, 1996; Hollenbeck & Klein, 1987; Hollenbeck, Williams, & Klein, 1989) (p. 655). These goal commitment researchers have integrated the Expectancy x Valence approach for personality effect, thus positioning those effects in a more theoretical taxonomy and more adequately addressing the criticisms of personality research from researchers such as Davis-Blake and Pfeffer (1989), Judge and Martocchio (1995), and Kanfer (1991) (Colquitt and Simmering, 1998). Thus, expectancy theory lends itself to predictions regarding the role that dispositional factors may assume in the motivation to improve work through leaning.

Furnham (1992) also formulated several hypotheses that correspond to this motivational theory. They include:
1. Instrumentalists have higher expectancy and instrumental beliefs (by definition) than fatalists.

2. Social contact and stimulation have higher valence for extraverts than introverts.

3. Neurotics tend to be less certain about instrumentality in general than non-neurotics.

**Motivational States**

Revelle (1989) stated that there are several different categorizations of motivational states, and that distinctions can be made between the affective direction and the energetic intensity of motivation (Humphreys & Revelle, 1984). Thayer (1989) contended that intensity should be viewed in terms of energetic and tense arousal (Revelle, 1989). Arousal, as defined by Corcoran (1965), is the inverse probability of falling asleep. Energetic arousal is linked to approach behavior and tense arousal is linked with avoidance behavior (Thayer, 1967, 1978, 1989). As such, it is a construct that is of great importance in both motivation and cognitive theories.

More important with regard to this study, however, is the construct of affectivity. Watson and Tellegen's work (1985) on affectivity classified affective states as either positive or negative. (See the section on Affectivity presented earlier in this chapter.) Table 2.8 provides descriptive terms associated with these constructs. Many of these descriptions (i.e., alert, attentive, interested, determined) address factors that relate to motivation. Revelle's studies and theories of arousal suggest that yet another means by
which dispositional characteristics can influence motivation and motivation to
improve work through learning.

Table 2.8: Descriptive Terms of Arousal and Affectivity Constructs

<table>
<thead>
<tr>
<th>Thayer's Dimensions of Arousal</th>
<th>Watson and Tellegen's Dimensions of Affectivity</th>
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<tbody>
<tr>
<td>Energetic Arousal</td>
<td>Positive Affect</td>
</tr>
<tr>
<td>Tense Arousal</td>
<td>Negative Affect</td>
</tr>
<tr>
<td>Energetic</td>
<td>Fearful</td>
</tr>
<tr>
<td>Tense</td>
<td>Alert</td>
</tr>
<tr>
<td>Full-of-pep</td>
<td>Jittery</td>
</tr>
<tr>
<td>Active</td>
<td>Active</td>
</tr>
<tr>
<td>Wakeful</td>
<td>Clutched-up</td>
</tr>
<tr>
<td>Lively</td>
<td>Intense</td>
</tr>
<tr>
<td>Vigorous</td>
<td>(not) quiescent</td>
</tr>
<tr>
<td>Wide-awake</td>
<td>(not) quiet</td>
</tr>
<tr>
<td>(not) sleepy</td>
<td>(not) placid</td>
</tr>
<tr>
<td>(not) drowsy</td>
<td>(not) still</td>
</tr>
<tr>
<td>(not) tired</td>
<td>(not) at-rest</td>
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<table>
<thead>
<tr>
<th>An Alternative Four Dimensional Model of Affect and Arousal</th>
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</thead>
<tbody>
<tr>
<td>High Energetic</td>
</tr>
<tr>
<td>Low Energy/Tension</td>
</tr>
<tr>
<td>High Depression</td>
</tr>
<tr>
<td>High Tension</td>
</tr>
<tr>
<td>Alert</td>
</tr>
<tr>
<td>Full-of-pep</td>
</tr>
<tr>
<td>Active</td>
</tr>
<tr>
<td>Wakeful</td>
</tr>
<tr>
<td>Lively</td>
</tr>
<tr>
<td>Aroused</td>
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<tr>
<td>Excited</td>
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</table>


Summary

This chapter has reviewed a wide body of dispositional effects and their influence to improve work through learning. What should be clear at this point is that situational effects alone do not fully explain attitudes and behavior in organizations. While the exact nature of dispositional effects in human resource development interventions is largely unexplored, the research in this chapter clearly points to the need for such research.
The basic premise of the dispositional effects perspective (i.e., that individuals have certain have predispositions toward certain attitudes and behavior) is likely to challenge the thinking of many within the human resource development field. Because most research within HRD has focused on situational effects, it seems clear that the predominate perspective is that dispositional attributes are not a major factor in determining HRD outcomes. As noted in this chapter, organizational behavior researchers had similar objections at one point. These objections, however, have been largely refuted. Given the vast amount of evidence for the dispositional effects on general organizational attitudes and behavior, it seems almost irrefutable that there must be dispositional effects within human resource development interventions. This study is designed to begin the journey of investigating those effects.
CHAPTER 3: RESEARCH HYPOTHESES

Introduction

Because of the complexity of the model to be tested in this study, it is necessary to present the hypotheses after the review of related literature. Doing so helps provide a theoretical framework from which the hypotheses should be considered. Therefore, this chapter presents the hypothesized causal model of dispositional antecedents for motivation to improve work through learning along with summary of key supporting research from Chapter 2.

To add clarity to the final model, it is systematically and incrementally “built” in this chapter. In other words, as each hypothesis is presented along with the key research findings to support it, the model is formulated, culminating in a final causal model that integrates all hypotheses.

Personality Domain

Personality Dimensions

Extraversion: Extraversion, as a variable of interest, has been widely studied. For instance, numerous studies have investigated the relationship between this personality dimension and job performance. Findings of such studies indicated that extraversion is a predictor of job performance and contextual performance. While this is not directly linked to the dependent variable of this study, motivation to improve work through learning, it seems logical to infer that there is a motivational component associated with job
performance. Thus, there should be an association between extraversion and motivation to improve work through learning. Other studies have more directly linked extraversion to variables of interest in this study. Specifically, research indicates the following:

- Extraversion was a predictor of job performance for sales representatives and managers and jobs that require social interaction (Barrick & Mount, 1991; Crant, 1995; Hough et al., 1990).
- Extraversion was a predictor of contextual performance (Hogan et al., 1998).
- Extraversion was related to customer service orientation (Hough & Schneider, 1996).
- Most likely because most training programs are highly interactive, Extraversion was a predictor of training proficiency (r = .26) (Barrick & Mount, 1991).
- Extraversion was strongly associated with positive affectivity (Clark & Watson, 1988; Costa & McCrae, 1980, 1991; Emmons & Diener, 1985; Meyer & Shack, 1989).

Hypothesis 1:
Extraversion will be positively associated with positive affectivity.

Hypothesis 2:
Extraversion will be positively associated with motivation to improve work through learning.
Neuroticism: Researchers have established a direct relationship between the Neuroticism/Emotional Stability dimension of personality and negative affectivity. Thus, there is substantial evidence to expect that this study will also indicate that a relationship exists between these two constructs as depicted in Figure 3.2. Specific evidence includes the following:

- Neuroticism is correlated ($r = .18$) with performance in jobs requiring interpersonal interactions (Barrick, Mount, & Stewart, 1998).
- Neurotic traits appeared to foster negative emotional experiences (Larsen & Ketelaar, 1991).
- There was a positive relationship between Neuroticism and Negative Affectivity (Tellegen, 1985).
- There were consistently high correlations between measures of negative emotions such as anxiety, irritability, neuroticism, and self-depreciation (Watson & Tellegen, 1985).
Hypothesis 3:

Neuroticism/Emotional Stability will be positively associated with Negative Affectivity.

Conscientiousness: Numerous studies have investigated conscientiousness in relation to both dispositional characteristics and work-related attitudes and behaviors. Many of the findings of such studies that are relevant to this study. They include the following:

- Conscientiousness has been found to be a predictor of job performance across occupational groups (Barrick & Mount, 1991) suggesting a possible relationship with motivation.
- Conscientiousness, achievement, and dependability validly predicted all job-related criteria (Hough et al., 1990).
- Conscientiousness and job performance were correlated ($r = .26$) with all job-related criteria for jobs requiring interpersonal interaction (Barrick, Mount, & Stewart, 1998).
• Conscientiousness and teamwork were correlated ($r = .17$) (Hogan et al., 1992).

• Conscientiousness was associated with teamwork (Costa & McCrae, 1995b).

• Conscientiousness was associated with volitional variables such as hard-working, perseverance, and achievement orientation (c.f., Costa & McCrae, 1988a, 1988b; Digman & Takemoto-Chock, 1981; Peabody & Goldberg, 1989) which are aspects of work ethic.

• Conscientiousness and educational achievement have been shown to be consistently correlated (Barrick & Mount, 1991).

• Conscientiousness and positive attitudes toward learning in general were associated (Barrick & Mount, 1991).

• Mathieu and Martineau (1997), Mathieu et al., (1993), and Sharpley and Pain (1987) found achievement motivation (a facet of Conscientiousness) to positively influence training motivation.

• Colquitt and Simmering (1998) found a positive relationship between motivation to learn and Conscientiousness.

**Hypothesis 4:**

Conscientiousness will be positively associated with work ethic.

**Hypothesis 5:**

Conscientiousness will be positively associated with work commitment attitudes.
**Hypothesis 6:**

Conscientiousness will be positively associated with motivation to improve work through learning.

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**Figure 3.3: Structural Model with Conscientiousness Hypotheses Added**

**Openness to Experience:** Empirical studies have shown a link between the Five Factor Model personality dimension, Openness to Experience, and various desirable work- and learning-related attitudes and behaviors. Consequently, it is reasonable to assume that this construct will be related to work attitudes and motivation to improve work through learning. The specific findings that relate to this assumption are listed below:

- Openness has been shown to be a valid predictor of training proficiency \( (r = .25) \) (Barrick and Mount, 1991).
- Openness was a predictor for training criterion \( (r = .26) \) (Salgado, 1998).
• Openness was correlated with teamwork ($r = .11$) (Hough et al., 1992).

• Openness was correlated with Gough’s (1987) achievement via independence which predicted academic achievement in certain training situations (McCrae, Costa, & Piedmont, 1992).

• Openness to experience was a valid predictor of training proficiency because it assesses traits typically associated with positive attitudes toward the learning experience (Barrick & Mount, 1991).

Hypothesis 7:

Openness to Experience will be positively associated with motivation to improve work through learning.

Figure 3.4: Structural Model with Openness to Experience Hypothesis Added
'Agreeableness: Agreeableness is also a personality dimension that has been shown to influence various work-related behaviors. As such, the construct has been linked to work-related behaviors such as job performance, teamwork and cooperation. Because each of these behaviors – both independently and collectively – could conceivably be encompassed in work commitment attitudes, a link between Agreeableness and work commitment attitudes may exist. The relationship between Agreeableness and motivation to improve work through learning is more direct due to the relationship that has been established between Agreeableness and training criterion. The specific findings include the following:

- There was a correlation of $r = .18$ and performance in jobs requiring interpersonal interaction (Barrick, Mount, & Stewart, 1998).

- Agreeableness was a predictor for training criterion ($r = .31$) (Salgado, 1998).

- Agreeableness was correlated with teamwork ($r = .17$) (Hough, 1992).

- Agreeableness was associated with service orientation (Costa & McCrae, 1995b; Hough & Schneider, 1996).

- Agreeableness was associated with cooperation (Hough, 1992).

Hypothesis 8:

Agreeableness will be positively associated with work commitment attitudes.
Hypothesis 9:

Agreeableness will be positively associated with motivation to improve work through learning.

Figure 3.5: Structural Model with Agreeableness Hypotheses Added

Affectivity Domain

Affectivity, both positive and negative, has been the focus of a considerable number of research efforts. Many of these studies have been aimed at establishing a link between affectivity and the various personality dimensions. While there seem to be few studies that directly investigated the link between affectivity and work commitment attitudes, it is important to note that affective style may influence the way an individual experiences his or her job (Levin & Stokes, 1989). Thus, it seems logical that an
individual’s affectivity could be mediated by his or her work commitment attitudes. Similarly, because traits influence states, and attitudes are a state (George, 1991b), it follows that affectivity could influence attitudes. This information, coupled with the assertions of Morrow 1983 and Brown (1996) relating dispositional attributes and individual differences to work commitment attitudes, provides evidence to consider the relationship between affectivity and work commitment attitudes. Therefore, this relationship, like the relationship between personality dimension and affectivity, must also be considered in the formulation of hypotheses regarding affectivity. Specific evidence to support the research hypotheses is outlined below.

Positive and Negative Affectivity

**Positive Affectivity:**

- Costa and McCrae (1980) found that extroverted individuals are predisposed toward positive affect.
- Commonly reported affectivity dimensions are engagement-disengagement (or activation) and pleasantness-unpleasantness (McFatter, 1994).
- Brown (1996) asserted that personality and individual differences are related to job involvement.
• PA has been found to influence an individual’s responsiveness to incentives (Gouaux & Gouaux, 1971).

• PA has been found to heighten the level of generosity extended to others (Isen & Leven, 1972).

• PA enhanced learning speed (Masters, Bard, & Ford, 1979).

• PA resulted in heightened expectations, greater estimates of past successes, and more favorable self-assessments (Wright & Mishel, 1982).

• Brief and George (1996) argue that affective characteristics may impact the nature of motivation.

• Individuals with high levels of PA have a general sense of well-being, view themselves with a pleasurable perspective and are effectively engaged in both interpersonal relations and achievement (George & Brief, 1992).

Hypothesis 10:
Positive affectivity will be positively associated with work commitment attitudes.

Negative Affectivity:
• Neurotic individuals were predisposed toward negative affect (Costa & McCrae, 1990).

• Negativity affectivity represents a general manifestation of negative functioning incorporating both affective and cognitive dimensions (Necowitz & Roznowski, 1994).
Hypothesis 11:

Negative Affectivity will be negatively associated with work commitment attitudes.

Figure 3.6: Structural Model with Positive Affectivity Hypotheses Added

Values Domain

Values, because of their enduring and stable nature, are considered to be a dispositional attribute. And, because dispositional characteristics have been found to influence work related attitudes and behaviors, the antecedents and consequences of values have been extensively studied. Work ethic, however, is one of the most widely examined work values. Its effect on both work commitment attitudes and achievement (a motivational component) has
been well documented. Such studies serve as the undergirding for the hypotheses listed below:

- Values influence job satisfaction, organizational commitment, and job involvement (Lee & Mowday, 1987).
- Correlations ranged between $r = .24$ (Sekaran, 1989) and $r = .41$ (Morrow & Goetz, 1988) for job involvement and PWE.
- Organizational commitment and PWE correlations were between $r = .28$ (Morrow & Goetz, 1988) and $r = .42$ (Morrow & McElroy, 1986).
- Individuals with high PWE scores performed better on tasks designed to provide low motivation levels (Merrens & Garrett, 1975).
• Work ethic was related to achievement (Murray, 1938; Furnham, 1990).

• Work values were more associated with organizational commitment than instrumental values (Putti et al., 1989).

• Organizational commitment was positively related to cognitive work value items (Koslowski & Elizur, 1990).

• Researchers have found a potential relationship between PWE and job involvement (Brief & Aldag, 1977; Lodahl, 1964; Mayer & Schoorman, 1998; Rabinowitz & Hall, 1977).

**Hypothesis 12:**

Work ethic will be positively associated with work commitment attitudes.

**Hypothesis 13:**

Work ethic will be positively associated with motivation to improve work through learning.

**Work-Commitment Attitudes Domain**

Attitudes influence behavior because they are linked with such constructs as personality, values and motivation. They are the positive and negative assessments or states of mental readiness that mediate an individual's response and reaction to others, to objects, and to situations. Many researchers have asserted that organizational commitment (both affective and continuance) and job involvement have significant effects on work behaviors, motivation, and training motivation, readiness and effectiveness. Some of these findings include the following:
Lawler (1986) believed job involvement to be a key component in employee motivation. Lawler (1992) and Pfeffer (1994) considered work commitment attitudes essential in an attempt to gain a competitive advantage in business markets.

Job involvement was positively related to growth need strength (Brown, 1996).

Work motivation was a consequence of job involvement (Lazurus, 1991; Naylor, Pritchard, & Ilgen, 1980; Pinder, 1984).

There was a positive relationship between job involvement and training (Clark & Hensey, 1987).
Mowday, Porter, and Steers (1982) and Brown (1996) contended that job involvement and work commitment are related.

Mathieu and Martineau (1997) maintained that characteristics such as personality, interests, needs, drives, attitudes, etc. predispose individuals to be ready for training.

Noe (1986) and Noe and Schmitt (1986) contended that trainee attitudes, interests, and expectations may attenuate or enhance trainee effectiveness.

Sanders and Yanouzas (1983) stated that individuals enter the learning situation with certain attitudes that may positively or negatively impact the learning process.

Noe (1986) found a positive relationship between job involvement and motivation to train.

Tannenbaum et al. (1991) found a correlation ($r = .53$) between commitment and motivation to learn.

Hypothesis 14:

Work commitment attitudes will be positively associated with motivation to improve work through learning.

