

CORE SELF-EVALUATIONS AND JOB SATISFACTION: THE ROLE OF
ORGANIZATIONAL AND COMMUNITY EMBEDDEDNESS

by

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Core Self-Evaluations and Job Satisfaction: The Role of Organizational and Community Embeddedness
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ABSTRACT

This study extends job embeddedness and job satisfaction theory in several notable directions. As hypothesized, structural equation modeling revealed that community embeddedness was a partial mediator of the relationship between core self-evaluations and job satisfaction. Contrary to job embeddedness theory, this study found that organizational embeddedness and job satisfaction were best represented by a single latent factor. Thus, organizational embeddedness did not act as a mediator of the relationship between core self-evaluations and job satisfaction nor did it act as a multiple mediator with community embeddedness. Explanations of these results and new avenues for research are discussed.

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CHAPTER ONE

INTRODUCTION

One of the most substantial issues of debate in organizational behavior and industrial/organizational psychology has revolved around dispositional and situational approaches to explain attitudes and behavior. Situational approaches in organizational research have typically been the result of organizational settings that create structural factors such as job design (Hackman & Oldham, 1976; 1980) and position in the social information network (Salancik & Pfeffer, 1977; 1978). In comparison, the emphasis of the dispositional approach has focused on the premise that individuals possess unobservable traits that are stable over time and determine one's attitudes and behaviors (Weiss & Adler, 1984). Specifically, the core of the debate focuses on the extent to which dispositions can substantially impact relevant attitudinal and behavioral outcomes in organizations. For example, Mischel (1968) and Davis-Blake & Pfeffer (1989) concluded that organizational settings were strong situations, and individual dispositions were likely to have only limited effects on attitudinal and behavioral outcomes in organizations. Specifically, the strength of organizational settings can be seen in the large body of research representing job characteristics (c.f. Fried & Ferris, 1987; Hackman & Oldham, 1976; 1980) and social information processing (c.f. Griffin, 1983; Salancik & Pfeffer, 1977; 1978; Thomas & Griffin, 1983). In defense of using dispositions to understand attitudes and behaviors, organizational researchers have long acknowledged the potential main effects of disposition on job satisfaction (e.g. Fisher & Hanna, 1931; Hoppock, 1935; Munsterberg, 1913). However, dispositional research lay dormant until new organizational researchers began to present indirect evidence for the dispositional approach. For example, Staw and Ross (1985) and Gerhart (1987) found empirical support for the stability and consistency of job satisfaction. In

addition, Arvey, Bouchard, Segal, & Abraham (1989) presented evidence that variability in job satisfaction was partially attributable to individual heritabilities. Other researchers provided direct support for the dispositional approach by defining and measuring dispositional constructs and linking them to job satisfaction (e.g. Judge & Hulin, 1993; Judge & Locke, 1993; Levin & Stokes, 1989; Staw, Bell, & Clausen, 1986; Watson & Slack, 1993). However, the majority of these studies lacked a clear understanding of what these dispositions were¹. Although the previous mentioned studies provided both indirect and direct support for the dispositional source of job satisfaction, organizational researchers have advocated for additional research that explains the role of both person and situation processes in the prediction of job satisfaction (House, Shane, & Herold, 1996).

Towards this end, Judge, Locke, & Durham (1997) introduced and defined core self-evaluations as fundamental and evaluative assessments that individuals reach about themselves. Furthermore, core-self evaluations were hypothesized to consist of self-esteem, generalized self-efficacy, locus of control, and low neuroticism. Thus, these core dispositional traits were hypothesized to represent a global appraisal of an individual's self-worth. Furthermore, Judge and his colleagues argued that core self-evaluations result from both genetic characteristics that prewire cognitive processes and life experiences that are the result of one's environment. In addition, they presented theoretical evidence for four alternative, yet complementary, models of the relationship between core self-evaluations and job satisfaction. The first model examined the direct effect of core self-evaluations on job satisfaction and argued that this process comes about through emotional generalization. Emotional generalization occurs as a result of the stable and consistent effects of dispositions on job satisfaction. In essence, it represents an immediate affective reaction to the job and underscores the dispositional approach to job satisfaction².

However, Judge and his colleagues also recognized the importance of both situational and dispositional determinants of job satisfaction. Therefore, the following proposed models focus on the importance of interactionism, or the joint effects of both person and situation. For example, the second model looked at indirect effects of core self-evaluations through the cognitive appraisal process leading to job satisfaction. The cognitive appraisal process determines how an individual perceives the environment and how it compares to one's value standards. Thus, core self-evaluations may exhibit indirect mediating effects on job satisfaction through the cognitive appraisal process. The third model also argues for indirect effects, but these effects occur through the actions people take as a result of their core self-evaluations. These actions are the result of situationally specific factors such as goals and stress. The fourth model proposes moderator effects in which situationally specific values interact with core self-evaluations to influence job satisfaction.

Based on Judge and colleagues (1997) initial work on core self-evaluations, Judge, Locke, Durham, and Kluger (1998) tested three possible models of the core self evaluation-job satisfaction framework. Based on data from three distinct samples, Judge et al. (1998) presented evidence for a higher order exogenous factor, core self-evaluations, that explained direct variance in job satisfaction and indirect variance through perceptions of work characteristics. Judge and colleagues' initial inquiry into core self-evaluations illustrates two important points. First, individuals possess affective dispositions that directly affect job satisfaction. For example, individuals with more positive core self-evaluations tend to bring more positive frames to work, and individuals with more negative core self-evaluations bring negative frames to work. Second, dispositions can also indirectly affect job satisfaction through perceptions of job characteristics. Thus, individuals with more positive frames are more satisfied not only because they feel happier

but also because they view the intrinsic characteristics of their jobs as more challenging and rewarding. Hereafter, Judge, Bono, & Locke (2000) replicated the Judge et al. (1998) study and extended the previous findings by using longitudinal data and objective measures of job characteristics. Judge et al. (2000) found that core-self evaluations directly impacted job satisfaction, and these dispositional effects were also transmitted indirectly through the cognitive appraisal process of job complexity. In turn, these indirect effects resulted in higher levels of job satisfaction for those individuals who possessed more positive core self-evaluations and these effects persisted over time.

Although the previous studies (Judge et al., 1998; Judge et al., 2000) have increased our understanding on the psychological processes underlying the core self evaluations-job satisfaction relationship, their findings are limited in that they have only examined indirect effects via the cognitive appraisal process and through the measurement of subjective and objective job characteristics. Unfortunately, this approach is based solely on theoretical assertions by Hackman & Oldham (1976; 1980) with little attention given to other psychological processes. Furthermore, the job characteristics approach has not been without criticism in regards to common method variance issues (Glick, Jenkins, & Gupta, 1986) and priming and consistency effects (Salancik & Pfeffer, 1977). Although early studies of the core self-evaluation model included job characteristics as the sole mediating variable between core self-evaluations and job satisfaction (Judge et al., 1998; Judge et al., 2000), more recent research has examined several psychological processes that underlie this relationship. For example, Erez and Judge (2001) used goal setting theory to explain several self-regulatory mechanisms that lead to higher levels of job performance. In addition, Best, Stapleton, and Downey (2005) used conservation-of-resources (COR) theory to demonstrate how organizational constraints and job burnout lead to job

dissatisfaction. Finally, Judge, Erez, Bono, and Locke (2005) used self-determination theory to explain how individuals select goals that are compatible with their disposition. Although Judge et al. (2005) made great strides in investigating evocation processes that underlie individual differences in emotional responses (c.f. Judge & Larsen, 2001), researchers have largely ignored cognitive, selective, and regulative processes. Therefore, future research should concentrate on additional psychological processes that explain these relationships.

Although considerable debate has occurred between both the situational and dispositional camps, researchers from both sides generally agree that the most plausible explanation for job satisfaction rests within the interactional approach (Pervin, 1989). As previously discussed both Locke et al. (1998) and Judge et al. (2000) used the interactional approach to explore indirect effects propositions set forth by Judge et al. (1997). Specifically, this approach is unique in that it acknowledges the situational importance of the environment and the more stable effects of disposition. However, no research to date has examined the impact of both work and nonwork influences on the core self evaluation-job satisfaction relationship.

At the same, there has also been an increased interest in developing new attitudinal and turnover models (e.g. Lee & Mitchell, 1994; Lee, Mitchell, Holtom, McDaniel, & Hill, 1999; Lee & Mitchell, 2001; Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). Based on these models, a new construct called job embeddedness has been developed (e.g. Lee, Mitchell, Sablinski, Burton, & Holtom, 2004; Mitchell & Lee, 2001; Mitchell et al., 2001). Job embeddedness is a unique construct in that it involves both organizational and community factors, and no other organizational construct has presented this dichotomy of environmental influences on the individual. The current research on job embeddedness is sparse at best. In fact, the previous empirical research has only examined consequences of job embeddedness with little attention

directed towards antecedents of job embeddedness. Thus, the field is ripe for new investigation into the antecedents and consequences of job embeddedness.