Full Structural Model

The full model resulting from the combination of these thirteen research hypotheses is presented below in Figure 3.10. This is the research model that was tested in this study.
Figure 3.9: Structural Model with Work Commitment Attitudes Hypotheses Added

Figure 3.10: Full Structural Model of All Research Hypotheses
AN EMPIRICAL TEST OF A STRUCTURAL MODEL OF THE
DISPOSITIONAL
ANTECEDENTS OF MOTIVATION TO IMPROVE WORK
THROUGH LEARNING

VOLUME II

A Dissertation
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requirements for the degree of
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CHAPTER 4: METHODOLOGY

Introduction

This chapter describes the sample, data collection procedures, and statistical analyses that were used to empirically test the hypothesized model presented in the previous chapter. In addition, measurement scales that were used in the study as well as relevant validation information for these scales will be presented.

Sample

Data for this study was obtained from a nonrandom sample of 247 subjects from a single private sector health insurance organization located in Baton Rouge, Louisiana. Respondents were participants of in-house training programs, and ranged from clerical employees to mid- and upper-level managers. Training topics included computer training, team building skills, new employee training, technical training, and leadership training sessions.

Although a total of 247 employees participated in the survey, two surveys were identified as patterned responses and were deemed not usable. This reduced the usable sample size to 245. During analysis procedures, listwise deletion procedures were employed to handle missing data. Due to missing data, this procedure reduced the actual sample size of the study to 239. Thus, the analyses were based on a sample size of 239.

This sample size is well within the recommended range for structural equation modeling research studies (Hair et al., 1998; Kelloway, 1995). "In large samples virtually any model tends to be rejected as inadequate, and in
small samples various competing models, if evaluated, might be equally accepted" (Bentler & Bonett, 1980, p. 588). Generally, a minimum of 200 subjects is recommended (Hair et al., 1998), and a respondent to parameter estimated ratio of 5:1 is considered adequate. In this model, 37 parameters are estimated so the ratio was 6.5:1 which is within the acceptable range.

The average age of the respondents was 35.5 years (minimum = 19, maximum = 68, standard deviation = 10.516); 28.4% or 68 of the respondents were male and 71.6% or 171 of the respondents were female. Five of the respondents (2.0%) had less than 1 year work experience; 16 respondents (6.7%) had 1-3 years work experience; 30 respondents (12.6%) had 3-5 years work experience; 101 respondents (42.3%) reported 5-15 years work experience; 60 respondents (25.1%) had 15-25 years work experience; and 27 respondents (11.3%) had more than 25 years work experience. Fifty-five respondents (23%) reported less than 1 year with the company; 55 respondents (23%) reported 1-3 years with the company; 36 respondents (15.06%) reported 3-5 years with the company; 48 respondents (20.08%) reported 5-15 years experience with the company; 39 respondents (16.3%) reported 15-25 years with the company; and 6 respondents (2.5%) reported more than 25 years with the company.

**Procedure**

Surveys were administered to respondents prior to their participation in an organizational training program. All participants were required to attend these classes as part of their job responsibilities. In each case, the trainer read description of the research project with instructions for participation from a
prepared script (See Appendix A.). Questionnaires were presented to participants as part of the training program. Instructors were told to allow participants to withdraw if they had objections to the study, but none objected. As a result, all participants are included in the sample.

As described in the next section, two questionnaires were utilized. (See Appendix B.) In order to match the scales completed by a single respondent, they were pre-coded with identification numbers. However, the responses were completely anonymous. Thus, unless participants voluntarily provided their names, there was no procedure in place to identify participants. The request for demographic information was limited to age, gender, number of years work experience, and number of years with this organization.

Instrumentation

Measuring The Five Factor Dimensions

There are several instruments available to provide estimates of the Five Factor personality domains (Schinka, Kinder, & Kremer, 1997). Among those considered were the various versions of the Hogan Personality Inventory (HPI) (1986) and the NEO (Costa & McCrae, 1985, 1992) instruments. However, because the personality dimensions of the Hogan instruments vary slightly from those more commonly cited in the literature and the fact that the NEO is the most widely used instrument for measuring the FFM (McKenzie, 1998), the NEO was selected for use in this study.

The NEO-PI-R (Costa & McCrae, 1992a) consists of 240 statements developed through cluster analysis of the 16PF (Cattell, Eber & Tatsuoka, 1970) scales. This cluster analysis produced a 3-dimension taxonomy of
Extraversion, Neuroticism, and Openness to Experience (Costa & McCrae, 1976) which formed the foundation of the initial NEO Inventory (Costa & McCrae, 1985). However, use of the 3-element instrument, the NEO Inventory indicated that it did not measure all of the personality domains, essential traits such as Cattell's superego strength being missing, and that it was not congruent with Norman's version of the FFM (McCrae & Costa, 1985) (as cited in McKenzie, 1998). Subsequently, the NEO-PI-R was developed and has undergone extensive reliability and validity research (Widiger & Trull, 1997). The NEO-PI-R has demonstrated consistent convergent and discriminant validity with respect to adjective checklist measures of the FFM (e.g., Goldberg, 1990, 1992; Trapnell & Wiggins, 1990). It also indicates how alternative models of personality can be understood from the perspective of the FFM (e.g., McCrae & Costa, 1989). Subjects use a five point Likert scale to indicate their extent of agreement with the statements in the instrument.

There are six facets for each dimension. These facets include the following:

- Neuroticism/Emotional Stability Facets
  1. Anxiety
  2. Angry Hostility
  3. Depression
  4. Self-Consciousness
  5. Impulsiveness
  6. Vulnerability
• Extraversion Facets
  1. Warmth
  2. Gregariousness
  3. Assertiveness
  4. Excitement-Seeking
  5. Positive Emotions
  6. Activity

• Openness to Experience Facets
  1. Fantasy
  2. Aesthetics
  3. Feelings
  4. Actions
  5. Ideas
  6. Values

• Agreeableness Facets
  1. Trust
  2. Straightforwardness
  3. Altruism
  4. Compliance
  5. Modesty
  6. Tender-Mindedness

• Conscientiousness Facets
  1. Competence
  2. Order
3. Dutifulness
4. Achievement Striving
5. Self-Discipline
6. Deliberation

The NEO Five-Factor Inventory (NEO-FFI) is a 60-item measure of personality developed by Costa & McCrae (1992). This instrument is an abbreviated version of the NEO PI-R, and provides an assessment of the five dimensions comprising the FFM, but does not provide measures of the facets.

The items are rated on a 5-point scale from 0-4 with anchors ranging from strongly agree to strongly disagree. The NEO-FFI measures five personality dimensions labeled Neuroticism (e.g., "I often feel jittery.") Extraversion (e.g., "I really enjoy talking to people.") Agreeableness (e.g., "I try to be courteous to everyone I meet.") Conscientiousness (e.g., "I work hard to accomplish my goals.") and Openness to Experience (e.g., "I often try new and foreign foods.") with 12 items for each scale. The 12 items from the scales are summed to provide a total score for each personality dimension ranging from 0 - 48. The scales of the instrument have demonstrated good internal reliability and convergent validity with the full version of the instrument, the NEO PI-R (Ferguson & Patterson, 1998). A number of studies have demonstrated the adequacy of the factor structure (e.g., Holden & Fekken, 1994; Mooradian & Neziek, 1996). Costa and McRae (1992b) found correlations ranging from .77 to .92 for the relationship between factors of the NEO-FFI and equivalent NEO PI-R factors. The raw scores were converted
to t-score values, using gender based national norms determined by Costa and McCrae (1991).

Measuring PA and NA

Both PA and NA can be measured as either a state (i.e., short-term mood fluctuations) or a trait (i.e., consistent and stable individual differences in general affective level) (Watson & Slack, 1993). However, this study is most concerned with the trait nature of PA and NA as they represent the dispositional component. Several instruments were considered, including the Job Affect Scale (JAS) (Brief, Burke, George, Robinson, & Webster, 1988), Multidimensional Personality Questionnaire (MPQ) (Tellegen, 1985), and the Positive and Negative Affectivity Schedule (PANAS) (Watson, Clark, & Tellegen, 1988).

Brief, Burke, George, Robinson, & Webster (1988) developed the JAS to measure positive and negative affectivity over a 1-week interval. The bipolar instrument is a self-report measure that consists of 20 items based on Watson and Tellegen's (1985) consensual mood structure. After conducting confirmatory factor analysis of the JAS and a competing multifactor model, Brief et al. (1989) determined that the unipolar measurement of positive and negative mood is a better measurement of the dispositional dimensions.

Tellegen (1985) has developed the Multidimensional Personality Questionnaire which provides a general inventory of normal-range personality in a true-false format. Two scales from this instrument, the Negative Emotionality (Nem) Scale and the Positive Emotionality Scale (Pem) assess trait NA and PA, respectively. These scales have a correlation (.60) to
traditional neuroticism and extraversion scales. [Nem correlated with the Neuroticism scale of the Eysenck Personality Questionnaire (EPQ) (Eysenck & Eysenck, 1975), and Pem correlated with the Extraversion scale of the EPQ] (Watson & Slack, 1993). The 14-item Nem scale includes descriptors such as nervous, irritable, worrying, emotionally liable, and overly sensitive; and the 11-item Pem scale includes descriptors such as highly energetic, happy, and enthusiastic. Watson and Pennebaker (1989) reported the internal consistency and stability data for the instrument as follows: consistency – coefficient alpha = .82 for Nem and .80 = Pem; and, stability over time – 12-week retest $r = .72$ for Nem and .77 for Pem with $n = 109$. As Watson and Slack (1993) indicated, the Nem and Pem demonstrate good convergent and discriminant validity when related to mood ratings and other variables (e.g., Watson, 1988a; Watson, Clark, & Carey, 1988; Watson & Pennebaker, 1989).

The most widely used measure of PA and NA is the Positive and Negative Affectivity Schedule (PANAS) (Watson, Clark, & Tellegen, 1988). As such, it has been the focus of considerable validation work (c.f., Bagozzi, 1993). The PANAS contains 20 affective adjectives -- 10 negative and 10 positive -- and is used to measure both trait and state affectivity. Subjects are instructed to rate trait PA and NA according to their “general” or “average” feelings, whereas state affectivity is measured on the basis of the subjects’ feelings “today.” Ratings are measured on a 5-point Likert scale, ranging from 1 = very slightly or not at all to 5 = extremely. Separate PA and NA scores are calculated by summing the scores on the 10 items that correspond to each scale.
The PANAS was developed using exploratory factor analysis to distinguish items with high loadings on either PA or NA and low loadings on the other dimension. Watson et al. (1988) reported internal consistency reliabilities for PA as .87 and for NA as .88. Eight-week test-retest reliabilities were .68 for PA and .71 for NA. Egloff (1998) found that PA and NA were independent when measured with the PANAS. Because of its widespread use and the validation work that has been conducted on the instrument, the PANAS was selected for this study.

Measuring Work Ethic

Furnham (1990a, 1990b) has conducted a comprehensive review of the literature regarding work ethic (Blau & Ryan, 1997). In doing so, he cited seven measures of the construct: Protestant Ethic (Goldstein & Eichorn, 1961); pro-Protestant Ethic and non-Protestant ethic (Blood, 1969); Spirit of Capitalism (Hammond and Williams, 1976); Protestant Work Ethic (Mirels & Garrett, 1971); Leisure Ethic and Work Ethic (Buchholz, 1977); Eclectic Protestant Ethic (Ray, 1982) and Australian Work Ethic (Ho, 1984). Furnham a priori content analyzed and then empirically factor analyzed these seven measures. His content analysis indicated that there are seven dimensions of PWE: hard work, nonleisure, independence, asceticism, separate morals and spiritual/religious factors. His subsequent exploratory factor analysis with varimax rotation found empirical evidence for five factors: belief in hard work, leisure avoidance, religious and moral beliefs, independence from others and asceticism. The multidimensionality of this construct (e.g., multiple eigenvalues greater than unity) is also supported by factor analyses.

Building on the work of Furnham (1990a, 1990b), Blau and Ryan (1997) conducted exploratory factor analyses to identify dimensions of the work ethic construct. Their study revealed a four-dimension construct: hard work, nonleisure, asceticism, and independence. "[F]actor analyses cumulatively supported the four-factor solution of hard work, nonleisure, independence, and asceticism. Items loaded on the expected factor and scale reliabilities were generally strong" (Blau & Ryan, 1997, p. 444). More specifically, coefficient alpha reliabilities were .85 for hard work; .80 for nonleisure; .75 for independence; and, .70 for asceticism. Their findings were supported in various subsample analyses.

Also emerging from the Blau and Ryan (1997) study was an 18-item secular work ethic instrument. The items were selected from high loading items drawn from the seven instruments used in Furnham's work. This instrument consists of 6 hard work items, 5 nonleisure items, 3 asceticism items, and 4 independence items. "Each of these four empirically derived scales fits within Weber's (1958) theoretical discussion of work ethic" (Blau & Ryan, 1997, p. 444). Even though Blau & Ryan (1997) contended that a shorter (12-item) instrument could be formed by choosing the highest loading 3 items for each factor, this study will utilize the longer (18-item) measure that emerged from their study. Doing so provides an adequate representation of all factors of the construct. This instrument appears to contain the most valid items empirically derived from seven different instruments.
Measuring Job Involvement

Two widely used job involvement instruments were considered: the Lodahl and Kejner instrument (1965) and the Job Involvement Scale (Kanungo, 1982b). Lodahl and Kejner (1965) developed what is perhaps the most well-known measure of job involvement. Numerous studies have assessed the reliability of Lodahl and Kejner measures with results ranging from .62 (Jones, James, & Bruni, 1975) to .93 (Hollon & Chesser, 1976) (Morrow, 1983). According to Wood (1974), the 20-item measure developed by Lodahl and Kejner (1965) contains five factors. This instrument served as the pioneering work to operationalize job involvement (Blau, 1985b). The factors are:

1. Work attraction
2. Failure sensitization
3. Job preeminence
4. Work Identification
5. Work commitment.

Factor analytic studies by Cummings and Bigelow (1976) and Lawler and Hall (1970) found that the Lodahl and Kejner short form included several items that had multiple loading problems on psychological identification, job involvement and intrinsic motivation factors (Blau, 1985b). Schwyart and Smith (1972) also found factor analytic problems associated with this scale. "The failure sensitization factor contains items operationalizing the performance-self-esteem conceptualization of job involvement, while the job preeminence and work identification factors contain items operationalizing the
central life interest or psychological identification conceptualization” (Blau, 1985b, p. 26).

Kanungo (1982b) proposed a job involvement measure consisting of 10 items that he felt were more representative of the psychological conceptualization of job involvement (Blau, 1985b). Items included on the Kanungo instrument were derived from the Lodahl and Kejner (1965) work. In fact, as Blau (1985a) asserts, much of the item content of Kanungo’s scale is based upon the item, “I live, eat, and breathe my job” from the Lodahl and Kejner (1965) instrument. However, this scale is psychometrically stronger than the other scales (Blau, 1997). The internal consistency coefficient reported by Kanungo (1982b) was .87.

In 1985, Blau conducted two studies to validate the dimensionality of the job involvement construct through empirical testing of the Lodahl and Kejner 6-item short scale (1965) and Kanungo’s (1982b) proposed 10-item scale. His results indicated that nine items in Kanungo’s (1982b) measure “loaded sufficiently on the job-involvement factor, [but] item (7) did not load highly on either factor” (Blau, 1985b, p. 25). He also found that only 3 of the 6 items from the Lodahl and Kejner (1965) instrument loaded cleanly on the job involvement factor. Blau’s (1985b) overall results indicated that Kanungo’s (1982b) measure “is a slightly ‘purer’ operationalization of the psychological identification conceptualization of job involvement than is the short-form version of the Lodahl and Kejner (1965) measure. The consistency of the factor structures in both measures over time enhances the confidence of
this result" (Blau, 1985b, p. 26). Because of this evidence, the Kanungo scale was selected for use in this study.

Measuring Organizational Commitment

Two instruments are predominantly used to measure organizational commitment. The first of these, the Organizational Commitment Questionnaire (OCQ) was developed by Porter, Steers, Mowday, and Boulian (1974). Numerous researchers have conducted factor analysis and validation studies on the OCQ, including: Angle & Perry, (1981), Ferris & Aranya (1983) Luthans, McCaul, & Dodd (1985), Schriesheim & Cooke, (1988), and, White, Parke, Gallagher, Tetrault, & Wakabayashi (1995). Results of these studies indicate that this instrument has good internal reliability, ranging from .84 to .90.

However, another measure of organizational commitment, the Meyer and Allen (1990) instrument, is increasingly being used because of its multidimensional structure. The Meyer and Allen (1990) instrument consists of three eight-item scales of affective, continuance, and normative commitment. Results of canonical correlation analysis indicated that affective and continuance components of organizational commitment are empirically distinguishable constructs with different correlates (Allen & Meyer, 1990).

Cohen (1996) examined the discriminant validity of the Meyer and Allen (1990) and the Porter et al. (1974) scales and their relationships to the other work commitment foci. Among these foci were Protestant work ethic [as measured by 10 of the 19 items from the Mirels and Garrett (1971) instrument], and job involvement [as measured by the Kanungo (1982)
instrument]. The confirmatory factor analysis (LISREL) results of Cohen's work indicated good discriminant validity and fit measures for the Meyer and Allen scales that were superior to those of the OCQ. Because of the increasing acceptance and use of this instrument by organizational researchers and its strong relationship with the other work commitment foci, the Meyer and Allen instrument was chosen for this study.

Measuring Motivation to Improve Work Through Learning

As stated in the previous chapters, Motivation to Improve Work through Learning is presumed to be a function of an individual’s motivation to train and his or her motivation to transfer the knowledge and skills acquired through training initiatives to the work setting. Accordingly, scales measuring both of these components are a necessary part of the instrumentation for this study. Because it is desirable to have at least three indicators for latent constructs, four scales were selected to measure the Motivation to Improve Work through Learning construct. Scales from two instruments – the START (Strategic Assessment of Readiness for Training) (Wienstein, Palmer, Hanson, Kierking, McCann, Soper, & Nath, 1994) and the LTSI (Learning Transfer System Inventory) (Holton, Bates, & Rouna, 1999) were selected for use.

The START instrument was designed to serve multiple purposes (Wienstein, et al., 1994) including:

1. to provide a diagnostic assessment of learning strengths and weaknesses in a work setting;
2. to provide baseline data about readiness to profit from training or
other learning experiences early in the training needs assessment
process; and,

3. to increase individual’s awareness of strategic learning strengths and

The instrument is comprised of eight 7-item subscales: Anxiety,
Attitude Toward Training, Motivation, Concentration, Identifying Important
Information, Knowledge Acquisition, Monitoring Learning, and Time
Management (Wienstein, et al., 1994). Reliability figures for the subscales, as
reported by the authors (Wienstein, et al., 1994) were as follows:

- Anxiety: \( \alpha = .87 \)
- Attitude: \( \alpha = .71 \)
- Motivation: \( \alpha = .65 \)
- Concentration: \( \alpha = .83 \)
- Identifying Important Information: \( \alpha = .75 \)
- Knowledge Acquisition: \( \alpha = .75 \)
- Monitoring: \( \alpha = .78 \)
- Time Management: \( \alpha = .76 \).

Training Attitudes is one of the scales that was used to assess
individual motivation to improve work through learning. This seven-item
subscale from the START instrument (Weinstein, et al., 1994) was used to
measure attitudes held by individuals toward training. Examples of items
included in this scale are: “I believe learning is important for professional
development”; “I believe training programs are important for professional development”; “I volunteer to participate in training programs”; and “I would rather not participate in learning activities” (reverse coded).

The Motivation subscale of the START instrument, with an alpha coefficient of .65, was also used in this study. Sample items from this scale include the following: “I come to training sessions unprepared” (reverse coded); “I can easily find an excuse for not completing a training program assignment” (reverse coded); “I work hard to do well in training programs, even when I don’t like them”; and “I try hard not to miss any of the sessions during a training program.”

The LTSI (previously called the LTQ) (Holton, et al., 1999), a 68-item instrument, was developed to measure learning transfer factors. “Transfer of training can be defined as the degree to which trainees apply knowledge, skills, behaviors, and attitudes learned in training to their jobs” (Holton, et al., 1998, p. 3). These researchers cited Baldwin and Ford (1988) in their characterization of training “as a function of three sets of factors: trainee characteristics, including ability, personality and motivation; training design, including a strong transfer design and appropriate content; and the work environment, including support and opportunity to use” (Holton, et al., 1999, p.3). This conceptualization, which served as the foundational basis for the development of the LTSI, closely parallels the foundational premise of this study. It is important to note that two of the factors identified by Baldwin and Ford (1988) – personality and motivation – constitute two domains in the
hypothesized model of this study. Thus, certain scales of LTSI instrument seem particularly well-suited for this study.

Exploratory factor analysis of the LTQ has revealed "an exceptionally clean and interpretable sixteen factor structure" (Holton, et al., 1999). These 16 scales and their respective alpha coefficients are: Learner Readiness (α = .73); Motivation to Transfer (α = .83); Performance Outcomes – Positive (α = .69); Performance Outcomes – Negative (α = .76); Personal Capacity for Transfer (α = .68); Peer Support (α = .83); Supervisor Support (α = .91); Supervisor Sanctions (α = .63); Perceived Content Validity (α = .84); Transfer Design (α = .85); Opportunity to Use (α = .70); Transfer Effort – Performance Expectations (α = .81); Performance Outcomes Expectations (α = .83); Resistance/Openness to Change (α = .85); Performance Self-Efficacy (α = .76); and Performance Coaching (α = .70) (Holton, et al., 1999).

The Motivation to Transfer Scale (α = .83) and Performance Outcomes Expectations (α = .83) were selected for use in this study. Drawing on expectancy theory, the second scale was selected to include an outcome component of improving work through motivation. Sample items of the Motivation to Transfer scale include: “Training will increase my personal productivity”; “I believe training will help me do my current job better”; and, “When I leave training, I can’t wait to get back to work to try what I have learned.” Sample items of the Performance Outcomes Expectations Scale include: “The organization does not really value my performance”; “For the most part, the people who get rewarded around here are the ones that deserve
it;” “When I do things to improve my performance, good things happen to me;” and “People around here notice when you do something well.”

**Data Analysis**

An extensive review of articles published in five prominent personality journals, conducted by (Endler and Speer, 1998), indicated that “the most popular statistical techniques were the analysis of variance and correlational measures” (p. 622). More specifically, their review revealed that the most frequent statistical analyses employed in personality related research involved correlational techniques (75.5%), analyses of variances (including ANOVA, MANOVA, 41%), factor analysis (28%), and regression techniques (26%). Use of causal modeling techniques, path analysis, goodness-of-fit indices, and structural equation modeling is much less frequently found than the “firmly established ones” (Endler & Speer, 1998, p. 633). However, the use of structural equation modeling (SEM) and path analysis has risen somewhat since 1986-1988 (5% of the studies then vs. 10% of the studies now). Endler and Speer (1998) summarized their findings by stating, “it appears that for the most part, personality researchers in North America are relying on the same statistical procedures as their predecessors – specifically, ANOVA, correlation and regression. . . . While the field of personality psychology in North America does appear to have changed somewhat over the past 25 years, it seems uncertain whether we are moving forward or simply moving laterally – in a different direction but without a great deal of progress” (p. 648).

It is reasonable to suggest that SEM would help move the field forward because, as Cliff (1983) points out, the SEM approach to data
analysis is described as the most important and influential statistical revolution to have occurred in the social sciences. It offers the added advantage of simultaneously examining a series of dependence relationships (Hair et al., 1998).

A structural equation modeling analysis was conducted with LISREL 8.2 (Joreskog & Sorbom, 1996) to test the causal relationships between variables within the hypothesized model. Input for estimation of the measurement and the structural model was provided by a covariance matrix prepared with PRELIS 2.2. One chief benefit of LISREL is that it provides tests of the relationships among constructs that are not attenuated by measurement error (Loehlin, 1987). In addition, application of structural equation modeling (SEM) provides a way to 1) model and estimate multiple and interrelated causal relationships, and 2) represent unobserved variables or concepts in these relationships and 3) account for measurement error in the estimation process (Hair et al., 1998).

Data analysis was conducted in two stages, in accordance with a procedure suggested by Anderson and Gerbing (1988) and Hair et al. (1998). This two-step approach minimizes the interpretational confounding in that no constraints are placed on structural concepts when estimating the measurement model (Anderson & Gerbing, 1988). Interpretational confounding has been defined as "the assignment of empirical meaning to an unobserved variable which is other than the meaning assigned to it by an individual a priori to estimating unknown parameters" (Burt, 1976, p. 4). In the first stage of this two-step approach, the adequacy of the measurement
model was examined to evaluate the contribution of each item to the construct (latent variable) being measured. This procedure assesses the psychometric properties of the measurement model, and is equivalent to a confirmatory factor analysis of the measured constructs.

Two primary considerations are required when a large number of variables are involved in specifying structural equation models. These considerations are 1) conceptual limitations (Bentler & Chou, 1987) and other difficulties in fitting models with a large number of indicators (Moorman, 1991; Williams & Hazar, 1986), and 2) the number of parameters estimated relative to the sample size which is an important determinant of convergence, standard errors, and model fit in covariance structure models (Hayduk, 1987). As Joreskog and Sorbom (1986) contended, even with strong theoretical support, models with numerous indicators are more difficult to predict. With regard to the second consideration (the number of parameters relative to sample size), Bentler (1985) contended that a sample size-to-parameter ratio of 5 to one is usually sufficient to achieve reliable estimates in maximum likelihood estimation.

A reduction of the number of indicators is a practice that is commonly noted in the literature (Moorman, 1991; Nierhoff & Moorman, 1993; Williams & Hazar, 1986). To accomplish this reduction, a separate confirmatory factor analysis of the work ethic, work commitment attitudes, and motivation to improve work through learning scales was conducted. The initial analyses evaluated the loading of individual items on scales. Scale scores were then calculated and used as indicators for the latent constructs. A second analysis
was conducted to evaluate the fit of the measurement model comprised of the scale scores and latent constructs.

Because the NEO and PANAS scales are both so well established and so deeply rooted in the literature, these scales were not included in this stage of analysis. Each of these scales was treated as a single indicator for a corresponding latent construct. As is common practice with single indicators, the error variance was set to 1 minus the reliability of the scale times the variance of the scale (Hair et al., 1998).

The second stage tested the fit of the hypothesized structural model with the data. Various appropriate measures of fit are available to assess the model fit of both the measurement and structural models. These include absolute indices, relative or incremental fit indices, and parsimony indices. The absolute indices “determine the degree to which the overall (structural and measurement models) predict the observed covariance or correlation matrix” (Hair et al., 1998). Incremental or relative measures provide a comparison of the proposed models to the null or fully saturated model (Hair et al., 1998). Finally, the parsimonious fit indices:

relate the goodness-of-fit of the model to the number of estimated coefficients required to achieve this level of fit. Their basic objective is to diagnose whether model fit has been achieved by “overfitting” the data with too many coefficients. This procedure is similar to the “adjustment” of the $R^2$ in multiple regression (Hair et al., 1998).

Models that achieve better fit at the expense of lost degrees of freedom or greater numbers of free parameters, are penalized by measures of parsimony (Church & Burke, 1994).
The absolute indices used include the likelihood ratio chi-square statistic which is a measure that can be used to test "the null hypothesis that a specified model reproduces the population covariance matrix of the observed variable (Bagozzi, 1993, p. 840). Convention dictates that an acceptable model has a $p$ value that is greater than or equal to .05. Hair et al. (1998) stated that conservative levels range from .10 or .20. Bentler and Bonett (1980) point out that "in effect, a nonsignificant chi-square value is desired, and one attempts to infer the validity of the hypothesis of no difference between the model and data" (p. 591). However, this measure of fit is particularly dependent on sample size. Hair et al., (1998) stated that with sample sizes of 100 or less, there is a potential for $X^2$ to denote no difference even when there are no significant relationships in the model. Bagozzi explains further, "in large samples even trivial deviations of a hypothesized model, or for very small samples, large deviations of a hypothesized model from a true model may go undetected .... Another drawback with the chi-squared test is that it does not directly provide an indication of the degree of fit such as is available with indices normed from 0 to 1" (Bagozzi, 1993, p. 840). Thus, it should not be the sole measure of fit used to determine goodness of fit: other indices that are less sensitive to sample size should be employed.

LISREL also provides the goodness-of-fit index as another measure of absolute fit. Ranging from 0 to 1, the GFI provides a measure of the relative amount of variance and covariance jointly accounted for by the model (Joreskog & Sorbom, 1989). However, there is no absolute threshold for acceptability of this fit index, though higher levels are more desirable (Hair et
al., 1998). For this study, GFI values $\geq .90$ were considered a strong fit, and values $\geq .80$ were considered an acceptable fit.

The Root-Mean-Square Index (RMS, also called the RMSR) provides an average of the residuals between the observed and model-produced covariances (Joreskog & Sorbom, 1989). The RMSR is the average residual covariance if covariances are used; and if a correlation matrix is used, the RMSR is in terms of the average residual correlation (Hair et al., 1998). Kelloway (1995) suggests that a standardized RMSR of .05 or less is desirable. However, like the GFI, no absolute threshold for acceptability has been established for the RMSR (Hair et al., 1998). The final absolute measure used was the Root Mean Square Error of Approximation. This fit index is the “discrepancy per degree of freedom” (Hair et al., 1998, p. 656). Desirable values range from .05 to .08.

The Tucker-Lewis Index, also referred to as the nonnormed fit index (NNFI), is a relative fit measure utilized in this study. This measure combines a measure of parsimony into a comparative index between the proposed and null models which has no structural paths. Similar to the GFI, values greater than or equal to .90 are considered to be the desirable.

Another measure of how well a model fits data is the adjusted goodness-of-fit index (AGFI). This index is a variation of a general coefficient of determination (Bagozzi, 1993). Researchers, however, have noted serious shortcomings of the AGFI (Church & Burke, 1994). "It can take on negative values and is undefined for saturated (perfect) models. Authors disagree about whether it undercorrects (Mulaik et al., 1989) or
overcorrects (Marsh et al., 1988) for degrees of freedom" (Church & Burke, 1994, p. 114). Muliak et al. explained, “A negative AGFI may be diagnostic of a poor model . . . , but because 0 and negative values have no rationale in the formulation of the AGFI, it is difficult to know what further interpretations to give them” (1989, p. 440).

There is also some discrepancy over whether the AGFI index is an incremental (Hair et al., 1998) or a parsimonious measure (Joreskog & Sorbom, 1989). Hair et al., (1995) explain this index as follows:

The adjusted-goodness-of-fit (AGFI) is an extension of the GFI, adjusted by the ratio of degrees of freedom for the proposed model to the degrees of freedom for the null model . . . [A] recommended acceptance level is a value greater than or equal to .90 (Hair et al., 1995, p. 686).

Bagozzi (1993) maintains that the AGFI usually falls between zero and 1, except in rare instances. An AGFI value of zero indicates a complete lack of fit, whereas a value of 1 is indicative of a perfect fit. However, as Hair et al. (1998) state, no absolute threshold levels for acceptability have been established. Anderson & Gerbing write that the AGFI “is independent of sample size in that sample size is not an explicit part of the equation . . . [However,] the distribution of [AGFI] values is strongly affected by sample size” (1984, p. 172).

The Comparative Fit Index (CFI) is an incremental measure that represents a comparison between the null and estimated model (Hair et al., 1998). Values range between zero and 1.0, with larger values representing higher levels of goodness-of-fit. As Hair et al. (1998) contend, the CFI is more appropriate in a model development strategy or in instances where a
sampler sample is available. In model development, CFI values are used to compare models with higher values indicating better fitting models.

The Parsimonious Goodness-of-Fit Index (PGFI), obviously a parsimony measure, is a variation of the AGFI. This index is based on the parsimony of the estimated model in contrast to the degrees of freedom in the estimated and null models much like the AGFI (Hair et al., 1998). Values range from zero and 1.0, with higher values indicating greater parsimony.

Assessment of models using structural equation modeling is a qualitative examination in that it involves balancing the examination of multiple indicators of a model's adequacy with the theoretical bases of the model. Statistical indicators produced through LISREL and theoretical foundations of the model are judged in combination with each other.

It is increasingly common for researchers to evaluate alternative models rather than simply examining the absolute fit of the hypothesized model. When using structural equation modeling techniques, it is customary to — at the very least — compare the fit of the null model and the fully saturated model. As part of the analysis process, modification indices were examined. Where appropriate, adjustments were made to the model and the model was evaluated for improvement in fit.
CHAPTER 5: RESULTS

Introduction

The 14 hypothesized relationships described in Chapter 3 and depicted in the structural model below were tested with structural equation modeling (SEM). Figure 5.1 depicts the full measurement model with 14 hypothesized structural paths and the indicator variables. The covariance matrices required were produced through PRELIS 2.20 (Joreskog & Sorbom, 1998). The joint specification and estimation of the measurement model and structural model hypothesized to account for the observed data was conducted through analysis of covariance structure models (Long, 1983). Following recommendations by Anderson and Gerbing (1988) and Hair et al., (1998) a two-step approach to SEM was employed.

Figure 5.1: Full Structural Model With Indicators
Analyses

Step 1: Measurement Model Assessment

Protestant Work Ethic: The factor structure of the 18 items used to measure Protestant Work Ethic (Blau & Ryan, 1998) was evaluated through confirmatory factor analysis. The hypothesized factors were hard work, asceticism, independence and non-leisure.

In CFA, factors are confirmed by appropriate factor loadings and the presence of significant paths from the factors to the items. According to Hair et al. (1998), factor loadings greater than or equal to .30 meet the minimal level of acceptance; loadings of .40 or higher are considered more important; and loadings of .50 or greater are considered particularly significant.

Following the Hair et al. (1998) criteria for factor loadings, this factor analysis confirmed the four hypothesized factors. Factor loadings ranged from .44 to .91, and all items loaded on the appropriate factor. Factor analysis results are summarized in Table 5.1. Fit indices are presented in Table 5.2. As shown by the fit indices, the fit was considered adequate (i.e., CFI = .88; GFI = .87; AGFI = .83; NNFI = .85).

Table 5.1: Factor Loadings For Work Ethic

<table>
<thead>
<tr>
<th>Item</th>
<th>Hardwork</th>
<th>Non-Leisure</th>
<th>Independ.</th>
<th>Asceticism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>.53</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td></td>
<td>.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td></td>
<td>.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q6</td>
<td></td>
<td>.86</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Table continued)
Table 5.2: Fit Indices For Work Ethic

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.87</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.83</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.64</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.25</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.82</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.85</td>
</tr>
<tr>
<td>Chi-square</td>
<td>295.97</td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.082</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.083</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.88</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>113</td>
</tr>
</tbody>
</table>

Work Commitment Attitudes: The factor structure of the 36 items measuring work commitment attitudes was also examined through confirmatory factor analysis. Factor loadings and fit indices are presented in Table 5.3 and Table 5.4, respectively. As the tables indicate, the initial fit indices were not at the desired level (i.e., GFI = .77; AGFI = .73; NFI = .71;
NNFI = .77). In addition, the CFA revealed a non-significant path for item number 40 (t = 1.05) which had a factor loading of .08. (Item number 40 read as follows: “It wouldn’t be too costly for me to leave my organization now.”) Thus, the CFA indicated that this item should be removed. The CFA also revealed a low loading (-.14) for item number 25. While the t-value indicated that the path for item 25 was significant (t = -2.09), it was only marginally so. (Item number 25 reads as follows: “Usually I feel detached from my job.”) Thus, based on the marginal significance of the path and the extremely low loading for the item, the decision was made to also remove item number 25 from the continuance commitment scale.