In this paper, I present a unifying model of job satisfaction based on interactional psychology. Thus, the primary objective of this research is to propose and test models of job embeddedness featuring employees' subjective appraisals of both the organization and the community environment. These models consider job embeddedness in the context of interactionist models and examine dispositional influences on subjective evaluations of the job context and work environment. First, I am interested in replicating the core self evaluation-job satisfaction relationship found in Judge et al. (1998) and Judge et al. (2000). Second, I am interested in replicating the job embeddedness–job satisfaction relationship discussed in Mitchell et al. (2001). Third, I am interested in whether core self-evaluations are related to job embeddedness- do individuals with positive core self-evaluations become more embedded? Finally, I will investigate whether disaggregated job embeddedness partially mediates the core self evaluations – job satisfaction relationship.

In the first chapter, a broad overview of the dissertation proposal was introduced to the reader. In the second chapter, three theoretical explanations for the source of job satisfaction will be discussed. Specifically, the reader will be introduced to situational, dispositional, and interactional approaches to job satisfaction. Hereafter, each of these approaches will be reviewed in great detail followed by particular emphasis on the strengths and weaknesses associated with each approach. The third chapter acquaints the reader with job embeddedness. Following the introduction and literature review, the fourth chapter presents the dissertation model and hypotheses. Thereafter, the fifth chapter introduces the research design followed by an explanation of the research sample, a description of the operationalization of constructs and the

measures used in the study, and an introduction to structural equation modeling. The sixth chapter presents detailed results of the research methods used to test the hypotheses. The final chapter concludes with a discussion on the results of the data analyses. Specifically, the results of the study are integrated into the existing literature on core self-evaluations and job embeddedness. This chapter also includes contributions, limitations, practical implications, and directions for future research.

CHAPTER TWO

LITERATURE REVIEW: JOB SATISFACTION

The purpose of this chapter is to introduce the reader to job satisfaction. Job satisfaction is first defined followed by a comprehensive review of the job satisfaction literature. First, the situational approach to job satisfaction is presented. In this approach, work design and the popular job characteristics model are viewed as essential tools in managing job satisfaction. Next, social information processing is introduced as an alternative to the job characteristics model. Second, the dispositional model of job satisfaction was introduced as an opponent to the situational approach to job satisfaction. Specifically, the former view argues that individuals possess stable enduring traits that are not easily changed. Based on this view, an individual is born with a predisposition to job satisfaction. The final approach to job satisfaction combines both situational and dispositional models into the interactional approach. Finally, the chapter concludes with a brief discussion on demographic differences in job satisfaction.

Perhaps, one of the most controversial relationships in the organizational behavior literature is the relationship between job satisfaction and job performance. Many practitioners hold steady to the belief that a worker will be more productive if his needs are being met. However, organizational researchers have only found a modest relationship between job satisfaction and job performance (e.g. Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985; Petty, McGee, & Cavender, 1984; Schwab & Cummings, 1970; Vroom, 1964). Organ (1977) and Bateman and Organ (1983) argue that the criterion variable is misspecified and support alternative conceptualizations of organizational reciprocity. In contrast, Lawler and Porter (1967) insist that reverse causation is a more appropriate model such that the performance-satisfaction relationship only exists when contingent rewards are available. Yet

others, such as Fried & Ferris (1987), have found the originally proposed relationship to be spurious and emphasize the importance of moderating variables. Although old habits often die hard, this management fad has led to the development other fascinating approaches to studying job satisfaction. Specifically, dispositional research has been revived and new approaches to understanding organizational attachment have been growing. Before I move further into my review, I will briefly discuss the state of affairs that lead us to the present period in job satisfaction research.

A dominant theme in the organizational behavior literature is the search for antecedents and consequences of job satisfaction. The search for sources of employee satisfaction dates back to the 1930s when Fisher and Hanna (1931) wrote their provocative book, “The Dissatisfied Worker”, and Hoppock (1935) introduced his book, “Job Satisfaction”. Based on a series of case studies, Fisher and Hanna (1931) argued that job dissatisfaction was the result of emotional maladjustment. Using field surveys from workers in a small Pennsylvania town, Hoppock (1935) found that the work environment, family expectations, and emotional maladjustment influenced job satisfaction. During this same period, Roethlisberger and Dickson (1939) published their book on a series of studies at the Western Electric Company in Hawthorne, Illinois. Originally, these researchers believed that altering work conditions would result in noticeable changes in performance. However, social interaction among the workers and the belief that management cared about employees actually lead to changes in production. After the wealth of research in the 1930s, the field of organizational behavior became more focused on empirical research that largely ignored theory and used a plethora of surveys to assess the affective status of job satisfaction (Brief & Weiss, 2002). In fact, dispositional characteristics were all but ignored until

the 1980s when Weiss and Adler (1984) questioned organizational behavior researchers for the lack of attention directed towards dispositional effects on job satisfaction.

Of all the possible employee attitudes, job satisfaction has remained the most focal construct in organizational behavior. Spector (1996) estimated that over 10,000 studies had been conducted on job satisfaction. For example, some studies investigated the antecedents of job satisfaction. The most notable antecedents include job characteristics (Fried & Ferris, 1987; Hackman & Oldham, 1976;), organizational constraints (O'Connor, Peters, Rudolf, & Pooyan, 1982; Peters, O'Connor, & Rudolf, 1980), dispositional effects (Connolly & Viswevaran, 2000; Judge et al., 1997; Judge et al., 1998; Judge et al., 2000; Judge & Bono, 2001; Watson & Slack, 1993), and role-related variables such as role ambiguity and role conflict (Jackson & Schuler, 1985). Moreover, job satisfaction impacts both employee job behavior and organizational effectiveness. In support, research has corroborated links between job satisfaction and job burnout (Lee & Ashforth, 1996), life satisfaction (Heller, Watson, & Ilies, 2004; Judge & Watanabe, 1993; Tait, Padgett, & Baldwin, 1989), organizational citizenship behavior (Organ & Ryan, 1995), organizational effectiveness (Koys, 2001; Ryan, Schmit, & Johnson, 1996), turnover intentions (Tett & Meyer, 1993), and turnover (Griffeth, Hom & Gartner, 2000).

Defining Job Satisfaction

One of the most frequently used definitions of job satisfaction was introduced by Locke (1976, p. 1300), who defined it as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences”. In this definition, Locke assumes that affective feelings result from cognitive appraisals. In congruence with other needs-satisfaction researchers, Locke extends the construct of job satisfaction to include both affective and cognitive domains. However as noted above, early management researchers implied that attitudes were more

affective in nature. Affective satisfaction relates to positive and negative feelings or emotions. Whereas, cognitive satisfaction results from a process of evaluation. Thus, we are left in a state of limbo in which some researchers argue the attitudinal basis of job satisfaction is more affective, yet measure it as if it were cognitive in nature (c.f. Brief & Weiss, 2002; Organ & Near, 1985; Weiss, 2002). In fact, Brief and Roberson (1989) and Williams (1998) found evidence that many of the most popular measures of job satisfaction possess varying levels of affective and cognitive satisfaction.

The Situational Approach to Job Satisfaction

Until the late 1970s, a substantial amount of attitudinal research was devoted to the needs-satisfaction paradigm. This perspective predicted attitudes and behaviors on the basis of individual needs (e.g. Alderfer, 1972; Herzberg, 1968; Maslow, 1943, 1954, 1970; McClelland, 1961). Although each theory within this paradigm focused on different factors that satisfied human needs, each provided practical information on how to motivate individuals based on their individual needs and the work environment. Specifically, researchers supporting the needs-satisfaction paradigm argued that individuals have a relatively unchanging set of needs that can be fulfilled by stable and identifiable job characteristics. Thus, higher job satisfaction and greater motivation to perform should result when the characteristics of the job or the job situation are congruent with the needs of the individual. In contrast, lower satisfaction and less motivation to perform will occur when the characteristics of the job or the job situation do not fulfill the needs of the individual.

In response to previous theoretical assertions and empirical research, Hackman and Oldham (1980) suggested that managers have three basic strategies to manage job attitudes. The first strategy suggests that the context of the work can be altered. Specifically, jobs should be

effectively designed to provide individuals with challenging goals and a sense of meaning at work. In contrast, the second strategy supports the selection of individuals who fit the job best based on selection and training procedures. However, the second strategy is somewhat problematic in that individuals who are overqualified for the job are often selected thereby creating conditions of underemployment. Thus, either applicants lower in the applicant pool must be selected or jobs still must be redesigned to motivate the best applicants. Finally, the third strategy argues that behavioral and organizational rewards help to influence employee performance. Although reward contingencies can be highly successful in motivating individuals in organizations when well-selected and designed, jobs still must be designed to elicit the appropriate behaviors and ultimately employee motivation and satisfaction. Based on these strategies, Hackman and Oldham (1980) advised the best task design approach was to redesign jobs so that they enhance intrinsic work factors and ultimately influence internal motivation and other psychological outcomes.

The Job Characteristics Model

Hackman and Oldham (1976, 1980) constructed their job characteristics model based on the importance of intrinsic motivation. They argued that jobs should be designed to build opportunities for growth and achievement. The major goal in redesigning jobs is to match a person's need for growth and challenging work with certain job factors. As such the job characteristics model indicates that jobs can be described by five core job dimensions that include skill variety, task identity, task significance, autonomy, and feedback. Jobs can be high or low on each of these factors. These five characteristics can be combined into a single index that indicates the potential of the job to support internal motivation. This index is known as the Motivating Potential Scores (MPS). Jobs that are designed based on vertical loading techniques

result in job enrichment. More enriched jobs lead to higher levels of internal work motivation, growth satisfaction, general job satisfaction, and work effectiveness³. In addition, job characteristics also impact three critical psychological states of employees: 1) experienced meaningfulness of the work, 2) experienced responsibility for outcomes of the work, and 3) knowledge of actual results of work activities. Skill variety, task identity, and task significance influence experienced meaningfulness of the work. Autonomy increases the experienced responsibility for outcomes of work. Feedback provides an employee with knowledge of the actual results of the work. In return, these critical psychological states are manifested in psychological and behavioral work outcomes. This approach is moderated by growth-needs strength, knowledge and skills, and satisfaction with contextual factors. Thus, employees with high growth-need strength, sufficient knowledge and skills to perform the job, and adequate levels of satisfaction with contextual factors (pay, job security, coworkers, and supervision) respond more favorably to enrichment efforts as compared to employees with low levels of these moderating variables.

Three major behavioral approaches to job design lend theoretical support to Hackman and Oldham's (1976; 1980) Job Characteristic Theory – Activation Theory (Scott, 1966), Motivation-Hygiene Theory (Herzberg, Mauser, & Synderman, 1959), and early Job Characteristics Theory (Hackman & Lawler, 1971; Hulin & Blood, 1968; Turner & Lawrence, 1965). Activation Theory (Scott, 1966) is a neuropsychological model aimed at explaining affective, behavioral, and physiological responses to variations in job design. This theory suggests that both routine and complex jobs will become boring after they have been learned and practiced over a period of time. Furthermore, each individual will react differently to a job depending on their characteristic brain activation level. For example, some individuals work

more effectively under highly structured situations; whereas, other individuals work best under more loosely structured situations. Typically, this theory of job design has been used to identify the properties of tasks, ideal levels of activation for the task, and the associated affective and behavioral outcomes for the task. Next, the Motivation-Hygiene Theory (Herzberg et al., 1959; Herzberg, 1968) has become one of the most influential theories of job design. This theory examines factors that lead to job satisfaction and job dissatisfaction and to varying levels of task performance. Herzberg and his colleagues concluded that motivation is composed of two factors – motivating factors and hygiene factors. Specifically, they argued that the causes of employee satisfaction are those motivating factors that are intrinsic to the job such as achievement, recognition, the work itself, responsibility, advancement, and growth. A person experiences these factors by performing challenging work. The absence of these factors does not lead to dissatisfaction but rather to no satisfaction. In contrast, employee dissatisfaction results from hygiene factors such as pay, supervision, and interpersonal relationships that are mainly extrinsic to the job. According to Herzberg's theory, dissatisfaction only results if certain levels of hygiene factors are not present. Thus, job design interventions based on extrinsic factors will only lead to temporary changes in motivation. Therefore, based on Herzberg et al's (1959) theory, researchers have attempted to redesign jobs so that they are intrinsically more rewarding in order to increase employee satisfaction and motivation. Last, the Job Characteristics Theory was derived from three separate task design studies (Hackman & Lawler, 1971; Hulin & Blood, 1968; Turner & Lawrence, 1965). The results of these studies found that jobs could be designed with task properties that enabled higher levels of motivation, performance, and satisfaction. In addition, subgroup differences in satisfaction and performance revealed that individuals responded differently to the same jobs. It was thought that individual differences intervened

between task design variables and employee reactions. Thus, these researchers argued that both job characteristics and individual differences must be taken into account when redesigning jobs. From these initial empirical studies and the previously mentioned behavioral theories of job design, Hackman & Oldham (1976, 1980) extended and revised the original Job Characteristics Theory to the current Job Characteristics Theory.

Moderators in the Job Characteristics Model

Although some critics of the job characteristics theory have called for an end to research on moderator effects (White, 1978), the role of individual differences in task design appears to be quite important (c.f. O'Connor, Rudolf, & Peters, 1980; Pierce & Dunham, 1976). Hackman and Oldham (1975, 1980) proposed that certain individuals would respond more positively to jobs high in MPS. Thus, individuals who are highly desirous of growth satisfaction and who possess the appropriate knowledge and skills for the job will be able to better respond to jobs with high MPS. In addition, the contextual features of the work environment are also thought to influence how an individual reacts to the task. Thus, growth need strength, individual knowledge and skills, and contextual satisfaction were hypothesized to act as moderators of the job characteristics–critical psychological states relationship and the critical psychological states–psychological and behavioral outcomes relationship (Hackman & Oldham, 1976, 1980).

A review of the research in this area reveals that that moderator studies can be divided into two groups. The first group of studies has examined the moderating influence of growth need strength and/or contextual satisfaction on the job characteristics–outcomes relationships (See Table 1 and Table 2). Typically, these relationships are investigated by examining correlations between task dimensions and the dependent variable for individuals high and low in the moderator variable. Participants in the top and bottom quartiles or thirds are divided into two

subgroups- high and low growth need strength. Then, correlations between job characteristics and job satisfaction are determined for the high and low groups. Support for the moderator hypothesis in these early studies was determined based on level of statistical significance and/or directional support. Thus, claims of support for moderators imply that individuals who are highly desirous of growth satisfaction and/or who are highly satisfied with the work context are more likely to respond positively to enriched work as compared to individuals low in growth need strength and/or low in contextual satisfaction. The second group of studies has examined moderator variables based on the causal core of the job characteristics model. There are two possible sites for moderators to interact in the model. The first site is between job characteristics and psychological states, and the second site is between psychological states and outcome variables. Typically, these studies have used either moderated regression analysis or structural equation modeling.

Growth need strength as a moderator of the job characteristics-job satisfaction relationship has stimulated a great deal of empirical research (See Table 3, c.f. Fried & Ferris, 1987; Loher, Noe, Moeller, & Fitzgerald, 1985; Pierce & Dunham, 1976; Spector, 1985a). Analysis of empirical studies generally indicates positive relationships between job characteristics and job satisfaction for individuals high in growth need strength. A substantial number of cross-sectional studies have found support for this relationship (e.g. Abdel-Halim, 1979; Griffin, 1982; Hackman & Lawler, 1971; Pokorney, Gilmore, & Beehr, 1980). A few longitudinal studies have also provided support (e.g. Griffin, 1981; Orpen, 1979). However, neither cross-sectional nor longitudinal correlational designs provide support for the claim that objective changes in task design result in perceived differences in task design. In response to this weakness, Umstot, Bell, & Mitchell (1976) conducted a laboratory experiment with 42 part-time

workers hired specifically for their experiment. Both the experimental and control condition consisted of coding parcels of land for zoning codes, but task design was enriched for the experimental condition. The results of the study found strong support for growth need strength as a moderator of the job characteristics – job satisfaction relationship. In a longitudinal experimental study that agreed with the findings of Umstot et al. (1976), Orpen (1979) found strong support for growth need strength as a moderator, $F(1,32) = 8.01$ ($p < .01$), for both the experimental and control groups. Even though some of these studies have claimed support for the moderator hypothesis, the evidence has not been always conclusive (c.f. Brief & Aldag, 1975; Umstot et al., 1976). The results tend to be in the hypothesized direction but are not always statistically significant. Further support has been found by way of a meta-analysis of nine studies (e.g. Loher et al., 1985). Specifically, the true relationship between the motivating potential score and job satisfaction was .68 for high growth need strength and .38 for low growth need strength. Thus, high growth need strength individuals are more likely to be satisfied with complex and enriched jobs as compared to low growth need strength individuals. Although Loher et al. (1985) found support for growth need strength moderator effects, Fried and Ferris (1987) indicated the results of their meta-analysis of over 200 studies did not support further statistical analysis of moderator effects for this the job characteristics-job satisfaction relationship. Aside from the Fried and Ferris (1987) meta-analysis, the overwhelming evidence for individual growth need strength as a moderator of the job characteristics-job satisfaction relationship suggests that employees who are highly desirous of growth satisfaction will be more satisfied with high MPS jobs as compared to individuals low in growth need strength.