**Table 5.3: Initial Factor Loadings For Work Commitment Attitudes**

<table>
<thead>
<tr>
<th>Item</th>
<th>Affective Commitment</th>
<th>Continuance Commitment</th>
<th>Job Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q19</td>
<td>.61</td>
<td></td>
<td>.61</td>
</tr>
<tr>
<td>Q20</td>
<td>- .57</td>
<td></td>
<td>-.57</td>
</tr>
<tr>
<td>Q21</td>
<td>.43</td>
<td></td>
<td>.43</td>
</tr>
<tr>
<td>Q22</td>
<td>.85</td>
<td></td>
<td>.85</td>
</tr>
<tr>
<td>Q23</td>
<td>.88</td>
<td></td>
<td>.88</td>
</tr>
<tr>
<td>Q24</td>
<td>.72</td>
<td></td>
<td>.72</td>
</tr>
<tr>
<td>Q25</td>
<td>-.14</td>
<td></td>
<td>-.14</td>
</tr>
<tr>
<td>Q26</td>
<td>.65</td>
<td></td>
<td>.65</td>
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<tr>
<td>Q27</td>
<td>.71</td>
<td></td>
<td>.71</td>
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<tr>
<td>Q28</td>
<td>.68</td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>Q29</td>
<td>.54</td>
<td></td>
<td>.54</td>
</tr>
<tr>
<td>Q30</td>
<td>.49</td>
<td></td>
<td>.49</td>
</tr>
<tr>
<td>Q31</td>
<td>.62</td>
<td></td>
<td>.62</td>
</tr>
<tr>
<td>Q32</td>
<td>-.46</td>
<td></td>
<td>-.46</td>
</tr>
<tr>
<td>Q33</td>
<td>-.73</td>
<td></td>
<td>-.73</td>
</tr>
<tr>
<td>Q34</td>
<td>-.77</td>
<td></td>
<td>-.77</td>
</tr>
<tr>
<td>Q35</td>
<td>.72</td>
<td></td>
<td>.72</td>
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<tr>
<td>Q36</td>
<td>-.74</td>
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<td>-.74</td>
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<tr>
<td>Q37</td>
<td>.40</td>
<td></td>
<td>.40</td>
</tr>
<tr>
<td>Q38</td>
<td>-.52</td>
<td></td>
<td>-.52</td>
</tr>
<tr>
<td>Q39</td>
<td>-.64</td>
<td></td>
<td>-.64</td>
</tr>
</tbody>
</table>

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Removal of item numbers 25 and 40 improved the fit slightly. As shown in the fit indices presented in Table 5.5, the GFI increased from .77 to .79, AGFI increased from .73 to .74, and the CFI increased from .79 to .81. Parameter estimates revealed that all paths were significant (t-values ranged from 5.77 to 16.65) and that the loadings for all items were .40 or higher (loadings ranged from .40 to .88).

The fit indices and loadings were still lower than desired after the removal of items 25 and 40. Because all the scales were large, the decision was made to adopt a more conservative approach in an attempt to improve
Table 5.5: Fit Indices For Work Commitment Attitudes – First Modification

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.79</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.75</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.66</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.28</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.74</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.79</td>
</tr>
<tr>
<td>Chi-square</td>
<td>704.04</td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td>.089</td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.091</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.81</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.84</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>249</td>
</tr>
</tbody>
</table>

The fit. Accordingly, items with a factor loading less than .50 were removed. These items included items numbers 21, 30, and 32 (“I am very much involved personally with my job.”; “I enjoy discussing my organization with people outside it.”; and, “I think that I could easily become as attached to another organization as I am to this one.”)

The fit of the model improved as a result of the elimination of these items. More specifically, removal of these three additional items resulted in significant paths for all items (t-values ranged from 7.55 to 16.82). In addition, the factor loadings and fit indices also improved as indicated in Table 5.6 and Table 5.7 (i.e., GFI increased from .79 to .82; AGFI increased from .75 to .77; CFI increased from .81 to .84). While the fit indices were still not quite as strong as desired, additional items were not deleted because
these scales had been previously validated. Deleting more items would increase the risk of capitalizing on sample specific variance.

Table 5.6: Factor Loadings For Work Commitment Attitudes – Second Modification

<table>
<thead>
<tr>
<th>Item</th>
<th>Affective Commitment</th>
<th>Continuance Commitment</th>
<th>Job Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q19</td>
<td>.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q20</td>
<td>.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q22</td>
<td>.85</td>
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<td>Q23</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Q24</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q26</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q27</td>
<td>.71</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Q29</td>
<td>.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q31</td>
<td>.60</td>
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<td></td>
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<tr>
<td>Q33</td>
<td>.75</td>
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<tr>
<td>Q35</td>
<td>.72</td>
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<tr>
<td>Q36</td>
<td>.74</td>
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<td>Q38</td>
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<td>.69</td>
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<td></td>
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<tr>
<td>Q42</td>
<td>.65</td>
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<td></td>
</tr>
<tr>
<td>Q43</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q44</td>
<td>.72</td>
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<td></td>
</tr>
</tbody>
</table>

Table 5.7: Fit Indices For Work Commitment Attitudes – Second Modification

<table>
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<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
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<td>Goodness of Fit Index (GFI)</td>
<td>.82</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.77</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.65</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.29</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.78</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.82</td>
</tr>
</tbody>
</table>

(table continued)
Chi-square 520.08
p < 0.001
Standardized RMR .089
Root Mean Square Error of Approximation (RMSEA) .096
Comparative Fit Index (CFI) .84
Degrees of Freedom 167

Motivation To Improve Work Through Learning (MTIWL): Using confirmatory factor analysis techniques, the following factor loadings and fit indices were obtained in the initial run. (See Table 5.8 and Table 5.9).

Table 5.8: Initial Factor Loadings For Motivation To Improve Work Through Learning

<table>
<thead>
<tr>
<th>Item</th>
<th>Attitudes Toward Training</th>
<th>Motivation To Train</th>
<th>Motivation To Transfer</th>
<th>Performance Outcome Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>-.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>-.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>-.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td>.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q6</td>
<td>.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q7</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q8</td>
<td></td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td></td>
<td>.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q10</td>
<td></td>
<td>-.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q11</td>
<td></td>
<td>-.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q12</td>
<td></td>
<td>-.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q13</td>
<td></td>
<td>.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q14</td>
<td></td>
<td>.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q19</td>
<td></td>
<td></td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>Q20</td>
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<td>.75</td>
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<tr>
<td>Q21</td>
<td></td>
<td></td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>Q22</td>
<td></td>
<td></td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>Q23</td>
<td></td>
<td></td>
<td></td>
<td>.54</td>
</tr>
<tr>
<td>Q24</td>
<td></td>
<td></td>
<td></td>
<td>-.42</td>
</tr>
<tr>
<td>Q25</td>
<td></td>
<td></td>
<td></td>
<td>-.78</td>
</tr>
<tr>
<td>Q26</td>
<td></td>
<td></td>
<td></td>
<td>-.72</td>
</tr>
<tr>
<td>Q27</td>
<td></td>
<td></td>
<td></td>
<td>-.78</td>
</tr>
</tbody>
</table>
Table 5.9: Initial Fit Indices For Motivation To Improve Work Through Learning

<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.86</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.83</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.70</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.047</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.77</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.85</td>
</tr>
<tr>
<td>Chi-square</td>
<td></td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td>440.55</td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.062</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.063</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.86</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>224</td>
</tr>
</tbody>
</table>

Examination of the factor loadings and the significance of the paths as indicated by the t-values (t-values ranged from 1.56 to 18.63), and the fit indices resulted in the decision to remove several items. Specifically, item numbers 5 (t = 1.62), 10 (t = -3.49), 13 (t = 1.70), and 14 (t = 3.20) were removed as each had a loading below Nunnally's (1978) and Hair et al. (1998) guideline of a acceptable minimum factor loading of .30. These items were 5) "It is more important to complete a training program than to understand the material being presented."; 10) "I work hard to do well in training programs, even when I don't like them."; 13) "I put off completing outside work assigned during training sessions."; and 14) "When training materials are difficult, I either give up or study only the easy parts.").

Elimination of these items resulted in factor loadings that were all above .30. (See Table 5.10.), and all item paths were significant (t-values...
ranged from 6.29 to 14.51). In addition, the fit indices, presented in Table 5.11, revealed an improvement in the fit. Specifically, GFI increased from .86 to .88; AGFI increased from .83 to .84; NFI increased from .77 to .81; and NNFI increased from .85 to .86.

Table 5.10: Factor Loadings For Motivation To Improve Work Through Learning – First Modification

<table>
<thead>
<tr>
<th>Item</th>
<th>Attitudes Toward Training</th>
<th>Motivation To Train</th>
<th>Motivation To Transfer</th>
<th>Performance Outcome Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>-.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>-.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>-.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q6</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q7</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q8</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Q11</td>
<td>-.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q12</td>
<td>-.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q19</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q20</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q21</td>
<td>.71</td>
<td></td>
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<td></td>
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<tr>
<td>Q22</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q23</td>
<td></td>
<td>.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q24</td>
<td></td>
<td>-.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q25</td>
<td></td>
<td>-.78</td>
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</tr>
<tr>
<td>Q26</td>
<td></td>
<td>-.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q27</td>
<td></td>
<td>-.78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.11: Fit Indices For Motivation To Improve Work Through Learning – First Modification

<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.88</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.84</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.67</td>
</tr>
</tbody>
</table>

(table continued)
Despite these improvements, it was decided to explore whether additional improvements in fit could be reasonably obtained. Accordingly, the decision was made to examine the results of eliminating items with factor loadings below .50, which was consistent with the approach taken for the Work Commitment Attitude factors. Based on this more conservative guideline, items 1, 11, and 24 were eliminated.

Removal of these additional items did result in fit improvement as indicated in Table 5.12. All item paths had significant loadings (t-values ranged from 7.66 to 14.47), and factor loadings ranged from .52 to .81. Fit indices improved as well (i.e., NFI increased from .81 to .84; CFI increased from .88 to .90; GFI from .88 to .89; AGFI from .84 to .85).

Table 5.12: Fit Indices For Motivation To Improve Work Through Learning - Second Modification

<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.89</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.85</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.66</td>
</tr>
</tbody>
</table>

(Continued)
Root Mean Square Residual (RMSR or RMR) \[ .038 \]
Normed Fit Index (NFI) \[ .84 \]
Non-Normed Fit Index (NNFI) \[ .87 \]
Chi-square \[ 240.20 \]
\[ p < 0.001 \]
Standardized RMR \[ .061 \]
Root Mean Square Error of Approximation (RMSEA) \[ .078 \]
Comparative Fit Index (CFI) \[ .90 \]
Degrees of Freedom \[ 98 \]

Scale Scores and Measurement Error: After the confirmatory factor analysis, scale scores for each latent variable were calculated by averaging the items for each scale (Williams & Hazer, 1986). According to standard procedure (Hair et al., 1998), when a single indicator is used for a latent construct, the error variance is set to one minus the reliability times the variance. For each NEO scale, the reliability from the NEO PI-R Professional Manual (Costa & McCrae, 1992) was used along with the variance calculated from this sample. For PA and NA, the reliability was calculated for this sample and used in conjunction with the variance from this sample data. (See Table 5.13.)

Table 5.13: Reliability, Variance and Error Variance

<table>
<thead>
<tr>
<th>Scale</th>
<th>Reliability</th>
<th>Variance (t score)</th>
<th>Error Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>.86</td>
<td>147.281</td>
<td>20.61934</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.77</td>
<td>154.148</td>
<td>35.45404</td>
</tr>
<tr>
<td>Openness</td>
<td>.73</td>
<td>137.785</td>
<td>37.20195</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.68</td>
<td>162.396</td>
<td>51.96672</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.81</td>
<td>89.766</td>
<td>17.05554</td>
</tr>
<tr>
<td>PA</td>
<td>.89</td>
<td>.433</td>
<td>.04416</td>
</tr>
<tr>
<td>NA</td>
<td>.87</td>
<td>.378</td>
<td>.46449</td>
</tr>
</tbody>
</table>
Complete Measurement Model: Using the procedures and guidelines described above, the complete measurement model was examined. Results of the analysis of the complete measurement model indicated that all paths were significant (t-values ranged from 2.77 to 12.88). However, loadings for some of the indicators were below .30 (non-leisure had a factor loading of .17 and continuance commitment had a factor loading of -.23) and the squared multiple correlations were low (i.e., nonleisure = .03; independence = .08) indicating that some of the indicators did not fit the latent constructs well. Thus, the decision was made to eliminate some indicators to improve the fit. (See Table 5.14 and 5.15 below)

Table 5.14: Initial Loadings For Multiple Indicator Latent Constructs of Complete Measurement Model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>WCATT</th>
<th>WETHIC</th>
<th>MTIWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardwork</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonleisure</td>
<td>.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td>.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asceticism</td>
<td>.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to Transfer</td>
<td></td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>Motivation Transfer to</td>
<td></td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>Train Motivation to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement Affective</td>
<td></td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td>Commitment Continuance</td>
<td></td>
<td>-.23</td>
<td></td>
</tr>
<tr>
<td>Commitment Perf-Out</td>
<td></td>
<td></td>
<td>.67</td>
</tr>
<tr>
<td>Expect</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the first step, continuance commitment was eliminated which resulted in an improved model fit, though low loadings were still evident, especially
Table 5.15: Initial Fit Indices For Full Measurement Model

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.88</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.80</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.54</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.13</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.68</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.62</td>
</tr>
<tr>
<td>Chi-square p &lt; 0.001</td>
<td>186.39</td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.099</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.12</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.84</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>41</td>
</tr>
</tbody>
</table>

in the case of nonleisure (.16). Tables 5.16 and 5.17, presented below, show both the fit indices and the factor loadings for this adjusted model. All paths were significant (t-values ranged from 2.68 to 12.97), and the fit improved slightly.

Table 5.16: Factor Loadings For Adjusted Measurement Model – First Modification

<table>
<thead>
<tr>
<th>Indicator</th>
<th>WCATT</th>
<th>WETHIC</th>
<th>MTIWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardwork</td>
<td>.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonleisure</td>
<td>.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td>.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asceticism</td>
<td>.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to Transfer</td>
<td>.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toward Training</td>
<td>.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to Train</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Train</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(table continued)
<table>
<thead>
<tr>
<th>Index</th>
<th>Index Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.88</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.80</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.51</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.12</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.71</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.64</td>
</tr>
<tr>
<td>Chi-square</td>
<td></td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.098</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.13</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.74</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>32</td>
</tr>
</tbody>
</table>

However, all of the loadings for work ethic indicators were still low, which was an early sign that the work ethic construct had measurement problems. It was decided to eliminate nonleisure as an indicator to see if the fit improved. Doing so revealed more significant problems. (See Tables 5.18 and 5.19 below.) More importantly, a negative error variance was detected, offending estimates (> 1) were obtained for correlations involving work ethic, and the near zero squared multiple correlations for the indicators indicted that almost no variance in independence, hardwork and asceticism
was being explained by the latent construct work ethic (i.e., independence = .03; asceticism = .05).

Contrary to Blau’s (1997) assertions that work ethic is comprised of four dimensions — nonleisure, asceticism, independence, and hard work — the removal of nonleisure from the model resulted in the severe instability of the construct within this sample data. It became clear that an alternate measurement model should be explored.

**Alternate Measurement Models:** As indicated in the discussion above, problems were encountered with the previous measurement models tested. More specifically, these included 1) a marginal fit; 2) instability in the work ethic construct (detected when nonleisure was removed); and, 3) squared multiple correlations for indicators of work ethic were relatively low indicating a marginal fit to the work ethic construct. Thus, additional steps were required to identify the proper measurement model.

Following Rindskopf’s (1984) recommendation, the model was re-examined for signs of factors with either no or only one large loading, or two large loadings if the factor had low correlations with other factors. His proposed solution for this problem consisted of “eliminat[ing] this factor or combin[ing] it with another factor (fixing its correlation with the other factor at one)” (Rindskopf, 1984, p. 118). Work ethic fit one of Rindskopf’s categories with low loadings on all factors (hardwk=.27; indep= 18; and asc.= 21). Rindskopf’s (1984) recommended strategy would lead to combining the work ethic with another latent construct.
There was a sound theoretical rationale for combining work ethic with work commitment attitudes. As stated in Chapter 2, Morrow (1984) proposed a single construct of work commitment, which encompasses both attitudinal and value-based foci. Through her influential work on the topic, Morrow posited a “facet design describing the theoretical and empirical relations among . . . forms of work commitment” (Blau, Paul, & St. John, 1993, p. 298). These five facets included value, career, job, affective organizational commitment, and continuance organizational commitment with the corresponding measures being Protestant work ethic, career salience, job involvement/central life interest and organization commitment, respectively.