Far fewer researchers have examined the moderating effects of contextual satisfaction on the job characteristics-satisfaction relationship (See Table 4, e.g. Abdel-Halim, 1979;

Champoux, 1981; Orpen, 1979). In one of the most comprehensive longitudinal field experiments to date, Orpen (1979) presented evidence that provided some support for the theory's propositions. He tested the proposed model on a sample of 72 clerical employees from a federal agency by manipulating task design in the experimental group and by comparing the results of job enrichment in the experimental group to a control group with no task changes. After six months, Orpen found that employees who were highly satisfied with their supervisors, coworkers, pay, and security were also more satisfied under a condition of high MPS, $F(1,32) = 5.01$ ($p < .05$). Another important finding was that contextual satisfaction was influenced by job enrichment. In comparison to previous research findings, this study set forth new suggestions to practitioners that employees who appear to be poorly matched to the job can be influenced by the job enrichment process. When contemplating job enrichment decisions, organizational practitioners should not only consider individual differences and the work context, but also the potential impact of job enrichment itself on individual differences. A second cross-sectional correlational study conducted by Abdel-Halim (1979) introduced evidence that was contrary to hypothesized relationships and results reported in Orpen's (1979) study. Based on a sample of 89 managerial personnel from a large manufacturing firm, Abdel-Halim found that individuals experiencing low supervisory and coworker satisfactions reported greater satisfaction under conditions of high MPS rather than low MPS. He makes the argument for curvilinear moderator effects rather than linear moderator effects. Thus, high levels of contextual satisfaction influence job satisfaction more under low to moderate levels of enrichment and the effect of contextual satisfaction is greatly reduced under conditions of high enrichment. Another cross-sectional study by Champoux (1981) confirmed Abdel-Halim's (1979) results. The moderating effects of contextual satisfaction found in Champoux's (1981) study were interpreted as consistent with the

contention that a curvilinear moderating effect exists for both supervisory and coworker satisfactions. Thus, under conditions of high MPS, individuals who are largely dissatisfied with these contextual satisfactions will turn to the job itself for satisfaction in the presence of a dissatisfying work context. In comparison, jobs will become less a source of satisfaction for individuals who are highly satisfied with the work context under conditions of high MPS. Since empirical studies are rather sparse for this moderator, additional research is needed in order to understand the moderating role of contextual satisfaction.

Early research on job design focused on job enrichment and the circumstances under which job characteristics influenced job satisfaction. Based on the results of these early studies, the moderating effect of growth need strength on the job characteristics-satisfaction relationship appears to be fairly well supported (c.f. Graen, Scandura, & Graen, 1986; Loher et al., 1985; Spector, 1985a). In contrast, the results of previous research using contextual satisfaction as a moderator variable of this relationship are inconsistent (c.f. Abdel-Halim, 1979; Orpen, 1979). To reiterate, the general picture that emerges from the early job design moderator literature is that job enrichment and individual differences influence job satisfaction only under certain circumstances.

It is equally important to note that the previously discussed studies are not without their limitations. Specifically, the majority of these studies used small sample sizes ($n < 200$) for survey analysis, relied on a limited set of occupations and jobs, employed subgroup analytic techniques rather than moderated hierarchical regression analysis, and failed to adequately test the proposed model in Hackman and Oldham's (1976, 1980) Job Characteristic Theory. Moreover, many of these studies considered support for the hypothesized moderators to be based on directional correlations, not on statistically significant relationships (c.f. Orpen, 1979; Umstot et al., 1976).

In essence, the body of research for moderator effects has been constructed on empirical studies that used small sample sizes in combination with nonsignificant statistical relationships thereby resulting in somewhat negligent empirical support for Hackman and Oldham's (1976, 1980) Job Characteristics Theory.

Table 1.

Research on GNS as a Moderator by Research Design and Outcome Criteria

Cross-Sectional Tests					
Study	Sample	<i>N</i>	Instruments Used	Relationship Moderated	Support for GNS
Hackman & Lawler, 1971	Telephone company employees	208	Job characteristics: adapted from Turner & Lawrence (1965) General and specific satisfaction: adapted from Turner & Lawrence (1965)	Job characteristics → General satisfaction Job characteristics → Specific facets satisfaction	Yes Yes
Brief & Aldag, 1975	Correctional employees	104	Job characteristics: adapted from Hackman & Lawler (1971) General satisfaction: adapted from Hackman & Lawler (1971) Facet satisfaction: Smith, Kendall, & Hulin's (1969) JDI	Job characteristics → General satisfaction Job characteristics → Work satisfaction Job characteristics → Supervisory satisfaction Job characteristics → Coworker satisfaction Job characteristics → Pay satisfaction Job characteristics → Promotion satisfaction	Yes Yes Mixed Yes No No
Abdel-Halim, 1979	Managerial employees in manufacturing firm	87	Job characteristics: Job characteristics: Hackman & Oldham's (1975) JDS Intrinsic satisfaction: 4-item index taken from Hackman & Oldham's (1975) JDS	Job Characteristics → Intrinsic satisfaction	Yes
Pokorney, Gilmore, & Beehr, 1980	Insurance managers	173	Job characteristics: Hackman & Oldham's (1975) JDS General satisfaction: Hackman & Oldham's (1975) JDS Growth satisfaction: Hackman & Oldham's (1975) JDS	Job characteristics → General satisfaction Job characteristics → Growth satisfaction	Yes Mixed

Table 1 continued.

Research on GNS as a Moderator by Research Design and Outcome Criteria

Cross-Sectional Tests					
Study	Sample	<i>N</i>	Instruments Used	Relationship Moderated	Support for GNS
Griffin, 1982	Manufacturing employees	100	Job characteristics: Sims, Szilagyi, & Keller's (1976) JCI Overall and job satisfaction: Alderfer's (1972) ERG scale	Job characteristics → Job satisfaction Job characteristics → Overall satisfaction	Yes No
Longitudinal Tests					
Orpen, 1979	Clerical employees	72	Job characteristics: Hackman & Oldham's (1975) JDS Work satisfaction: Smith, Kendall, & Hulin's (1969) JDI	Job enrichment → Work satisfaction	Yes*
Griffin, 1981	Manufacturing employees	107	Job characteristics: Sims, Szilagyi, & Keller's (1976) JCI Overall and job satisfaction: Alderfer's (1972) ERG scale	Job characteristics → Job satisfaction Job characteristics → Supervision satisfaction	Yes No
Laboratory Experiments					
Umstot, Bell, & Mitchell (1976)	Part-time employees	42	Work satisfaction: Smith, Kendall, & Hulin's (1969) JDI	Job characteristics → Work satisfaction	Yes*

Table 2.

 Research on Contextual Satisfaction as a Moderator by Research Design and Outcome Criteria

Cross-Sectional Tests					
Study	Sample	<i>N</i>	Instruments Used	Relationship Moderated	Support for CS
Abdel-Halim, 1979	Managerial employees in manufacturing firm	89	Job characteristics: Hackman & Oldham's (1975) JDS Intrinsic satisfaction: 4-item index taken from Hackman & Oldham's (1975) JDS Supervisory satisfaction: Smith, Kendall, & Hulin's (1969) JDI Coworker satisfaction: Smith, Kendall, & Hulin's (1969) JDI	Job Characteristics → Intrinsic satisfaction	Yes
Longitudinal Tests					
Orpen, 1979	Clerical employees	72	Job characteristics: Hackman & Oldham's (1975) JDS Work satisfaction: Smith, Kendall, & Hulin's (1969) JDI	Job enrichment → Work satisfaction	Yes*

Table 3.

Moderating Effects for Growth Need Strength

Study	Cross-Sectional Tests											
	MPS		Task Identity		Task Significance		Skill Variety		Autonomy		Feedback	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Hackman & Lawler, 1971												
J.C. → general satisfaction	.48*	.40*	.27*	.18	-	-	.41*	.28*	.43*	.29*	.17	.33*
J.C. → pay satisfaction	.27*	.09	.07	.03	-	-	.24*	-.10	.15	.09	.26*	.36*
J.C. → promotion satisfaction	.45*	.08	.14	.10	-	-	.29*	-.09	.35*	-.10	.40*	.34*
N= 67												
Brief & Aldag, 1975												
J.C. → general satisfaction	.56*	.54*	.40*	.33	-	-	.47*	.35*	.53*	.35*	.36*	.36*
J.C. → work satisfaction	.61*	.33	.40*	.35*	-	-	.63*	.20	.62*	.36	.52*	.18
J.C. → supervision satisfaction	.41*	.32	.37*	.00	-	-	.28	.16	.23	.33	.40*	.43*
J.C. → coworker satisfaction	.36*	.11	.26	-.26	-	-	.26	.06	.41	.28	.31	.13
J.C. → pay satisfaction	.30*	.34	.31	.16	-	-	.40*	.09	.11	.33	.18	.19
J.C. → promotion satisfaction	-.19	.49*	-.14	.17	-	-	.01	.20	-.13	.46*	-.15	.37*
N= 35												
Abdel-Halim, 1979												
J.C. → intrinsic satisfaction	.69*	.34*	-	-	-	-	-	-	-	-	-	-
N= 44, 45												
Pokorney, Gilmore, & Beehr, 1980												
J.C. → general satisfaction	-	-	.40*	.17	.64*	.29*	.40*	.17	.42*	.23	.63*	.15
J.C. → growth satisfaction	-	-	.08	.23	.45*	.12	.16	-.06	.36*	.18	.56*	.18
N= 54												
Griffin, 1982												
J.C. → job satisfaction	-	-	.48*	.13	-	-	.53*	-.03	.74*	.23	.84*	.13
J.C. → overall satisfaction	-	-	.15	-.01	-	-	-.04	-.02	.15	.11	.39*	.14
N= 56, 44												

Table 3 continued.

Moderating Effects for Growth Need Strength

Study	Longitudinal Tests											
	MPS		Task Identity		Task Significance		Skill Variety		Autonomy		Feedback	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Orpen, 1979 J.E. → work satisfaction N= 18	.37	.21	.29	.31	.27	.18	.19	.14	.46*	-.02	.28	.09
Griffin, 1981 J.C. → job satisfaction	-	-	.52*	.18	-	-	.56*	.60*	.52*	.11	.44*	.42*
J.C. → supervision satisfaction	-	-	.73*	.57*	-	-	.82*	.53*	.72*	.73*	.71*	.63*
N= 54, 53	-	-	-.22*	.02	-	-	-.24*	.13	-.26*	-.23*	-.20	.15
	-	-	-.07	.11	-	-	-.03	.10	-.21	-.10	-.06	.18
Study	Experimental Tests											
	MPS		Task Identity		Task Significance		Skill Variety		Autonomy		Feedback	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Umstot, Bell, & Mitchell (1976) J.C. → work satisfaction N= 12	.84*	.67*	.27	.67*	.70*	.28	.70*	.73*	.71*	.41	.76*	.48

Table 4.

Moderating Effects for Contextual Satisfaction

Cross-Sectional Tests												
Study	MPS		Task Identity		Task Significance		Skill Variety		Autonomy		Feedback	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Abdel-Halim, 1979 J.C.S.S. → intrinsic satisfaction N= 44, 43	.56*	.59*	-	-	-	-	-	-	-	-	-	-
J.C.C.S. → intrinsic satisfaction N= 49, 38	.68*	.41*										
Longitudinal Tests												
Study	MPS		Task Identity		Task Significance		Skill Variety		Autonomy		Feedback	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
Orpen, 1979 J.E. → work satisfaction N= 18	.36	.17	.24	.20	.16	.19	.36	-.11	.40	.32	.24	.25

In response to the previous weaknesses in the research, the second set of empirical studies examined the hypothesized moderating influences as originally proposed in Hackman & Oldham's (1976, 1980) Job Characteristics Theory. Surprisingly, very few researchers have examined the model as originally set forth (c.f. Arnold & House, 1980; Champoux, 1992; Hackman & Oldham, 1976; Hogan & Martell, 1987; Tiegs, Tetrick & Fried, 1992).

Based on earlier research that predicted the presence of curvilinear moderator effects, Champoux (1992) extended his research by examining growth need strength and contextual satisfaction moderator effects on critical psychological states and the affective outcomes of general and growth satisfaction. He gathered survey data from questionnaires given to 247 respondents in a state agency and found several different moderating effects for pay and supervisory satisfaction at both high and low levels of job scope. In regards to critical psychological states, he found support for U-shaped pay satisfaction moderator effects for both experienced meaningfulness and knowledge of results. The results of the study also confirmed previous research on inverted-U moderator effects for supervisory satisfaction and extended the research by finding support for curvilinear moderator effects for pay satisfaction. Although the nature of these curvilinear moderator relationships vary based on threshold effects of growth need strength, contextual satisfaction, and job scope, practitioners should analyze jobs, people, and the work context to make substantial improvements in job satisfaction.

Unlike Champoux's (1992) results that found support for curvilinear moderator effects, Tiegs et al. (1992) separately examined both pieces of the full job characteristics model with linear moderator effects for growth need strength and contextual satisfaction. Their study compiled data from a comprehensive survey with responses from over 6400 employees in 56 organizations and 876 jobs. Based on both multivariate moderated regression analysis and

structural equation modeling, they found no support for either individual or joint moderating effects. The results of moderated regression analysis revealed only small, nonsignificant amounts of incremental variance for the moderators. In addition, several structural nested models revealed little support for the hypothesized model. Thus, the results of their study indicate that individual moderator effects of growth need strength and contextual satisfaction and joint moderator effects do not moderate the relations among job characteristics, psychological states, and motivational and affective outcomes. Other studies have found little support for the moderating influence of contextual satisfaction on the relationship between job characteristics and outcomes as originally proposed in the job characteristics model (e.g. Abdel-Halim, 1979; Bottger & Chew, 1986; Champoux, 1981; Kulik, Oldham, & Hackman, 1987). It is important to note that the work context was operationalized in terms of satisfaction with pay, supervision, coworkers, and job security. It is thought that satisfaction with these extrinsic factors and satisfaction as an outcome variable may be subsumed under one factor of general affective orientation to the job (c.f. Hogan & Martell, 1987). Furthermore, future researchers should develop studies based on new operationalizations of the work context. One notable methodological weakness in Tieg's et al.'s (1992) study was the use of a large sample size with structural equation modeling techniques. In fact, large sample sizes invariably affect chi-square values, goodness of fit measures, and ultimately increase the probability of a Type II error. Again, before growth need strength and contextual satisfaction are rejected as moderators, additional studies using structural equation modeling techniques are needed.

Although several researchers have found support for growth need strength as a linear moderator (e.g. Arnold & House, 1980; Hackman & Oldham, 1976; Loher et al., 1985; Spector, 1985a) and contextual satisfaction as a curvilinear moderator (e.g. Abdel-Halim, 1979;

Champoux, 1992), more recent research has cast significant doubt on the validity of these moderators (c.f. Hogan & Martell, 1987; Johns, Xie, & Fang, 1992; Tieggs et al., 1992). As noted previously, there is an abundance of research that indicates individual differences moderate how people feel towards their work. Before the more progressive job characteristics theory research, numerous empirical studies provided support for growth need strength as a moderator. In addition, empirical support was also found for contextual satisfaction moderator effects but was based on far fewer studies. However, the majority of these early moderator studies did not fully examine the core of the job characteristics model. In contrast, recent research has used more sophisticated analytic techniques to examine the full job characteristics model and has found less substantial support. Thus, we are left with rather conflicting results and stand at an important intersection. For one, individual differences seem to be important in job characteristics theory as illustrated by 35 years of extensive empirical support. However, conflicting results that stand in direct contradiction to the job characteristics model were substantiated with the advent of more sophisticated data analysis techniques. Even researchers who presented radically different results still argued that individual differences and contextual factors are important determinants of affective reactions to task design (c.f. Hogan & Martell, 1987; Tieggs et al., 1992). For example, variance in perceptions of task design may be heavily influenced by main effects of selected individual difference variables or by the interaction of objective task characteristics and individual differences (c.f. O'Connor et al., 1980). Furthermore, numerous researchers have called for additional replication studies using advanced research designs combined with existing job characteristics data sets (c.f. Champoux, 1992; Hogan & Martell, 1987; Tieggs et al., 1992).

Research into the moderating effects of knowledge and skills on job satisfaction in the task design literature has been virtually nonexistent. Some researchers have used education and

tenure as proxies for knowledge and skills, respectively (c.f. Aldag & Brief, 1975; Katz, 1978a, 1978b; Kemp and Cook, 1983; Johns et al., 1992). Education should be positively related to job satisfaction as individuals with more knowledge are hypothesized to respond more favorably to enriched jobs. However, Brief and Aldag (1975) found higher correlations between job characteristics and job satisfaction for individuals with less education. Johns et al. (1992) also found similar support for less educated individuals on both sides of the causal core of the job characteristics model. The results of these studies present some interesting conclusions. For example, it may be that less educated individuals have found themselves in a condition of overemployment since they are working in a management position without a college degree. In contrast, more educated employees may feel less excited about their lower level management position because of their level of education and associated unmet expectations. In addition, these relations may reflect conditions of inequity where the more educated individual feels less satisfied with his/her job because others with less education are also in the same job.

Concerning job tenure, Katz (1978a, 1978b) presented evidence in favor of a staging model in which individuals with intermediate levels of tenure would respond more favorably to enriched jobs as compared to newcomers and experienced job incumbents. Although Katz did not suggest the potential existence of curvilinear effects, it is readily apparent from his results. Kemp and Cook (1983) could not replicate Katz's results with their two samples of blue collar workers. Returning to John et al.'s (1992) study with lower level managers, their results did not support or replicate Katz's findings but found limited support for positive, linear moderator effects between knowledge of results and general and growth satisfaction for individuals with more tenure after controlling for a simple curvilinear relationship between job tenure and satisfaction. Based on the conflicting results of these studies, additional research should be

conducted to assess the full impact of knowledge and skills on the causal core of the job characteristics model.

The Importance of Critical Psychological States

While there has been an abundance of studies dealing with task design and moderator effects, far less research has addressed critical psychological states. Hackman and Lawler (1971) were the first to propose that psychological states acted as a mediating link between core job dimensions and satisfaction. Further, they argued that all three critical psychological states were required for internal work motivation, and ultimately satisfaction, to be maximized.