A new measurement model was developed as shown in Figure 5.2. This model eliminated the work ethic latent construct and three structural paths. Thus, hypotheses 4, 12, and 13 (the paths from conscientiousness to work ethic, work ethic to work commitment attitudes, and work ethic to motivation to improve work through learning) were eliminated. Confirmatory factor analysis of this model eliminated the negative error variance that was previously encountered and improved the factor loadings (see Table 5.18 and 5.19 for factor loadings and fit indices.) Initial test of this measurement model indicated that the work commitment latent construct was the more appropriate structure. Given theoretical and statistical support, it was decided to pursue refinement of this model.
Table 5.18: Factor Loadings For Alternate Measurement Model – Initial Run

<table>
<thead>
<tr>
<th>Indicator</th>
<th>WCATT</th>
<th>MTIWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardwork</td>
<td>.42</td>
<td></td>
</tr>
<tr>
<td>Nonleisure</td>
<td>.33</td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td>.34</td>
<td></td>
</tr>
<tr>
<td>Asceticism</td>
<td>.45</td>
<td>.76</td>
</tr>
<tr>
<td>Motivation to transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td>Toward Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to Train</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Job</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>.59</td>
<td></td>
</tr>
<tr>
<td>Affective Commitment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuance Commitment</td>
<td>-.30</td>
<td></td>
</tr>
<tr>
<td>Perf-Out</td>
<td></td>
<td>.71</td>
</tr>
<tr>
<td>Expect</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5.19: Fit Indices For Alternate Measurement Model – Initial Run

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.87</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.78</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.54</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.59</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.75</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.72</td>
</tr>
<tr>
<td>Chi-square p &lt; 0.001</td>
<td>334.01</td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.08</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.095</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.80</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>106</td>
</tr>
</tbody>
</table>

The first step was to test the removal of indictors with low path estimates. Nonleisure (.33) and continuance commitment (-.30) were selected for elimination. Doing so, resulted in some improvements in the factor loadings and fit indices. For instance, GFI improved from .87 to .90, AGFI improved from .78 to .81; and NNFI increased from .72 to .77. (See Table 5.20 and 5.21 below.)

Table 5.20: Factor Loadings For Alternate Measurement Model – First Modification

<table>
<thead>
<tr>
<th>Indicator</th>
<th>WCATT</th>
<th>MTIWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardwork</td>
<td>.47</td>
<td></td>
</tr>
<tr>
<td>Independence</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>Asceticism</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>Motivation to Transfer</td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>Attitudes Toward Training</td>
<td></td>
<td>.43</td>
</tr>
</tbody>
</table>

(table continued)
<table>
<thead>
<tr>
<th>Motivation to Train</th>
<th>.66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Involvement</td>
<td>.65</td>
</tr>
<tr>
<td>Affective Commitment</td>
<td>.62</td>
</tr>
<tr>
<td>Perf-out</td>
<td>.71</td>
</tr>
<tr>
<td>Expect</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.21: Fit Indices For Alternate Measurement Model – First Modification

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.90</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.81</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.51</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.60</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.81</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.77</td>
</tr>
<tr>
<td>Chi-square</td>
<td>226.17</td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.071</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.09</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.86</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>75</td>
</tr>
</tbody>
</table>

Two scales still had lower loadings (.37 for independence and .37 for asceticism). In an effort to improve the fit even further, it was decided to evaluate the results of eliminating each. First, independence was removed. All paths were significant (t-values ranged from 5.62 to 19.15), factor loadings ranged from .39 to .76 (See Table 5.22 below), and the model fit improved (see Table 5.23 below). For instance, GFI increased from .90 to .91, AGFI increased from .81 to .83, NNFI increased from .77 to .80, and CFI increased from .86 to .90.
Table 5.22: Factor Loadings For Alternate Measurement Model – Second Modification

<table>
<thead>
<tr>
<th>Indicator</th>
<th>WCATT</th>
<th>MTIWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardwork</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>Asceticism</td>
<td>.39</td>
<td></td>
</tr>
<tr>
<td>Motivation to Transfer Attitudes toward Training</td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>Motivation to Train Job</td>
<td></td>
<td>.43</td>
</tr>
<tr>
<td>Involvement Affective Commitment</td>
<td></td>
<td>.66</td>
</tr>
<tr>
<td>Perf-out</td>
<td></td>
<td>.57</td>
</tr>
<tr>
<td>Expect</td>
<td></td>
<td>.62</td>
</tr>
</tbody>
</table>

Table 5.23: Fit Indices For Adjusted Measurement Model – Second Modification

<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.91</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.83</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.46</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.54</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.84</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.80</td>
</tr>
<tr>
<td>Chi-square</td>
<td>175.67</td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.063</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.088</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.90</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>61</td>
</tr>
</tbody>
</table>

Next, asceticism was removed from the model (thereby making hardwork the equivalent of Morrow's work ethic construct), which further...
improved the model fit. Fit indices are listed in Table 5.24 below. As the table indicates, improvements in the fit of the model were evident in GFI (from .91 to .93), CFI (from .90 to .91), NFI (from .84 to .87), and NNFI (.80 to .86).

Table 5.24: Fit Indices For Alternate Measurement Model – Final Modification

<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.93</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.84</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.42</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.36</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.87</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.83</td>
</tr>
<tr>
<td>Chi-square</td>
<td>130.39</td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.055</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.085</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.91</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>31</td>
</tr>
</tbody>
</table>

Based on an analysis of the fit indices, the significant loadings of the indicators on their latent variables, and substantial squared multiple correlations (i.e., motivation to transfer = .58, motivation to train = .43, affective commitment = .41) for each indicator, this model was selected as the final measurement model.

Step 2: Structural Model Assessment

As described earlier, the second step of the analysis requires assessment of the structural model describing the relationships among the
latent constructs (Anderson & Gerbing, 1988). Just like the evaluation process for the measurement model, structural model assessment involves examination of multiple fit indices. In addition, parameter estimates for each path and their statistical significance are examined as part of this stage.

As stated earlier, because it was discovered that three of the indicators for the latent construct work ethic in the measurement model did not load properly on the construct and that hard work loaded on work commitment attitudes, 3 paths (conscientiousness to work ethic; work ethic to motivation to improve work through learning; and work ethic to work commitment attitudes) and one latent construct (work ethic) were deleted from the original structural model. The result is the revised structural model shown in Figure 5.3 for the second phase of the structural analysis.

![Figure 5.3: Revised Structural Model](image)

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Initial Structural Model: The initial structural model tested included the 11 hypothesized paths. These paths are listed below. (These 11 hypotheses are identified with the numbers that were assigned to them in Chapter 3.)

Hypothesis 1: Extraversion to PA
Hypothesis 2: Extraversion to Motivation To Improve Work Through Learning
Hypothesis 3: Neuroticism to NA
Hypothesis 5: Conscientiousness to Work Commitment Attitudes
Hypothesis 6: Conscientiousness to Motivation To Improve Work Through Learning
Hypothesis 7: Openness to Motivation To Improve Work Through Learning
Hypothesis 8: Agreeableness to Work Commitment Attitudes
Hypothesis 9: Agreeableness to Motivation To Improve Work Through Learning
Hypothesis 10: PA to Work Commitment Attitudes
Hypothesis 11: NA to Work Commitment Attitudes
Hypothesis 14: Work Commitment Attitudes to Motivation To Improve Work Through Learning.

The fit for this initial model was not as strong as desired (See Table 5.25 for fit indices.) and several paths were non-significant. These included openness to motivation to improve work through learning ($t=-.48$).
agreeableness to motivation to improve work through learning ($t=−.61$), agreeableness to work commitment attitudes ($t=1.33$) and NA to work commitment attitudes ($t=1.19$). Thus, modifications to the model were deemed appropriate. However, because the $t$-values for the path between agreeableness and work commitment attitudes was larger, this link was retained in the model and the link between agreeableness and motivation to improve work through learning was eliminated.

Table 5.25: Fit Indices For Initial Structural Model

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.89</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.82</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.53</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>1.34</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.79</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.77</td>
</tr>
<tr>
<td>Chi-square</td>
<td>206.53</td>
</tr>
<tr>
<td>P &lt; .001</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.098</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.084</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.85</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>63</td>
</tr>
</tbody>
</table>

**Modified Structural Model**: Dropping the paths from openness to motivation to improve work through learning, agreeableness to motivation to improve work through learning, and NA to work commitment attitudes yielded an improved fit, though still not as strong as desired. The NFI increased from .79 to .86, and the NNFI from .77 to .86. In addition, as Table 5.26 indicates, the residuals are still slightly higher than desired.
Thus, additional modifications to the structural model were considered. More specifically, after assessing the indicators of path significance (t-values ranged from .55 to 16.69), the decision was made to eliminate the path from conscientiousness to motivation to improve work through learning. The rationale for this decision was that, a) this path was not significant (t-value = -.55) and, b) there was a significant path from conscientiousness to work commitment attitudes (t-value = 3.71) so the conscientiousness construct would not be eliminated from the model. Its influence would be retained through attitudes.

Table 5.26: Fit Indices For Modified Structural Model 1

<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.92</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.86</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.59</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.87</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.85</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.85</td>
</tr>
<tr>
<td>Chi-square</td>
<td>120.16</td>
</tr>
<tr>
<td>p &lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.067</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.095</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.89</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>38</td>
</tr>
</tbody>
</table>

Dropping the path from conscientiousness to motivation to improve work through learning slightly modified the fit. (See Table 5.37 below.) However, the fit was still not at a desirable level, and was, in fact, slightly
worse than the previous model. Additionally, the path from agreeableness to work commitment attitudes was not significant (t-value = 1.45).

Table 5.27: Fit Indices For Modified Structural Model 2

<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.91</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.85</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.54</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.82</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.83</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.82</td>
</tr>
<tr>
<td>Chi-square p &lt; 0.001</td>
<td>131.09</td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.072</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.10</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.87</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>39</td>
</tr>
</tbody>
</table>

Alternate Structural Model: At this point in the analysis theory was examined in an attempt to establish a theoretical basis for considering an alternate model. This decision was made because there still existed one non-significant path and a non-superlative fit. While this model could have been used as the final structural model, testing an alternative model for an improvement in fit was adopted as the next step in this process.

The alternate model examined involved the relocation of the PA path which was supported both by statistical and theoretical evidence. Specifically, PA was changed from an endogenous construct mediating the relationship between extraversion and work commitment to an exogenous construct directly influencing motivation. Modification indices showed that
adding a path from PA to motivation to improve work through learning would lead to the greatest improvement in model fit (mod. Index = 33.19).

Theoretical support for the path from PA to motivation is provided by several researchers. Ashforth and Humphrey (1995) argued that current theoretical perspectives of work motivation do not emphasize the role of affectivity. George and Brief (1996) noted that a gradual shift toward the role of emotions, mood, and feelings was beginning. “Pekrun and Frese (1992) for example, opened a recent ‘review’ on work and emotions by noting ‘we are convinced that industrial and organizational psychologists ought to take the issue of emotions at work more seriously’; but, they also observed ‘there is little research that speaks directly to the issue of work and emotion’ (p. 153). Additionally, research by Staw and colleagues has focused on affect as it relates to actual performance (e.g., Staw and Barsade, 1993; Staw, Sutton, and Pelled, 1994)” (George & Brief, 1996, p. 79).

Motivational attention refers to the “allocation of cognitive resources to a possible self, to the pathways leading to that end, and to the consequences of arriving there” (Brief & George, 1996, p. 79). Affective characteristics can serve as information that guides and directs an individual’s motivational attention (Brief & George, 1996). George and Brief relied on the work of Klinger (1982) to describe the role of affectivity within this context:

The flow of attention and thought content seems to be steered from moment to moment by the mental and environmental flow of concern-related cues. Thus, as each cue is sensed, it appears nonconsciously to be accorded a kind of priority that
determines the likelihood of its being processed further . . . . It seems very likely that what determines the priority accorded a concern-related cue is the capacity to elicit an affective response . . . . Thus, it appears that attentional mechanisms are themselves steered in part by emotional response, which is in turn anchored in goal striving (pp. 139-140).

Brief and George (1996) argued that affective characteristics impact the nature of motivation. They cite Clark (1982) and Morris and Reilly (1987) as support for this contention. Clark stated that "there is now little doubt that subtle feeling states, or . . . moods, are capable of influencing a wide variety of judgments and behaviors" (1982, p. 264). The pervasiveness and nonspecific nature of moods are part of the reason that moods appear to have such extensive effects on cognitions and development (Morris & Reilly, 1987).

According to propositions asserted by Brief and George (1996), "positive mood enhances distal motivation by facilitating initial involvement, interest, and enthusiasm for work tasks. Moreover, once a worker is in the process of performing a task, positive mood also enhances proximal motivation in that it results in a worker, for instance, persisting" (p. 89).

The hypothesized paths involving personality dimensions and affectivity depicted in the original model were based on the theoretical assertions of Costa and McCrae (1991). According to Costa and McRae (1991), "extraversion and neuroticism most likely play a temperamental (i.e., direct) role in fostering positive and negative affect, respectively, whereas
other traits (e.g., conscientiousness and agreeableness) most likely play an instrumental (i.e., indirect) role in fostering the creation of life circumstances that, in turn, promote positive affect and minimize negative affect” (Larsen & Ketelaar, 1991, p. 133). Thus, these researchers viewed positive affectivity as being directly caused by extraversion and negative affectivity caused by neuroticism.

However, in this sample data set, the correlation between extraversion and positive affectivity was .47 which, while clearly indicating an association between the constructs, also suggested that there may not be a direct causal relationship. In other words, instead of being directly caused by extraversion, positive affectivity may be a separate construct that was associated with, but not caused by extraversion. Thus, alternate theory was examined.

An alternate theory regarding the constructs was proposed by Tellegen (1985). Tellegen viewed the constructs (i.e., positive affectivity and extraversion) as separate, independent constructs. He considered certain personality dimensions and certain affective tendencies to be so closely related that he considered the most powerful second-order dimensions to emanate from his program of personality scale construction as positive and negative emotionality (Larsen & Ketelaar, 1991). Emotionality is the term that Tellegen uses to describe the interaction between personality and affectivity: the term is not synonymous with either personality or affectivity. This neurotic trait cluster “appears to foster negative emotional experiences”
(Larsen & Ketelaar, 1991, p. 132). It is important to note that Tellegen does not assert that the constructs (i.e., extraversion-positive affectivity and introversion-negative affectivity) are the same. Rather, Tellegen's work indicates that they are correlated, but distinct constructs.

Following the suggested path modifications and the theoretical assertions described above, from extraversion to positive affectivity and the path from positive affectivity to work commitment were removed, and one path — the path from positive affectivity to motivation — was added. The paths in this alternate model include the following (note: the numbers assigned to these hypotheses correspond to the numbers assigned to the original hypotheses in Chapter 3):

Hypothesis 2: Extraversion to Motivation To Improve Work Through Learning

Hypothesis 5: Conscientiousness to Work Commitment

Hypothesis 8: Agreeableness to Work Commitment

Hypothesis 14: Work Commitment to Motivation To Improve Work Through Learning.

Hypothesis 10A (added as a result of theoretical and statistical examinations): PA to Motivation To Improve Work Through Learning

This model was reached both through statistical and theoretical means (i.e., non-significant paths were systematically eliminated and theory
was examined to support possible further modifications.) Fit statistics for this model are presented in Table 5.28.

**Table 5.28: Fit Indices For Alternate Structural Model**

<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.94</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.89</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.53</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>.20</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.89</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.90</td>
</tr>
<tr>
<td>Chi-square</td>
<td>85.57</td>
</tr>
<tr>
<td>p = 0.000</td>
<td></td>
</tr>
<tr>
<td>Standardized RMR</td>
<td>.063</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.074</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.93</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>37</td>
</tr>
</tbody>
</table>

Table 5.29 summarizes all the fit statistics for the structural models and also includes comparison measures used for competing models (i.e., AIC, ECVI, CAIC, and NCP). For AIC, or the Akaike information criterion, values closer to zero are indicative of better fit and greater parsimony (Hair et al., 1998). When comparing models, the lowest values is preferred. The expected cross validation index (ECVI) is the goodness-of-fit expected in another sample of the same size. Although no ranges of acceptability have been established, this index is used in making comparisons between models with lower values being preferred (Hair et al., 1998). The non-centrality parameter (NCP) is stated in terms of respecified $\chi^2$ and is used to compare alternative models with lower values preferred.
The CAIC is Bazdogan’s (1987) modification of the AIC which may yield different rankings. But, just like the AIC, lower values are indicative of a better fit.

Comparison of the fit statistics indicated that this was the best fitting model. More specifically, the GFI increased from .91 to .94; AGFI increased from .85 to .89; NFI increased from .85 to .89; NNFI increased from .82 to .90; and CFI increased from .87 to .93. Comparison of the fit measures for comparing models also indicates that this the best fitting model, with all values being lowest for this model.