The mediational hypothesis was difficult to address in early empirical research because of the lack of appropriate analytic techniques. Hackman and Oldham (1976) used a multi-step process to investigate the mediating hypothesis. First, they examined the extent to which each psychological state added variance to the relationship between each job dimension and outcome measure by using partial correlations. Next, they independently regressed internal motivation, growth satisfaction, and general satisfaction onto 1) the three psychological states and 2) the three psychological states with the five core job dimensions. The results of their study revealed that all three critical psychological states were not required to maximize internal motivation or satisfaction. Arnold and House (1980) also examined the causal core of the model but used a series of regression equations to explain the mediational hypothesis. Similar to Hackman and Oldham's (1976) results, they found little support for the inclusion of all three psychological states in the job characteristics model.

In response to the methodological weaknesses in the literature, researchers began to use structural equation modeling to examine the causal core of the job characteristics model. One of the first studies to examine the fully proposed model used a small sample of 208 government

engineers (Hogan & Martell, 1987). Based on the results of their study, they found some support for full job characteristics model with mediating and moderating variables. However, three other models fit the data much better and were more parsimonious. One of the most interesting models consisted of a generalized affective latent variable that explained variance in all other observed variables. This model stands in direct refutation of the job characteristics model because it assumes an overall affective orientation to the job.

Basing their research on a previous call to address significant gaps in job characteristics research (c.f. Fried and Ferris, 1987), Johns et al. (1992) employed a random sample of 300 lower level managers from a large utility company. In order to fully examine the mediating hypothesis, they tested the mediating effect via 1) a combination of regression equations, 2) Baron and Kenny's (1986) instructions for detection of partial and full mediating variables, 3) and structural equation modeling techniques. They suggested that the psychological states do act as mediators in the job characteristics model and all three states are necessary to maximize prediction of growth satisfaction but not general satisfaction. Moreover, no one state has more predictive power than another state in predicting outcomes. Thus, they argued that all three psychological states should be included the job characteristics model to do a better job of predicting attitudinal outcomes.

In another study using structural equation modeling techniques, Renn and Vandenberg (1995) examined the mediation hypothesis and the extent to which all three critical psychological states were required to maximize both general and growth satisfaction. Based on the results of two field studies, they found support for a partial mediation model. Specifically, they posited that job characteristics create both an immediate affective reaction to the job and a longer cognitive evaluation of the job through the critical psychological states. Although their results from both

studies did not support the inclusion of all three states to maximize affective reactions, each critical psychological state was related to job characteristics and affective outcomes such that the removal of one state reduced the overall explanatory power of the model. Furthermore, Renn and Vandenberg's results were congruent with previous empirical research that found all three states did not contribute additional variance to general or growth satisfaction but each made important contributions in terms of relationships with job characteristics and affective outcomes (c.f. Hackman & Oldham, 1976; Arnold & House, 1980; Johns et al., 1992). Thus, they speculated that additional variables could operate as mediators in the job characteristics model.

Problems with Job Characteristics Theory

It is important to note that job characteristics theory is not without criticism (e.g. Aldag, Barr, & Brief, 1981; Glick et al., 1986; O'Reilly, Parlette, & Bloom, 1980; Pfeffer, 1982; Roberts & Glick, 1981; Salancik & Pfeffer, 1977, 1978). First, critics argue that situational and social influences on task perceptions are not specified in the job characteristics model (e.g. Roberts & Glick, 1981; Salancik & Pfeffer, 1978). Fried and Ferris (1987) reviewed the task design and social information processing literature and found equivocal support for the influence of social cues on the perception of job characteristics. As discussed earlier, Hogan and Martell (1987) also found substantial support for the inclusion of a general affective factor. Second, objective job characteristics are frequently interchanged with perceived job characteristics without the use of appropriate construct validation procedures (Roberts & Glick, 1981). In response to this critique of the literature, Fried & Ferris (1987) reviewed the task design literature and found that changes in objective job characteristics corresponded to changes in perceptions of job characteristics. In addition, they found similar correlations between objective job characteristics–outcomes relationships and perceived job characteristics-outcomes

relationships. Third, self-reported perceptual measures of job characteristics have been the most popular and frequently used method to examine task design. However, the use of such measures brings forth the potential for inaccuracy and bias. A review of the task design literature revealed by Fried & Ferris (1987) revealed that objective manipulation of job characteristics and perceived job characteristics contributed similar levels of variance in outcomes. Thus, they concluded that common method variance with self-report data were not as serious as once assumed. Fourth, the five-factor structure of job characteristics from Hackman and Oldham's (1975) Job Diagnostic Survey (JDS) has not been consistently supported in empirical research (c.f. Dunham, 1976; Dunham, Aldag, & Brief, 1977; Roberts & Glick, 1981). To investigate the underlying dimensionality of job characteristics, Fried and Ferris (1987) reviewed 18 studies that had examined the dimensionality of job characteristics. Some studies showed consistent support for the five-factor model and other studies showed support for fewer than five factors. Based on the results of their meta-analysis, Fried and Ferris (1987) reasoned that the JDS was multidimensional, yet the most parsimonious structure may be less than five factors, and suggested that skill variety, task significance, and job autonomy may compose one factor. In congruence with previous researchers, Fried and Ferris concluded that the empirical dimensionality of job characteristics should be addressed for each sample studied. Fifth, other researchers have suggested job characteristics theory is prone to methodological problems such as consistency and priming effects (Salancik & Pfeffer, 1977). However, Hogan and Martell (1987) rearranged the order of the Job Diagnostic Survey (Hackman & Oldham, 1976) and found no evidence for priming or consistency effects.

Conclusions

Job characteristics theory has prompted a great deal of research and has inspired several approaches to job redesign. Yet, there are some difficulties with the theory that to some extent compromise its usefulness. For example, a number of researchers have been unable to find empirical support for growth need strength and contextual satisfaction as linear moderators of the proposed main effect relationships (e.g. Champoux, 1992; Fried & Ferris, 1987; Johns et al., 1992; Tiegs et al., 1992). As noted earlier, individual differences appear to be an important component of this model; yet, key individual difference variables and the underlying operational processes still have not been identified. Contextual factors also appear to play an important role in the model; however, researchers disagree on the nature of the relationship. In fact, Johns et al. (1992) found no support for growth need strength but presented more substantiated support for the continued inclusion of contextual satisfactions. Furthermore, research on moderator effects of knowledge and skills has been virtually nonexistent. In fact, the sparse research on knowledge and skills actually uses proxies as indicators of these constructs (c.f. Aldag & Brief, 1975; Katz, 1978a; Katz, 1978b; Kemp & Cook, 1983; Johns et al., 1992).

While there have been numerous empirical studies that addressed moderator effects, far fewer studies have actually examined the causal core of the job characteristics model or the mediating effects of the critical psychological states. Fried and Ferris's (1987) meta-analysis found substantial correlational support for the inclusion of critical psychological states as intervening variables between job characteristics and psychological outcomes. Hereafter, several additional empirical studies substantiated their claim by providing support for the causal core of the model (e.g. Johns et al., 1992; Renn & Vandenberg, 1995). As noted earlier, other studies have also found support for the continued inclusion of all three critical psychological states to

maximize prediction of the job characteristics model (e.g. Hackman & Oldham, 1976; Arnold & House, 1980; Johns et al., 1992; Renn & Vandenberg, 1995).

Several meta-analyses and comprehensive reviews of the literature have shown moderate support for Hackman and Oldham's (1980) Job Characteristics Model (e.g. Fried & Ferris, 1987; Loher et al., 1985; Pierce & Dunham, 1976), although some critical reviews and modifications have been suggested (Roberts & Glick, 1981; Salancik & Pfeffer, 1978). Job characteristics theory has been subjected to a great deal of empirical research and much of the literature has shown substantial support for the basic job characteristics model. As previously noted, some empirical research and anecdotal reviews have suggested weaknesses in the existing job characteristics model. However, the model only provides a partial picture of the totality of motivational effects on an individual. There are several other theories that serve as complementors to this theory of motivation. Relative to other motivational theories, the strength of this theory is based on the consistent support for predictions regarding employee attitudes and mediating critical psychological states. Although this theory has included both person and situation variables to explain the job design process, individual differences and work contextual factors have not made substantial contributions to the overall explanatory power of the model. In conclusion, job characteristics theory has received continued support and provides a useful framework for examining job design (Ambrose & Kulik, 1999).

Social Information Processing

In contrast to job characteristics theory that assumes attitudes vary as a result of the correspondence between individual needs and job situations, researchers have used the social information processing approach to explain the importance of social processes in forming job attitudes (e.g. Salancik & Pfeffer, 1977; Salancik & Pfeffer, 1978). These researchers challenged

the job characteristics approach on the basis that individuals cognitively reconstruct situations and do not always follow the rational choice perspective. Thus, the relevance of job characteristics to job holders depends on the particular situation and the person. Specifically, Salancik and Pfeffer argued that individuals' perceptions of their jobs are a function of 1) information from the social context and important others and 2) salient information about past and present behavior.