Table 5.29: Summary of Fit Indices For All Structural Models Tested

<table>
<thead>
<tr>
<th>Index</th>
<th>Initial</th>
<th>M1</th>
<th>M2</th>
<th>Alternate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>.89</td>
<td>.92</td>
<td>.91</td>
<td>.94</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>.82</td>
<td>.86</td>
<td>.85</td>
<td>.89</td>
</tr>
<tr>
<td>Parsimony Goodness of Fit Index (PGFI)</td>
<td>.53</td>
<td>.59</td>
<td>.54</td>
<td>.53</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR or RMR)</td>
<td>1.34</td>
<td>.87</td>
<td>.82</td>
<td>.20</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.79</td>
<td>.85</td>
<td>.83</td>
<td>.89</td>
</tr>
<tr>
<td>Non-Normed Fit Index (NNFI)</td>
<td>.77</td>
<td>.85</td>
<td>.82</td>
<td>.90</td>
</tr>
<tr>
<td>Chi-square p = 0.000</td>
<td></td>
<td>206.53</td>
<td>120.16</td>
<td>131.09</td>
</tr>
<tr>
<td>Standardized RMR</td>
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<td>.079</td>
<td>.067</td>
<td>.072</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.098</td>
<td>.095</td>
<td>.10</td>
<td>.074</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.84</td>
<td>.89</td>
<td>.87</td>
<td>.93</td>
</tr>
<tr>
<td>Aikaike Information Criterion (AIC)</td>
<td>290.53</td>
<td>176.16</td>
<td>185.09</td>
<td>143.57</td>
</tr>
<tr>
<td>Expected cross validation index (ECVI)</td>
<td>.88</td>
<td>.74</td>
<td>.78</td>
<td>.60</td>
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<tr>
<td>CAIC</td>
<td>478.54</td>
<td>301.5</td>
<td>305.96</td>
<td>273.39</td>
</tr>
<tr>
<td>Non-centrality parameter (NCP)</td>
<td>143.53</td>
<td>82.16</td>
<td>92.09</td>
<td>48.57</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>63</td>
<td>38</td>
<td>39</td>
<td>37</td>
</tr>
</tbody>
</table>
Path Estimates of Final Model: Figure 5.4 shows the final path model with standardized path coefficients. Parameter estimates of the final model indicated that all but one of the paths was statistically significant. T-values, as reported in Table 5.30 below, ranged from 1.57 to 4.57. While the path from extraversion to motivation to improve work through learning was not statistically significant (t=1.57), it was only marginally so. The remaining five paths were significant.

Figure 5.4: Final Model With Coefficients

Table 5.30: T-values For Final Model Paths

<table>
<thead>
<tr>
<th>Path</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conscientiousness to Work Commitment Attitudes</td>
<td>4.50</td>
</tr>
<tr>
<td>Agreeableness to Work Commitment Attitudes</td>
<td>2.22</td>
</tr>
</tbody>
</table>

(table continued)
Extraversion to Motivation to Improve Work Through Learning | 1.57
---|---
PA to Motivation To Improve Work Through Learning | 4.57
Work Commitment Attitudes to Motivation To Improve Work Through Learning | 4.10

As indicated in Table 5.31 below, the constructs conscientiousness and agreeableness explained 52% of the variance in work commitment. And, work commitment, extraversion and positive affectivity explained 59% of the variance in the dependent construct, motivation to improve work through learning.

Table 5.31: Regression Equations

<table>
<thead>
<tr>
<th>Regression Equations</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCATT = 0.54<em>NEOCONSC + 0.25</em>NEOAGREE, Errorvar.= 0.50, R² = 0.52</td>
</tr>
<tr>
<td>(0.12) (0.11)</td>
</tr>
<tr>
<td>4.50 2.22</td>
</tr>
<tr>
<td>MTIWL = 0.40<em>WCATT + 0.14</em>NEOEXTRA + 0.42*PA, Errorvar.= 0.41, R² = 0.59</td>
</tr>
<tr>
<td>(0.047) (0.087) (0.092)</td>
</tr>
<tr>
<td>4.10 1.57 4.57</td>
</tr>
</tbody>
</table>
CHAPTER 6: SUMMARY AND DISCUSSION

Introduction

This final chapter restates the research problem and provides an overview of the study methodology and analyses. Findings and conclusions are presented in addition to implications for research and practice.

Summary

The goal of this study was to develop and empirically test a model of dispositional antecedents of motivation to improve work through learning. The study investigated the influence of certain dispositional effects, some mediated by work commitment attitudes, on employees' motivation to improve work through learning. A causal model was hypothesized for these constructs.

Participants in training programs at a private sector health insurance company completed survey instruments designed to measure personality dimensions, affectivity, work ethic, work commitment attitudes, and motivation to improve work through learning. Listwise deletion resulted in a final sample size of 239.

A two-step approach to structural equation modeling (SEM) was used to test the causal relationships between variables within the hypothesized model. The first step involved the assessment of the psychometric properties of the measurement model, and the second step tested the structural model.
Through a combination of statistical and theoretical reasoning the original model was modified. A model with four of the hypothesized paths and one new path was determined to best fit the data. The original hypothesized model failed to account for an important relationship between two variables (positive affectivity and motivation to improve work through learning). However, this relationship was included in the alternate model that was found to best fit the sample data.

With regard to the hypothesized paths, the findings supported the following hypotheses (The hypothesis numbers below correspond to the original hypothesis numbers assigned in Chapter 3.):

Hypothesis 2: Extraversion will be positively associated with motivation to improve work through learning.

Hypothesis 5: Conscientiousness will be positively associated with work commitment attitudes.

Hypothesis 8: Agreeableness will be positively associated with work commitment attitudes.

Hypothesis 14: Work commitment attitudes will be positively associated with motivation to improve work through learning.

Examination of alternate theory and modification indices yielded the following additional significant path:

Hypothesis 10A: Positive affectivity will be positively associated with motivation to improve work through learning.
Other paths, listed below, were not retained in the final model (The hypothesis numbers below correspond to the original hypothesis numbers assigned in Chapter 3.):

Hypothesis 1: Extraversion will be positively associated with positive affectivity.

Hypothesis 3: Neuroticism/emotional stability will be positively associated with negative affectivity.

Hypothesis 4: Conscientiousness will be positively associated with work ethic.

Hypothesis 6: Conscientiousness will be positively associated with motivation to improve work through learning.

Hypothesis 7: Openness to experience will be positively associated with motivation to improve work through learning.

Hypothesis 9: Agreeableness will be positively associated with motivation to improve work through learning.

Hypothesis 10: Positive affectivity will be positively associated with work commitment attitudes.

Hypothesis 11: Negative affectivity will be positively associated with work commitment attitudes.

Hypothesis 12: Work ethic will be positively associated with work commitment attitudes.

Hypothesis 13: Work ethic will be positively associated with motivation to improve work through learning.
Discussion

Consistent with the two-step approach used in the analysis process, the discussion of findings will be organized in two sections. The first section discusses findings associated with the structural model and the second section discusses findings associated with the measurement model.

Structural Model

Dispositional effects, as assessed in this study, were significant antecedents of the dependent construct, motivation to improve work through learning. Four dispositional traits affected this dependent variable – two directly and two indirectly through work commitment attitudes. Results of this study indicated that extraversion, positive affectivity and work commitment attitudes directly affected motivation to improve work through learning. In addition, within this sample data, conscientiousness and agreeableness directly affected work commitment, which mediated the effect of conscientiousness on the dependent construct. More specifically, 59% of the variance in motivation to improve work through learning was explained by positive affectivity ($\beta = .46$), work commitment attitudes ($\beta = .29$), and extraversion ($\beta = .16$). Fifty-two percent of the variance in the mediator construct, work commitment, was explained by conscientiousness ($\beta = .56$) and agreeableness ($\beta = .25$). This says that these dispositional effects are, in fact, important considerations in predicting motivation to improve work through learning.
Somewhat unexpectedly, openness to experience was not a significant predictor of the dependent variable, nor did it significantly influence the mediator construct, work commitment. In some ways, this contradicts previous research. For instance, Barrick and Mount (1991) found openness to be correlated with training proficiency ($r = .25$). Other related findings include Salgado’s (1998) study which indicated that openness was a predictor for training criterion; Gough’s (1987) findings that achievement via independence predicted academic achievement in certain training situations (McCrae, Costa, & Piedmont, 1992); and Barrick and Mount’s (1991) finding that openness was a valid predictor of training proficiency because it assessed traits typically associated with positive attitudes toward the learning experience (Barrick & Mount, 1991).

One possible explanation for the non-significance of openness to experience focuses on the performance productivity component of the motivation to improve work through learning construct. The motivation to improve work through learning construct, unlike the more frequently assessed motivation to learn construct, included a transfer component. According to Noe (1986), motivation to learn is described as the trainee’s desire to learn the content of training and development activities. But, because work improvement does not solely consist of nor end with learning/training outcomes, a broader construct was necessary. Therefore, the process of improving work through learning or training also encompassed an individual’s willingness to transfer knowledge acquired through training.
initiatives to application in his or her work processes. Mathematically stated, \[ \text{Motivation to Improve Work Though Learning/Training} = \frac{f(\text{Motivation to train, Motivation to transfer})}{f(\text{Motivation to train, Motivation to transfer})}. \]

One facet of the openness to experience personality dimension is intellectual curiosity. This curiosity often translates to "an active pursuit of intellectual interests for their own sake" (Costa & McRae, 1991, p. 17), and may reflect something closer to a mastery rather than a goal orientation. A relatively stable dispositional variable, goal orientation relates to whether individuals view situations as learning opportunities (mastery orientation) or opportunities to exhibit their capabilities (goal orientation) (Colquitt & Simmering, 1998; Mathieu & Martineau, 1997). The dependent construct assessed in this study was broader than just learning for the sake of learning because there was both a transfer of training and a performance outcome aspect of the construct. This may have created a goal orientation element within the construct rather than a mastery orientation. Accordingly, it seems logical to assume that the openness to experience dimension of personality would not have a direct causal link to this study's dependent variable.

Had the dependent variable been more learning oriented (i.e., learning for the sake of learning) as opposed to being goal oriented (i.e., geared toward the application of the training knowledge and skills attained), openness to experience might have remained in the model. An interesting additional study would be to examine the difference in findings when the
dependent variable is motivation to learn as opposed to motivation to improve work through learning. This would provide insight regarding the significance of this personality dimension.

In retrospect, the findings regarding neuroticism and negative affectivity were not surprising. Paths from both constructs (neuroticism and negative affectivity) were not found to be significant. Most training programs are highly interactive and require a high level of energy. Individuals who score high on the neuroticism dimension are characterized as vulnerable to stress, prone to feeling inferior, self-conscious and uncomfortable around others (Costa & McCrae, 1991). Individuals with higher levels of negative affectivity tend to have higher levels of nervousness and anxiety and focus more on negative aspects of themselves and the world in general. They also tend to dwell on their mistakes, disappointments and shortcomings (Levin & Stokes, 1989).

Examining these negative affectivity and neuroticism characteristics from the motivation to improve work through learning perspective helps explain why they were not significant predictors. Voluntary participation in training initiatives and motivation to transfer training from individuals high in neuroticism or negative affectivity would be less likely given that self-confidence and energy are fundamental elements required for successful completion of training programs. The highly interactive nature of most training programs could also contribute to the anxiety and discomfort levels of these individuals, causing them to forgo participation.
The significance of the path from positive affectivity to motivation to improve work through learning, the strongest path found in this study, is supported by previous research findings. George and Brief (1996), for instance, argued that affective characteristics might impact the nature of motivation. Studies have found that positive affectivity influences an individual's responsiveness to incentives (Gouaux & Gouaux, 1971), enhances learning speed (Masters, Bard, & Ford, 1979), and results in heightened expectations, greater estimates of past successes, and more favorable self-assessments (Wright & Mishel, 1982). According to George & Brief (1992), individuals with high levels of positive affectivity also actively seek both interpersonal relations and achievement (George & Brief, 1992). Finally, engagement (or activation) is a commonly reported positive affectivity dimension (McFatter, 1994).

The findings of these previous studies of positive affectivity relate to motivation to improve work through learning both directly and indirectly. George and Brief (1992, 1996) have asserted that achievement motivation is associated with positive affectivity. Achievement motivation is also an inherent part of motivation to improve work through learning. Thus, there is conceptual and empirical support for the strength of the path between positive affectivity and motivation. The engagement component of positive affectivity (McFatter, 1994) also seems to be directly associated with the dependent variable. Individuals scoring high on the positive affectivity scale are more likely to become engaged in the training program, thereby
increasing the likelihood of their success in the program and the subsequent transfer of training.

Walter and Mishel's (1982) findings relating to heightened expectations, greater estimates of past successes, and more favorable self-assessments by individuals with high positive affectivity scores helps to establish an indirect link between positive affectivity and motivation to improve work through learning. High positive affectivity individuals, like highly extraverted individuals, may be more optimistic about and have a stronger belief in their ability to successfully complete the training program. They may also have faith in their ability to improve their work situations, either through increased productivity or improved efficiency as a result of the knowledge and skills acquired through training. Their optimism and positive self-assessments may make them feel empowered to affect change.

The finding that suggests a path between extraversion and motivation to improve work through learning, although the weakest predictor in the model, supports some previous research efforts. For instance, according to several researchers, extraversion is strongly associated with positive affectivity (c.f., Clark & Watson, 1988; Costa & McCrae, 1980, 1991; Emmons & Diener, 1985; Meyer & Shack, 1989). Within this sample, the correlation between the two constructs was .47, suggesting a moderate, though not strong, association between extraversion and positive affectivity. Extraverts, like individuals with high levels of positive affectivity, tend to be optimistic, energetic, enthusiastic, and actively seek both interpersonal
relations and achievement (George & Brief, 1992). Each of these characteristics is an important component of motivation and motivation to improve work through learning. The dispositional characteristics of these individuals may lead them to perceive that successful completion of the training program is likely and that, upon completion, they can affect change or improve their work with the information and skills they have acquired.

Barrick and Mount (1991) found extraversion to be associated with training proficiency \((r = .26)\). They speculated that a likely reason for the predictive nature of extraversion regarding training proficiency is that training programs are highly interactive. Extraversion has also been found to be a predictor of job performance for sales representatives and managers and jobs that require social interaction (Barrick & Mount, 1991; Crant, 1995; Hough et al., 1990). Like Barrick and Mount (1991), these researchers imply that it is the interaction inherent in the training program or the job that helps explain these findings.

This study, which found extraversion to be predictive of motivation to improve work through learning, sheds new light on the effects of this personality dimension. In addition to the interaction, extraverts also crave stimulation, are optimistic, enjoy the company of others, and need to keep busy (Costa & McCrae, 1991). Training programs, like the occupational positions described in the job performance studies above, can provide an outlet for other needs of extraverts rather than simply the need for interaction.
Work commitment, the mediator construct, is attitudinally based. As such, these attitudes do not constitute a dispositional trait, but are affected by dispositional characteristics. Several researchers have found evidence for the dispositional underpinnings of work values and attitudes (e.g., Arvey, Bouchard, Segal, & Abraham, 1989; George, 1989; Staw, Bell, & Clausen, 1986; Williams et al., 1991). Brown (1996) also found evidence that personality and individual differences are related to one dimension of work commitment in particular, job involvement. Thus, there is some element of stability in work attitudes.

This element of stability in work attitudes suggests that people with certain dispositional characteristics are more likely to develop stronger commitment to work. While it seems readily apparent that these dispositional characteristics of individuals would seem to be most desired by employers, it does not imply that the work commitment levels of individuals are totally fixed. Attitudes are object based and are organized around specific organizations or jobs (George & Jones, 1997). Because work commitment attitudes are not totally stable, there is also a situational component involved. The findings of this study that emphasize the importance of work commitment in motivating employees to improve work through learning, coupled with the attitudinal basis of this mediator variable, suggest that employers could work to change the work commitment of their employers. For instance, altering certain situational components may increase an employee's job involvement. As an example, reassignment of
duties, additional responsibility, or more challenging work assignments could serve as an intrinsic motivator, and could result in an increased level of job involvement. Or, employers could work to increase the level of organizational commitment among employees.

Conscientiousness, as a variable of interest, has been the subject of numerous research studies. In general, findings of this study are consistent with previous research that suggests a relationship between this personality dimension and work commitment. As previously mentioned, the latent construct of this study, work commitment, is comprised of work ethic, affective commitment, and job involvement. Morrow's (1983) work commitment theory (upon which this construct is based) relates the work commitment construct to dispositional factors and other individual differences (Morris & Sherman, 1981; Welsh & Lavan, 1981).

Descriptors of the work ethic component of work commitment (i.e., work ethic) include an orientation toward hard work and achievement, dependability, and persistence (Weber, 1958). Similarly, the conscientiousness personality dimension, according to Costa & McCrae (1991), is comprised of facets such as competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Thus, the association between these two constructs is both easily understood and supported by empirical evidence. For instance, in a study conducted by Hough et al. (1990), conscientiousness, achievement, and dependability validly predicted all job-related criteria. Conscientiousness has also been found to be
associated with volitional variables such as hard-working, perseverance, and achievement orientation (Costa & McCrae, 1988a, 1988b; Digman & Takemoto-Chock, 1981; Peabody & Goldberg, 1989) which are aspects of work commitment. Digman and Takemoto-Chock (1981) felt the relationship between achievement orientation and this personality dimension was so strong, they labeled the construct "Will to Achieve."