Salancik and Pfeffer borrowed from both March and Simon (1958) and Weick (1969, 1977) to create the social information processing perspective. March and Simon noted the importance of information from the environment where organizational decisions and processes influence members' behavior. Weick's model of social reenactment also argues that individuals in organizations create their environments that surround them and thus these socially constructed environments affect the perceptions of the individual. Ultimately, the key difference between job characteristics theory and social information processing is that the later theory argues that affective reactions to work depend on the perception of the task characteristics, social information that dictates what behaviors are appropriate for the particular work environment, and past behaviors.

The social information processing framework attempts to validate the importance of social context effects on job characteristics and job satisfaction. According to this framework, the same job characteristics, and ultimately job satisfaction, are perceived differently by individuals. Although numerous research studies have shown support for the effects of job redesign on job satisfaction (e.g. Orpen, 1979; Umstot et al., 1976), some studies have not found the same level of support (e.g. Bishop & Hill, 1971; Lawler, Hackman, & Kaufman, 1973). Thus, social information processing researchers have attempted to identify when and under what

conditions do job enrichment activities and social information influence perceptions of job characteristics and reactions to jobs (See Table 5).

The majority of studies that validated the social information processing perspective were based on laboratory experiments with university students (e.g. O'Reilly & Caldwell, 1979; White & Mitchell, 1979). Objective job characteristics were often manipulated to create conditions of enrichment or nonenrichment. Social information was manipulated either by supplying students with written job descriptions, verbal cues, and role models or by providing no social information. The results of these studies found significant support for the main effects of objective job characteristics and social information on perceived task characteristics and overall satisfaction (e.g. O'Reilly & Caldwell, 1979; White & Mitchell, 1979). Specifically, objective job characteristics showed less impact on overall satisfaction than social information, and covariance of these main effect variables with growth needs variables seemed to add little statistical significance to the explanation of overall satisfaction. The results of these studies were taken to imply that informational cues may be just as important as job enrichment in creating and sustaining overall satisfaction.

In addition to the laboratory studies, two field surveys (Oldham & Miller, 1979; O'Reilly, Parlette, & Bloom, 1980) and one mixed methods study (Griffin, 1983) used nonstudent samples to examine the social information processing model. Specifically, the field studies used inferred comparison processes rather than direct manipulation of social information and generally found support for the main effects of social information on perceived job characteristics. A study of 658 employees from 62 different job classifications found that individuals evaluated their work situation by comparing their level of job complexity with significant others (Oldham & Miller, 1979). If the individual's job complexity was greater or less than the significant other, the

individual typically experienced lower levels of growth satisfaction. In a study of public health nurses who were in the same job classification, O'Reilly and his colleagues (1980) found that differences in task perceptions were attributable to variations in frames of reference, professional attitudes, and affective orientation. Both of these studies contend that coworkers are the main source of social information and this information significantly influences perceptions of job characteristics and affective reactions to job design. Finally, a mixed methods study that consisted of a laboratory experiment with undergraduates and a field experiment with two separate manufacturing plants investigated the extent to which manipulated objective job characteristics and information from supervisory sources would impact perceived job characteristics and affective reactions to the work (Griffin, 1983). Results of this study indicated that both objective job characteristics and supervisory cues impacted perceived task attributes and overall satisfaction. Empirical evidence from each of these studies stands in sharp contrast to the job characteristics model. Specifically, this model argues for the main effect of social information objective on perceptions of task design and reactions to work with less consideration given to objective job characteristics.

Based on the preceding review, it does appear that social processes influence employee perceptions of job characteristics and their attitudinal reactions to task design. These initial studies investigated the relative impact of social information from coworkers and supervisors on perceived job characteristics with little attention direction to other sources of information. It has been hypothesized that other sources of information cues might come from group norms, family, community, organization, or unions (c.f. O'Reilly & Caldwell, 1979; O'Reilly et al., 1980). Several weaknesses should be noted from the studies reviewed. First, results have not explained unique and shared contributions to variance from either objective job characteristics or social

information. Thus, the magnitude of information cues in comparison to objective job characteristics is not known. Second, all of these studies were cross-sectional studies, and the unfolding nature of informational cues has not been studied. Third, demand characteristics from laboratory experiments present a much stronger case for the importance of information cues as compared to field surveys and field experiments. Thus, the significance of information cues appears to be less important in field studies because workers tend to be more familiar with their tasks and rely less on social and informational cues. Fourth, individual differences appear to be important based on a limited number of studies (e.g. O'Reilly & Caldwell, 1979; O'Reilly et al., 1980). However, additional studies need to investigate the potential impact of individual differences on the perceptual process. Based on review of the literature and empirical research studies, Thomas & Griffin (1983) found some support for the social information processing framework but still advocate for the importance of the job characteristics model. Specifically, they point to empirical research that found both objective job characteristics and social information influenced task perceptions and job satisfaction.

Table 5.

Summary of Studies Examining Objective Job Characteristics and Social Information

Authors	Type of Study	Sample	Independent Variable	Individual Differences	Dependent Variable	Results
O'Reilly & Caldwell (1979)	Laboratory experiment	75 graduate business students	Task design Information cues ⁱ	Need for autonomy Need for achievement Need for affiliation Need for dominance	Job characteristics ^{a,b} Overall job satisfaction ^c Pay satisfaction ^a Growth satisfaction ^a Desired wage rate ^g	Main effects for task design on autonomy, overall satisfaction, and growth satisfaction Main effects for information cues on skill variety, autonomy, task identity, task significance, overall satisfaction, pay satisfaction, growth satisfaction, and desired wage rate Inconclusive results for moderators
White & Mitchell, (1979)	Laboratory experiment	41 undergraduate business students	Task design Social cues ^j	None	Job characteristics ^b Overall job satisfaction ^b Role ambiguity ^d Productivity ^e	Main effects for task design on task identity, task significance, autonomy, and overall MPS Main effects for positive social cues on overall job satisfaction, productivity, and social cues motivation Some interaction effects for feedback and role ambiguity
Oldham & Miller (1979)	Field survey	658 employees 62 job classes	Job complexity of self versus comparative other ^l	None	Growth satisfaction ^b Performance ^f	Higher job complexity than comparison other results in lower satisfaction and higher performance Lower job complexity than comparison other results in lower satisfaction & perf.

Table 5 continued.

Summary of Studies Examining Objective Job Characteristics and Social Information

Authors	Type of Study	Sample	Independent Variable	Individual Differences	Dependent Variable	Results
O'Reilly, Parlette, & Bloom (1980)	Field survey	76 public health nurses	Same job ^l	Demographic variables Professionalism Affective orientation (consisting of overall job satisfaction and future tenure)	Job characteristics ^b	Individual demographics, professionalism, and affective orientation biased perceptions of job characteristics
Griffin (1983)	Laboratory experiment	50 undergraduates	Information cues ^k	None	Job characteristics ^a Job satisfaction ^h	Main effects for information cues on skill variety, task identity, feedback, dealing with others, friendship opportunities, intrinsic and extrinsic satisfaction, and overall satisfaction
	Field Experiment	351 production workers	Task design Information cues ^k	None	Job characteristics ^a Interpersonal dimensions ^a Job satisfaction ^h Productivity ^e	Main effects for task design on job characteristics, interpersonal dimensions, intrinsic and extrinsic satisfaction, overall satisfaction, and productivity Main effects for information cues on job characteristics, interpersonal dimensions, intrinsic and extrinsic satisfaction, and overall satisfaction Interaction effects for skill variety, task identity, and friendship opportunities

^a Job Characteristics Inventory; ^b Job Diagnostics Survey; ^c Brayfield & Rothe (1951); ^d Rizzo, House, & Lirtzman, 1970; ^e Count of items produced; ^f Supervisor; ^g Own measure; ^h Minnesota Satisfaction Questionnaire; ⁱ Coworkers' written statements; ^j Coworker verbal cues; ^k Supervisory verbal cues; ^l Inferred cues

Summary of Situational Approach to Job Satisfaction

As previously discussed, both camps in the situational approach lend empirical support to the importance of objective job characteristics. The job characteristics approach argues for imposed task characteristics which result in job characteristics. Further, job characteristics lead to various attitudinal and behavioral outcomes. Job characteristics researchers argue that improvements in job satisfaction result from job design and job enlargement activities (Hackman & Oldham, 1976, 1980). In contrast, the social information processing approach touts the importance of socially constructed realities. Thus, social information processing researchers posit that job attitudes are altered by environmental cues and social influence (e.g. Salancik & Pfeffer, 1977, 1978). Although both objective job characteristics and social information cues are hypothesized to influence perceived task characteristics, the main position of the social information processing argument is that social cues provide more powerful effects than objective job characteristics. However, based on a review of the literature, the majority of social information processing studies have not refuted the job characteristics approach as evidenced by the studies that found support for both social information cues and objective job characteristics as main effect variables (e.g. Griffin, 1983; O'Reilly & Caldwell, 1979; White & Mitchell, 1979). Since both objective job characteristics and social information cues influence perceived job characteristics, the most logical question should address the still unexplained variance in job attitudes and the process in which job attitudes are formed. Furthermore, the debate between these two approaches has led to renewed speculation that individual differences, in addition to situational forces, are important factors in the interpretation of the work situation and ultimately job attitudes.