These findings also support studies involving conscientiousness that are more closely related to training/learning and motivation. For instance, studies in educational settings have resulted in correlations between scores on the conscientiousness dimension and educational achievement (Digman & Takemoto-Chock, 1981; Smith, 1967) and vocational achievement (Takemoto, 1979) in .50 to .60 range (Barrick & Mount, 1991). Barrick and Mount (1991) found conscientiousness to be a significant predictor of training proficiency ($r = .23$) across all occupational groups studied. In addition, Mathieu and Martineau (1997), Mathieu et al. (1993), and Sharpley and Pain (1987) found achievement motivation (a facet of conscientiousness) positively influenced training motivation. Finally, Colquitt and Simmering (1998) found a positive correlation between motivation to learn and conscientiousness. Though the direct path from conscientiousness to motivation to improve work through learning was not supported in this study, the mediated path does associate conscientiousness with the dependent construct.
The relationship between agreeableness and work commitment found in this study provides new information regarding this personality dimension. Previous studies focusing on agreeableness have examined its relationship to job performance (Barrick, Mount, & Stewart, 1998), teamwork (Hough, 1992), service orientation (Costa & McCrae, 1995b; Hough and Schneider, 1996), and cooperation (Hough, 1992). However, no other studies were found that directly tested the relationship between agreeableness and work commitment.

An important characteristic of individuals scoring high in agreeableness is willingness to assist others (Costa & McCrae, 1991). When applied to employment situations, these individuals can become highly involved in their jobs, transferring that willingness to assist others to exerting extra effort on the job. In other words, the parallel to willingness to assist others is that these individuals are willing to assist the organization by improving work. According to Moorhead and Griffin (1995), individuals with high levels of job involvement surpass the normal expectations of their jobs and are more motivated by intrinsic forces.

Measurement Model

An important finding that emerged from assessment of the measurement model concerns the work ethic construct. Blau and Ryan (1997) extended Furnham's (1990a, 1990b) initial work on the work ethic construct and, through exploratory factor analysis, identified a four-factor structure of the construct. These four dimensions were hard work,
nonleisure, independence, and asceticism. Blau and Ryan (1997) also advocated the use of an 18-item secular work ethic instrument. However, when subjected to confirmatory factor analysis, severe instability of the construct was detected. The scales for asceticism, independence, and nonleisure did not load on the work ethic latent construct. These findings suggest that work ethic is not one latent construct with these four dimensions.

One possible explanation for the failure of these scales to load on the work ethic construct stems from the changing values in contemporary society. This construct, which originated from the work of Max Weber (1958), may have provided a more adequate representation of work values during earlier times in American society. According to Weber’s conceptualization of work ethic, which stemmed from Calvinistic and Quaker individualism and asceticism (Macoby, 1983), work is “performed as if it were an end in itself, a calling” (Weber, 1958, p. 62). Individuals with a strong work ethic are committed to the values of hard work and embrace the Calvinistic tradition of frugality, hard work, conservatism, and success (Weber, 1958).

Today’s culture, however, does not necessarily support the same conventions and values as the culture of previous times. The history of work values is constantly changing and evolving, so the notion that the work values of 1958 would not be applicable today is consistent with historical trends. A redefinition of work values has occurred. Bernstein (1997)
describes contemporary employees as "inner-directed employees who clearly place their personal wants and aspirations above those of their employers" (p. 221). Work schedules and business priorities are secondary to self-fulfillment (Sinetar, 1980, p. 752). For instance, there is an increased emphasis on stress management and wellness initiatives that frequently involve leisure activities (e.g., walking, fishing, golfing, etc.). In fact, entire industries are built around filling our leisure time and, as a society, we are inundated with advertising campaigns enticing us into leisurely living. So, while the values of previous generations may have been deeply rooted in nonleisure as the norm, such is not the case in today's American society.

Asceticism, like nonleisure, may not be representative of today's American values. The term is defined as "rigorous abstention from self-indulgence" (Webster, 1986, p. 126.) As we approach the millennium, the current emphasis is not on minimalism, but rather on materialism. Certainly, the wants and needs experienced during post-depression/post-war times differed greatly from what many of us currently express as "wants" and "needs" (e.g., motor homes, swimming pools, luxury automobiles, etc.). Thus, the concept of asceticism may no longer be a component of the work ethic construct.

A closer examination of the concept of independence also challenges its place within the construct. Many organizations (including the one used in this study) stress teamwork as a desirable work behavior. In fact, team-building training classes are offered in countless organizations, and staff
meetings consume a large percentage of many employees' workdays. Thus, independence is not necessarily the most desirable employee behavior. Therefore, its failure to load on the work ethic construct is understandable.

In light of the prevailing values, cultures, and mores in today's culture, it is possible for an individual to score high on the hard work scale, but low on nonleisure, asceticism, and/or independence. Compliance with the norms and values of today's society could lead an individual to respond to the instrument in a manner that would be contrary to the protestant work ethic construct which requires high scores on all four facets of the construct - hardwork, independence, asceticism, and nonleisure.

While the work ethic scale items emerged from previous first order exploratory factor analysis studies, no other known study has attempted to analyze the construct using confirmatory factor analysis of the latent work ethic construct. First order exploratory factor analysis only identifies whether the four scales are separate factors, not whether they represent one higher order construct. In this data, an exploratory factor analysis did, in fact, replicate Blau and Ryan's (1997) structure. However, this study went further by evaluating not only whether the items loaded on the respective scales, but whether the four scales represented one latent construct of work ethic.

The motivation to improve work through learning construct is a new construct devised to assess an individual's motivation to train and his or her motivation to transfer knowledge or skills acquired through training
initiatives to work settings. This is the first known use of this construct. As such, four scales were selected to measure this new construct – attitudes toward training and motivation to train, both from the START instrument (Weinstein et al., 1994); and, motivation to transfer and performance outcomes expectations from the LTSI instrument (Holton, Bates, & Rouna, 1999). While the analysis indicated that the construct is four-dimensional, several items were eliminated due to low factor loadings in the confirmatory factor analysis.

Within this sample data, the four scales loaded on one latent construct, identified as motivation to improve work through learning. The squared multiple correlations for 3 of the 4 scales were good (motivation to transfer = .58; motivation to train = .43; performance outcome expectations = .51) and was acceptable for attitudes toward training (.18). Each of the separate scales selected had evidence of initial content validity (See Chapter 4). Construct validity and criterion validity were also evident because a significant portion of the variance in the construct was predicted ($r = .59$). Finally, the fact that certain other constructs that are related to training proficiency (i.e., openness to experience) were not related to this one suggests discriminant validity between this construct and motivation to learn.

Morrow (1983) presented a multi-faceted design of work commitment comprised of five separate foci – value (Protestant work ethic); career (career salience); job (job involvement); organizational (affective and
continuance commitment); and union (union commitment). Union commitment was later dropped from her model (1993). While career commitment was not a variable of interest in this study, the other work commitment facets proposed in her model were assessed. Confirmatory factor analysis indicated that continuance commitment loaded weakly on the latent construct work commitment for this sample data.

The affective commitment focus of work commitment, which loaded strongly on the latent construct ($\beta=.62$) is associated with intrinsic motivation. Affective commitment is defined by Allen and Meyer as an “emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in, the organization” (1990, p. 2). An employee’s level of affective commitment is a reflection of his or her “emotional attachment to, identification with, and in the organization” (Meyer, Irving, & Allen, 1998, p. 32). In other words, these employees stay with the organization because they want to.

In contrast to affective commitment, the basis for remaining with an organization for individuals scoring high on continuance commitment is not their “desire” to do so. Rather, continuance commitment “involves a recognition of the costs associated with leaving the organization” (Meyer, Irving, & Allen, 1998, p. 32). Accordingly, continuance commitment is substantively different from affective commitment. Continuance commitment reflects an employee’s “need” to stay, whereas affective commitment reflects his or her “desire” to stay. As such, continuance
commitment is more closely related to extrinsic, rather than intrinsic, drive. The absence of a strong intrinsic motivational component in continuance commitment could explain its failure to load significantly on work commitment. Thus, it is possible that continuance commitment is not a part of the work commitment construct. Because this is the first known test of this construct, future efforts should be aimed at confirming its validity.

In addition, Morrow (1993) herself conceded that there may be methodological issues associated with measuring more than one form of work commitment in a single data collection format. Among the problems that she identified was the insufficient discriminant ability on the part of respondents to allow them to report multiple work commitment attitudes accurately within a single collection effort (Morrow, Eastman, & McElroy, 1991). "It may be that referents like work, career, profession, job, and organization invoke such a halo effect that respondents cannot distinguish these referents meaningfully, even if explicitly asked to do so" (Morrow, 1993, p. 165). It can also be difficult for employees to distinguish between values and attitudes when included on the same instrument. These issues could have contributed to the failure of all scales to load on the latent construct work commitment.

Limitations

The findings of this study are potentially limited by several factors. These include:

1. The generalizability of the sample is a potential limitation of this
study. The data for this study was comprised of a nonrandom sample. Respondents were from a single company and there was an overrepresentation of females in the data (i.e., 28.5% of the respondents were males).

2. A nonexperimental research design was used in this study. Caution is necessary when using even the most sophisticated statistical techniques available for making causal inferences. Nevertheless, the theoretical underpinnings of the model development and testing provide credibility for the study’s results.

3. Despite the fact that respondents were assured of anonymity and confidentiality, an element of social desirability could be present in the data. Attempts were made, however, to ameliorate these effects by providing a script of instructions and an assurance of confidentiality. (See Appendix A.)

Implications For Practice And Research

The overall findings of this study present new and insightful information for the field of human resource development. More specifically, the results generally support the contention that dispositional traits affect the newly identified construct, motivation to improve work through learning. Because disposition provides information regarding the motivational levels of employees with regard to improving work through training, the influence of dispositional components is an important organizational consideration as
well. Thus, these results have implications from both a research and a practical perspective.

Dispositional traits have been found to be relatively stable and enduring individual characteristics. They transcend the specific situation and are carried from job to job. Accordingly, these traits affect an individual’s attitudes and behavior (Buss & Craik, 1983; Caspi & Bem, 1990; Weis & Adler, 1984). Juxtaposing the findings of this study that point to the significance of dispositional characteristics in predicting one specific and often desirable employee behavior — motivation to improve work through learning — with the enduring nature of these traits emphasizes the need for more detailed information regarding individual differences. More directly stated, because individuals typically carry with them the same dispositional tendencies throughout their working careers, knowledge of an employee’s dispositional profile may enable employers to make better predictions regarding work behaviors. For instance, industrial organizations offering (but not requiring) advanced training in safety procedures may prefer to have in attendance most or all of a particular job classification (e.g., plant engineers, maintenance professionals, contract workers). Knowledge of the dispositional characteristics of these individuals will enable employers to more effectively motivate them to attend. Thus, such dispositional information would provide a more complete perspective regarding the behavior of individuals in organizations.
These findings suggest that each individual has a personal dispositionally affected motivational profile based on these four factors – extraversion, agreeableness, conscientiousness, and positive affectivity. As such, organizations must be prepared to respond to the motivational forces within current and potential employees. Viewed from a selection perspective, organizations must determine the desired employee profile to best meet their organization’s needs. However, while the findings indicate a significant relationship between conscientiousness, agreeableness, extraversion, and positive affectivity with motivation to improve work through learning, these personality/dispositional traits do not always describe the individual profiles appropriate for high performance in all jobs. For instance, individuals who score low on the agreeableness dimension can offer valuable contributions necessary to meet organizational goals and objectives. These individuals are not afraid to offer dissenting opinions or to challenge ideas, which are characteristics often required of company executives, attorneys, research scientists, etc. Similarly, individuals who score low on the extraversion dimension tend to be deep thinkers, to think before acting, and to work well independently. It is not hard to imagine any number of occupations for which these characteristics would be desirable.

From a humanistic orientation, employers must consider how to work with individuals who are not naturally inclined to be motivated to improve work through learning. Phrased differently, careful consideration must be given to what motivates employees who do not fit the profile found to be
significant in the model. The fact that the findings indicate that four traits, (three personality dimensions — extraversion, conscientiousness, and agreeableness — and positive affectivity) were significant predictors of motivation to improve work through learning suggests that HRD professionals should more closely attend to the motivational levels of employees who score low on these personality dimensions. Interventions should be developed and implemented to heighten pre-training motivation for these individuals. Knowledge of the dispositional profiles of employees, coupled with an awareness of the optimum required dispositionally affected motivational profile should enable employers to better accomplish this task.

Dispositional characteristics have been largely absent from previous HRD studies which have relied heavily upon situationally based variables. However, the magnitude of the findings of this study highlight the need for HRD researchers to include dispositional and individual difference factors in future research efforts. Because the effects of dispositions were so powerful, models regarding training in the workplace should control for dispositional effects. While situational effects are certainly an important component of training related models, they do not constitute the totality of these models. Failure to include dispositional affects in such models results in an overestimation of the situational affects, and could lead organizational researchers down the wrong path in their attempts to enhance training related outcomes. Attending exclusively to situational affects ignores the importance of individual differences that, as this data shows, strongly
influence an employee's motivation to improve work through learning. Thus, the inclusion of dispositional components in training models would provide researchers with a more complete representation of the factors influencing training related issues.

Empirical tests of the dispositional antecedents of the dependent variable, motivation to improve work through learning, highlight the need for further research in this area. Future research efforts should more carefully examine the dependent construct using the facets of the personality dimensions found to be influential — conscientiousness, agreeableness, and extraversion. Examples of these facets include dutifulness, self-discipline, achievement striving, deliberation, compliance, trust, assertiveness, gregariousness, activity, excitement seeking, and positive emotions. Extending the study by using facet scores would lead to a more precise explanation of the exact facets of the personality dimensions that influence motivation to improve work through learning. Using multiple indicators of the personality dimensions would yield more powerful results.

Additionally, other individual difference characteristics could be incorporated in hypothesized models to extend the scope of dispositional variables studied. There are a host of other individual difference variables, both cognitive and noncognitive based, that have been examined by industrial and organizational psychology researchers (Murphy, 1996). An integration of these variables (i.e., locus of control, self-directedness,
learning styles, etc.) with the variables examined in the study could provide additional insight into dispositional effects.

Additional research should be aimed at expanding or refining the dependent construct as well. Because this is the first known study to examine motivation to improve work through learning, it should be tested on other sample populations both within and across other organizations. Other scales should also be investigated to see if they should be considered as possible indicators of this construct. Researchers could also examine the convergent and divergent validity of the construct with other variables in its nomological net, or use only attitudes toward training and motivation to train scales to determine if the same results are observed. Finally, researchers should examine its criterion validity by examining the relationship between this construct and performance.

Morrow's theory regarding the dimensions of work commitment, partially tested in this study, also provides rich research opportunities. Morrow (1983, 1993) theorized that the work commitment construct is comprised of four foci -- work ethic, organizational commitment, job involvement, and career commitment. This is the first known study to at least partially test the validity of that construct. Of these four foci, career commitment is the only one that was beyond the scope of this study. Thus, future studies should examine the convergent and divergent validity of the work commitment construct as theorized by Morrow (1983, 1993). Adding
career commitment as another indicator variable is the first obvious possibility for further research regarding the work commitment construct.

Organizational commitment, as conceptualized by Meyer and Allen (1990), can be separated into three distinguishable dimensions – affective commitment, continuance commitment, and normative commitment. Although Morrow (1993) asserted that affective commitment and continuance commitment are foci of work commitment, the loadings for continuance commitment did not support this structure. Additional tests are necessary to determine whether this failure to load on the construct is a sample specific issue. Researchers should also examine the results of using normative commitment as part of the work commitment construct. Because the work commitment construct has not previously been tested empirically, little is known about its relationship to other organizational attitudes and behaviors. The construct should be examined in relationship to other attitudes and behaviors such as job satisfaction, pro-social behavior, attendance, etc.

Blau and Ryan (1997) advocated the use of the 18-item measure used in this study to test the four dimensions of work ethic construct they had confirmed through exploratory factor analysis. However, no known confirmatory factor analysis had been conducted prior to this study. The results of the confirmatory factor analysis conducted as part of this study on this latent variable indicated that these scales failed to load on one latent construct. This warrants additional research in this area. Additional
confirmatory factor analyses should be conducted on these scales to further
test the validity of the four-factor structure identified by Blau and Ryan
(1997). Because of selection biases that may exist within this organization,
data from multiple organizations may better assess this construct. This
would help ameliorate the possibility of having a single “employee type” as
respondents and could, in fact, confirm the four factor structure proposed by
Blau and Ryan (1997). In addition, other measures of work ethic should be
examined as possible measures of this work commitment focus.

Tangential lines of research would involve the exploration of
dispositional characteristics in other models of HRD processes and
outcomes. The model studied here should be integrated in other HRD
models such as Holton's Evaluation Research and Measurement Model
(1996). In the Holton model, personality characteristics are predicted to
influence motivation to learn. This study has defined what the
characteristics are that influence motivation to improve work through
learning. Other HRD models of processes and outcomes must similarly
incorporate personality characteristics and dispositional constructs.
Technically, the Holton model does not show indirect influence of
personality characteristics through job attitudes. A more complete version of
the Holton model should incorporate a path from personal characteristics to
job attitudes to capture the indirect relationship on motivation to learn.
REFERENCES


Ackerman, P.L. & Heggestad, E.D. (1997). Intelligence, personality, and interests: Evidence for overlapping traits. Psychological Bulletin, 121, 2, 219-245.


317

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322


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costs, alternatives, and investments. Organizational Behavior and Human Performance. 27, 78-95.


Freidlander, F. Comparative work value systems. Personnel Psychology, 18, 1-20.

Freidlander, F. Importance of work vs non-work among socially and occupationally stratified groups. Journal of Applied Psychology, 50, 437-441.


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
and job performance. Paper presented at the 10th annual meeting of the Society for Industrial and Organizational Psychology, Orlando, FL.


Guttman, L. (1968). A general nonmetric technique for finding the smallest coordinate space for a configuration of points. Psychometrika, 33, 469-506.


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348

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349


Krug, S.E., Johns, E.F. (1986). A large scale cross-validation of second-order personality structure defined by the 16PF. *Psychological Reports, 59*, 683-693.


360


nature of the commitment that counts. *Journal of Applied Psychology, 74*, 152-156.


366


Norman, W.T. (1967). *2,800 personality trait descriptors: Normative operating characteristics for a university population.* Ann Arbor: University of Michigan, Department of Psychology.


370

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376


381

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APPENDIX A: INSTRUCTIONS TO RESPONDENTS

For Facilitator to Read to Respondents

These envelopes contain two different survey forms. We ask that you please complete both. These surveys are part of a research project being conducted by the LSU HRD Program with which we are cooperating. The purpose of the project is to provide insights into corporate training participation. Please be assured that your responses will be absolutely confidential. The envelopes containing the completed forms will be picked up by LSU personnel, and no one other than LSU personnel will see your individual responses. No individual data will be reported at any time. All individual responses are COMPLETELY confidential. Only group level data will be generated.

Please complete both surveys and put them back in the envelope when completed. The surveys should take about 30 minutes to complete. Despite the fact that one of the survey forms asks for your name, you DO NOT have to put your name on either survey. You may seal the envelope if you wish to be doubly sure of the confidentiality of your responses.

Please be sure to read the instructions carefully. Generally, your first reaction to the questions is most accurate. There are no right or wrong answers.

Thank you for your participation. It is greatly appreciated.

Notes For Facilitator Only

• Don’t interpret the meaning of the items for the participant.

• Answer questions about instructions or how to record responses only.
• If anyone seriously objects to completing the survey, you may allow him or her to withdraw from participation. DO NOT OFFER THE OPTION OF NOT PARTICIPATING UNLESS SPECIFICALLY ASKED BY A TRAINEE.

• If the trainee objects to completing the demographic section, he or she may skip that section and complete all others.

• If you observe any participant attempting to score the NEO-FFI, please discourage it as the trainee will be unable to interpret the results, causing confusing.

• Return the envelopes with completed surveys to NAME.

• If you have any questions or problems, contact Sharon Naquin at TELEPHONE NUMBER or TELEPHONE NUMBER.
APPENDIX B: SURVEY

RESEARCH QUESTIONNAIRE
Sharon S. Naquin, Research Associate
Louisiana State University ERD Program

This questionnaire will be scanned by a computer, so please mark your answers carefully. Use a No. 2 pencil.

MARK ANSWERS LIKE THIS: .................................

PART 1: WORK PERCEPTIONS

INSTRUCTIONS: For questions in Part 1, please blacken the circle to the right of each item that most closely corresponds to your OPINIONS OR FEELINGS ABOUT WORK. The answer corresponding to each circle is shown below and at the top of the circles on each page.

1. There are few satisfactions equal to the realization that one has done his or her best at a job. ..........................................................
2. If you work hard you will succeed..........................................
3. Hard work makes one a better person..................................
4. People should have more leisure time to spend in relaxation......
5. More leisure time is good for people......................................
6. Life would be more meaningful if we had more leisure time.....
7. Only those who depend on themselves get ahead in life..........
8. One should live one's life independent of others as much as possible.
9. To be superior, a person must stand alone..........................
10. You can't take it with you, so you might as well enjoy yourself.
11. If you've got it, why not spend it?
12. Hard work is fulfilling in itself.
13. Hard work is a good character builder.
14. "Eat, drink and be happy, because who knows what tomorrow will bring?" may be stated strongly, but nevertheless it reflects the proper orientation toward life.

Strongly Agree
Agree
Mildly Agree
Neutral
Mildly Disagree
Disagree
Strongly Disagree

0 0 0 0 0 0 0
15. By working hard, an individual can overcome most obstacles that life presents and make his or her own way in the world. ..............................

16. Work takes too much of our time leaving little time to relax. ..............................

17. The fewer hours one spends working and the more leisure time available the better. ............................................................

18. One must avoid dependence on other persons whenever possible. ..............................

19. The most important things that happen to me involve my present job. ..............................

20. To me, my job is only a small part of who I am. ............................................................

21. I am very much involved personally in my job. ............................................................

22. I live, eat, and breathe my job. ............................................................

23. Most of my interests are centered around my job. ............................................................

24. I have very strong ties with my present job which would be very difficult to break. ............................................................

25. Usually I feel detached from my job. ............................................................

26. Most of my personal life goals are job-oriented. ............................................................

27. I consider my job to be very central to my existence. ............................................................

28. I like to be absorbed in my job most of the time. ............................................................

29. I would be very happy to spend the rest of my career with this organization. ............................................................

30. I enjoy discussing my organization with people outside it. ............................................................

31. I really feel as if this organization's problems are my own. ............................................................

32. I think that I could easily become as attached to another organization as I am to this one. ............................................................

33. I do not feel like 'part of the family' at my organization. ............................................................

34. I do not feel 'emotionally attached' to this organization. ............................................................

35. This organization has a great deal of personal meaning to me. ............................................................
| 36. I do not feel a strong sense of belonging to my organization. | 0 0 0 0 0 0 0 |
| 37. I am not afraid of what might happen if I quit my job without having another one lined up. | 0 0 0 0 0 0 0 |
| 38. It would be very hard for me to leave my organization right now, even if I wanted to. | 0 0 0 0 0 0 0 |
| 39. Too much in my life would be disrupted if I decided I wanted to leave my organization now. | 0 0 0 0 0 0 0 |
| 40. It wouldn't be too costly for me to leave my organization now. | 0 0 0 0 0 0 0 |
| 41. Right now, staying with this organization is a matter of necessity as much as a desire. | 0 0 0 0 0 0 0 |
| 42. I feel that I have too few options to consider leaving this organization. | 0 0 0 0 0 0 0 |
| 43. One of the few serious consequences of leaving this organization would be the scarcity of available alternatives. | 0 0 0 0 0 0 0 |
| 44. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice — another organization may not match the overall benefits I have here. | 0 0 0 0 0 0 0 |
| 45. If I could, I would go into a different line of work/career field. | 0 0 0 0 0 0 0 |
| 46. I can see myself in this line of work/career field for many years. | 0 0 0 0 0 0 0 |
| 47. Choosing this line of work/career field was a good decision. | 0 0 0 0 0 0 0 |
| 48. If I could, I would not choose this line of work/career field again. | 0 0 0 0 0 0 0 |
| 49. If I didn't need the money, I wouldn't stay in this line of work/career field. | 0 0 0 0 0 0 0 |
| 50. I am sometimes dissatisfied with this line of work/career field. | 0 0 0 0 0 0 0 |
| 51. I like this line of work/career field too well to give it up. | 0 0 0 0 0 0 0 |
| 52. My education/training was not for this line of work/career field. | 0 0 0 0 0 0 0 |
| 53. I have the ideal line of work/career field for my life's work. | 0 0 0 0 0 0 0 |
| 54. I wish I had chosen a different line of work/career field. | 0 0 0 0 0 0 0 |
| 55. I am disappointed that I entered this line of work/career field. | 0 0 0 0 0 0 0 |

**PLEASE NOTE THE INSTRUCTIONS ARE ABOUT TO CHANGE**
PART 2: TRAINING PERCEPTIONS

INSTRUCTIONS: For questions in Part 2, please blacken the circle to the right of each item that most closely corresponds to your OPINIONS OR FEELINGS ABOUT TRAINING. The answer corresponding to each circle is shown below and at the top of the circles on each page.

1. In my opinion, what is taught in most training programs is not worth learning. 0 0 0 0 0
2. I enjoy training programs that help me to develop knowledge and skills that will be useful to me in my work. 0 0 0 0 0
3. I volunteer to participate in training programs. 0 0 0 0 0
4. I believe training programs are important for professional development. 0 0 0 0 0
5. It is more important to complete a training program than to really understand the material being presented. 0 0 0 0 0
6. As long as I get good raises or promotions, I do not care whether or not I participate in training. 0 0 0 0 0
7. I would rather not participate in training. 0 0 0 0 0
8. I come to training sessions unprepared. 0 0 0 0 0
9. I can easily find an excuse for not completing a training program assignment. 0 0 0 0 0
10. I work hard to do well in training programs, even when I don’t like them. 0 0 0 0 0
11. Even when training materials are dull and uninteresting, I manage to keep working until I finish. 0 0 0 0 0
12. I try hard not to miss any of the sessions during a training program. 0 0 0 0 0
13. I put off completing outside work assigned during training sessions. 0 0 0 0 0
14. When training materials are difficult, I either give up or study only the easy parts. 0 0 0 0 0
15. My job performance improves when I use new things that I have learned. 0 0 0 0 0
16. The harder I work at learning, the better I do my job. 0 0 0 0 0
17. Training usually helps me increase my productivity. 0 0 0 0 0
18. The more training I apply on my job, the better I do my job. 0 0 0 0 0
19. Training will increase personal productivity. 0 0 0 0 0
20. When I leave training, I can’t wait to get back to work to try what I have learned. 0 0 0 0 0
21. I believe training will help me do my current job better. ......................... 0 0 0 0 0
22. I get excited when I think about trying to use my new learning on my job. ...... 0 0 0 0 0
23. The organization does not really value my performance. ......................... 0 0 0 0 0
24. For the most part, the people who get rewarded around here are the ones that deserve it. ................................. 0 0 0 0 0
25. When I do things to improve my performance, good things happen to me. .... 0 0 0 0 0
26. People around here notice when you do something well. ......................... 0 0 0 0 0
27. My job is ideal for someone who likes to get rewarded when they do something really well. ................................. 0 0 0 0 0

PART 3: DEMOGRAPHIC INFORMATION

1. Age ..........................
2. Gender .......................... 0 Male 0 Female
3. Years work experience ............... 0 Less than 1 0 1-3 0 3-5 0 5-15 0 15-25 0 25+
4. Years with this company ............... 0 Less than 1 0 1-3 0 3-5 0 5-15 0 15-25 0 25+

PLEASE PROCEED TO THE NEXT PAGE
### PART 4: GENERAL PERSPECTIVES

INSTRUCTIONS: The questions in Part 4 consist of a number of words that describe different feelings and emotions. Please read the appropriate answer above the ovals. Indicate to what extent you GENERALLY (not just occasionally) feel this way.

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Extremely</th>
<th>Quite a bit</th>
<th>Moderately</th>
<th>A little</th>
<th>Very slightly or not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Interested</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Distressed</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Excited</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Upset</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Strong</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Guilty</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Scared</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hostile</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Enthusiastic</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Proud</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Irritable</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Alert</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Ashamed</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Inspired</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Nervous</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Determined</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Attentive</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Jittery</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Active</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Afraid</td>
<td>0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THANK YOU!
Note: The five personality dimensions were measured by the NEO-FFI (Costa & McCrae, 1991) which is protected by copyright.
## APPENDIX C: CORRELATION MATRIX

<table>
<thead>
<tr>
<th></th>
<th>NEOEURO</th>
<th>NEOEXTRA</th>
<th>NEOOPEN</th>
<th>NEOAGREE</th>
<th>NEOCONSC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEOEURO</strong></td>
<td>1.000</td>
<td>-1.152*</td>
<td>0.357</td>
<td>-0.254*</td>
<td>-0.233*</td>
</tr>
<tr>
<td><strong>Significance</strong></td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td><strong>NEOEXTRA</strong></td>
<td>-1.152*</td>
<td>1.000</td>
<td>0.485*</td>
<td>0.402*</td>
<td>0.328*</td>
</tr>
<tr>
<td><strong>NEOOPEN</strong></td>
<td>0.357</td>
<td>0.485*</td>
<td>1.000</td>
<td>0.342*</td>
<td>0.330*</td>
</tr>
<tr>
<td><strong>NEOAGREE</strong></td>
<td>-0.254*</td>
<td>0.402*</td>
<td>0.342*</td>
<td>1.000</td>
<td>0.417*</td>
</tr>
<tr>
<td><strong>NEOCONSC</strong></td>
<td>-0.238*</td>
<td>0.328*</td>
<td>0.320*</td>
<td>0.417*</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>JOBINV</strong></td>
<td>-0.238*</td>
<td>0.328*</td>
<td>0.320*</td>
<td>0.417*</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>AFFCOM</strong></td>
<td>-0.250*</td>
<td>0.280*</td>
<td>0.151*</td>
<td>0.281*</td>
<td>0.425*</td>
</tr>
<tr>
<td><strong>CONCOM</strong></td>
<td>-0.320*</td>
<td>0.013</td>
<td>0.018</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>NA</strong></td>
<td>-0.320*</td>
<td>0.013</td>
<td>0.018</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>PA</strong></td>
<td>-0.377*</td>
<td>-0.197*</td>
<td>-0.287*</td>
<td>-0.125*</td>
<td>-1.125*</td>
</tr>
<tr>
<td><strong>HARDWK</strong></td>
<td>-0.377*</td>
<td>-0.197*</td>
<td>-0.287*</td>
<td>-0.125*</td>
<td>-1.125*</td>
</tr>
<tr>
<td><strong>NONLSSR</strong></td>
<td>-0.154*</td>
<td>0.097</td>
<td>0.242*</td>
<td>0.245*</td>
<td>0.172*</td>
</tr>
<tr>
<td><strong>INDEP</strong></td>
<td>-0.154*</td>
<td>0.097</td>
<td>0.242*</td>
<td>0.245*</td>
<td>0.172*</td>
</tr>
<tr>
<td><strong>ASCETSM</strong></td>
<td>-0.159*</td>
<td>0.059</td>
<td>0.245*</td>
<td>0.239*</td>
<td>0.179*</td>
</tr>
<tr>
<td><strong>MOTTRSF</strong></td>
<td>-0.313*</td>
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</tbody>
</table>
| NEONEURO | r = -0.210, p = 0.015 | **
|          | N = 245, df = 244 |  |
| NEOEXTRA | r = 0.253, p = 0.001 | **
|          | N = 245, df = 244 |  |
| NEOOPEN  | r = 0.217, p = 0.011 | **
|          | N = 245, df = 244 |  |
| NEOAAGREE| r = 0.257, p = 0.002 | **
|          | N = 245, df = 244 |  |
| NEOCONSC | r = 0.298, p = 0.001 | **
|          | N = 245, df = 244 |  |
| JOBINV   | r = 0.300, p = 0.045 | *
|          | N = 245, df = 244 |  |
| AFFCOM   | r = 0.324, p = 0.005 | **
|          | N = 245, df = 244 |  |
| CONCOM   | r = -0.132, p = 0.124 | *
|          | N = 244, df = 243 |  |
| NA       | r = -0.139, p = 0.241 | *
|          | N = 244, df = 243 |  |
| PA       | r = 0.311, p = 0.000 | **
|          | N = 244, df = 243 |  |
| HARDWK   | r = 0.118, p = 0.253 | *
|          | N = 245, df = 244 |  |
| NONLSR   | r = 0.111, p = 0.118 | *
|          | N = 245, df = 244 |  |
| INDEP    | r = 0.057, p = 0.066 | *
|          | N = 245, df = 244 |  |
| ASCETSM  | r = 0.283, p = 0.017 | **
|          | N = 245, df = 244 |  |
| MOTTRSF  | r = 0.359, p = 0.000 | **
|          | N = 245, df = 244 |  |
| TRSEFFRF | r = 0.089, p = 0.165 | *
|          | N = 245, df = 244 |  |
| ATTRN1   | r = 1.000, p = 0.000 | **
|          | N = 245, df = 244 |  |
| MOTTRN1  | r = 0.300, p = 0.000 | **
|          | N = 245, df = 244 |  |

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
APPENDIX D: DESCRIPTIVE STATISTICS

<table>
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<tr>
<th></th>
<th>N</th>
<th>α</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
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<td>46.0735</td>
<td>12.1360</td>
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<td>Extraversion</td>
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<td>12.4157</td>
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<td>Openness</td>
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<tr>
<td>Agreeableness</td>
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<td>.73</td>
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<td>Conscientiousness</td>
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<tr>
<td>NA</td>
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<td>.6166</td>
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<td>PA</td>
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<td>Continuance Commitment</td>
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<td>Motivation to Transfer</td>
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<td>Attitudes Toward Training</td>
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<td>Performance Outcomes Expe.</td>
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<td>Valid N (listwise)</td>
<td>239</td>
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</tr>
</tbody>
</table>
VITA

Sharon Smith Naquin holds a bachelor of science degree in Finance/Commercial Banking, a bachelor of science degree in Human Resource Management, a masters of arts degree in Humanities, and a doctor of philosophy degree in Human Resource Development from Louisiana State University. Currently employed as Sr. Research Associate in the HRD Program at Louisiana State University, she has conducted research in the areas of organizational needs analysis, community workforce development systems, business and industry needs assessment, and leadership/management development evaluation. She has also been involved in numerous other HRD research areas and publications including adult learning, management development/assessment, motivation to learn, and learning transfer assessment. Ms. Naquin has also had papers presented at both the 1998 and 1999 annual conference of the Academy of Human Resource Development. Her prior work experience is in the banking industry where she served as Vice President of Savings Operations with a major bank.
Candidate: Sharon Smith Naquin

Major Field: Vocational Education

Title of Dissertation: An Empirical Test of a Structural Model of the Dispositional Antecedents of Motivation to Improve Work Through Learning

Approved:

Edward J. Helder, Jr.
Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Michael Burnett

Thomasino H. Meno

Gerardine H. Helms

[Signatures]

Date of Examination:

March 25, 1999