The Dispositional Approach to Job Satisfaction

A third approach to the study of job satisfaction involves the dispositional perspective. Dispositions are best defined as personality, traits, and individual differences that manifest themselves as non-observable, inferred characteristics. The dispositional perspective suggests that individuals are predisposed to respond positively or negatively to the job context regardless of job design, job enrichment, or informational cues. The view that attitudes can have a dispositional source has long been recognized in the field of organizational behavior (e.g. Fisher & Hanna, 1931; Hoppock, 1935; Munsterberg, 1913). For example, Munsterberg (1913, p.198) suggested that "... the feeling of monotony depends much less upon the particular kind of work than upon the special disposition of the individual." Fisher and Hanna (1931) proposed that workers would bring either positive or negative dispositions to the job which in turn affected their interpretation of the work situation and ultimately their level of job satisfaction. In addition, Hoppock (1935) in his review of 32 job satisfaction studies found that dispositional factors were just as important as extrinsic work factors. For the most part, dispositional research lay dormant in the field of organizational behavior because most studies found little support for personality or demographic variables (Weiss & Adler, 1984). Thus, extensive research efforts based on the dispositional approach were not in vogue until the mid to late 1980s when organizational behavior researchers become disenchanted with the situational approach. Specifically, the dispositional perspective was similar to the social information processing perspective as both perspectives touted the potential methodological flaws with the job characteristics perspective. However, the dispositional perspective focused on the importance of internal states of the individual rather than external situational cues.

The dispositional approach is supported by two major assumptions - 1) individuals are consistent in their attitudes, values, and needs over time and across situations and 2) individuals have a unique pattern of dispositional qualities (e.g. Gerhart, 1987; Pulakos & Schmitt, 1983; Staw & Ross, 1985; Staw, Bell, & Clausen, 1986; Weiss & Adler, 1984). In addition, the dispositional approach claims that individuals possess stable traits that significantly influence attitudes and behavior. As mentioned previously, dispositions are defined as unobservable traits that are stable over time and result in consistent attitudes and behavior (Weiss & Adler, 1984). Thus, dispositional researchers must infer dispositions based on temporal stability and cross-situational consistency.

The renewed interest in the dispositional perspective was sparked by Weiss and Adler (1984) who argued that previous dispositional research had found little variance in attitudes and behavior because of poor measurement properties of personality measures. In addition, they indicated, that in order to further advance the dispositional perspective, conceptual issues surrounding this approach should be formally addressed to avoid previous atheoretical problems. In response to Weiss & Adler's call for renewed focus on the dispositional approach, organizational behavior researchers began to reexplore dispositional sources of job attitudes.

Researchers investigating the dispositional source of job satisfaction have used either indirect or direct studies (Judge & Larsen, 2001). Indirect studies typically infer the dispositional source of job satisfaction. Indirect studies usually infer dispositions by examining the correlation of job satisfaction over time. In contrast, direct studies define the construct of interest and measure the personality trait. From here, the personality trait is related to job satisfaction. Direct studies have investigated positive and negative affect, core self-evaluations, and other measures of dispositions.

Early Dispositional Studies: Indirect Evidence in Support of the Dispositional Approach

Staw and Ross (1985)

Research by Staw and Ross (1985) helped to renew interest and lay the framework for future empirical studies that examined the influence of stable individual differences, or dispositions, on job satisfaction. Specifically, they contend that individuals have stable predispositions to like or dislike work. The root of their hypothesis is that job satisfaction should be stable over time and across situations in order to have an endogenous source of variance. In addition, they maintain that dispositions are just as important as situational factors in the prediction of job satisfaction.

Staw and Ross used the Longitudinal Survey of Mature Men (LSMM: Center for Human Resource Research, 1977) to examine the consistency of job attitudes and the overall predictive power of dispositions. They first examined the temporal stability of a single, global job satisfaction item by comparing simple correlations of job satisfaction responses from 1966, 1969, 1971 and an aggregation index of 1966 and 1969 (See Table 6). Specifically, there was moderate consistency of job satisfaction over time with the most support being for the correlation of the aggregation index with 1971 satisfaction ($r = .44, p < .001$). In addition, the consistency of job satisfaction declined over the 5 year period from 1966 to 1971. Thus, the results revealed partial support for the temporal stability of job satisfaction.

Table 6.

Temporal Stability of Job Satisfaction

Year	1966 Satisfaction	1969 Satisfaction	1971 Satisfaction
1966 Satisfaction	1.00	.32	.29
n	4,549	3,702	3,350
1969 Satisfaction		1.00	.42
n		3,807	3,275
1971 Satisfaction			1.00
n			3,446
Index of 1966 and 1969 Satisfaction			.44
n			3,200

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Situational changes were determined by either change in occupation and/or employer. The effects of situational change were argued to be at their highest when individuals experienced both occupation and employer changes and at their lowest when no changes occurred. Cross-situational consistency of job satisfaction was tested by correlating job satisfaction measures with and without situational changes (See Table 7). The temporal consistency of job satisfaction was shown to decrease over time. Individuals who experienced no changes in employer or occupation showed the highest consistency in attitudes when using the index of 1966 and 1969 satisfaction with 1971 satisfaction ($r = .48, p < .001$). In contrast, the lowest consistency occurred when using the correlation of 1966 satisfaction and 1971 satisfaction with changes in both occupation and employer ($r = .19, p < .001$).

Table 7.

Cross-Situational Consistency of Job Satisfaction

Employer	Occupation	
	Same	Changed
1966 Satisfaction with 1969 Satisfaction		
Same	.47	.31
N	2156	171
Changed	.36	.33
n	891	735
1966 Satisfaction with 1971 Satisfaction		
Same	.37	.24
N	1711	274
Changed	.23	.19
n	1232	1121
Index of 1966 & 1969 Satisfaction with 1971 Satisfaction		
Same	.48	.37
N	2114	164
Changed	.39	.34
N	868	714

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The researchers also examined the extent to which prior job satisfaction contributed significant variance to subsequent job satisfaction independent of situational changes in terms of occupation, employer, pay and status. Pay was used as a proxy for job characteristics, and job status was used as a proxy for the presence of informational cues. Job satisfaction in 1966 explained significant variance ($b = .272$, $F = 197.84$, $p < .01$) in job satisfaction in 1971 under all situations. Status never explained significant variance in 1971 satisfaction. However, under changes in employer and occupation, pay explained significant variance ($\Delta r^2 = .045$, $b = .001$, $F = 5.84$, $p < .05$) in 1971 satisfaction over and above job satisfaction in 1966 ($b = .132$, $F = 8.10$, $p < .01$)

As previously discussed, Staw and Ross (1985) used longitudinal data to examine the consistency of job satisfaction irrespective of situational effects. The results of their study indicated that job satisfaction was stable over time and across situations, and prior job satisfaction explained significant variance in current job satisfaction. However, job satisfaction was prone to attenuation with situational changes. Thus, Staw and Ross set forth the proposition that both dispositional influences and situational factors explain differences in job attitudes.

It is important to discuss the potential criticisms of the Staw and Ross (1985) study. First, the sample of older workers places limits on the external validity of the study. In comparison to their younger counterparts, older workers tend to be more consistent in their job attitudes (Brush, Moch, & Pooyan, 1987; Witt & Nye, 1992; Thorsteinson, 2003). Second, the sample also limits the generalizability of the findings. Since older workers are more settled with their employers and in their occupations, it is difficult to pinpoint the exact cause of job satisfaction. Third, Staw and Ross indicated that dispositions were a potential source of job satisfaction. However, dispositions were never measured in their study. In fact, disposition was inferred from previous measures of job satisfaction. Fourth, correlational techniques were used to imply the stability of job satisfaction. However, correlational analyses show nothing more than relationships among variables. The most proper test of temporally stable relationships would involve the use of structural equation modeling techniques with longitudinal data sets. Although there are numerous weaknesses as previously noted, the most important contribution of the Staw and Ross (1985) study was the implication that a dispositional source of job satisfaction might exist.

Gerhart (1987)

Although the Staw and Ross (1985) study refocused attention on dispositional variables as determinants of job satisfaction, Gerhart (1987) critiqued Staw and Ross's study based on

several limitations of validity. First, the data set was quite limited in generalizability due to the age of the subjects. Specifically, Gerhart contended that older workers were less likely to experience significant changes in their job situation. Second, the test-retest reliability of both pay and status between 1966 and 1971 was rather high ($r = .84$) and the overall reliability of both pay and status were quite low (ranging from .06 to .38). Based on these estimations of reliability, we would expect to find measurement error in pay and status and lower than expected situational effects in their study. Third, Gerhart disagreed with Staw and Ross's position on the futility of job design interventions given the purported importance of the dispositional nature of job satisfaction. Specifically, Gerhart emphasizes that Staw and Ross did not measure job characteristics and are unable to support the former conclusion based on the results of their study.

The purpose of Gerhart's (1987) study was to replicate Staw and Ross's (1985) study and to examine the relationship between job characteristics and job satisfaction. Gerhart used data from the youth cohort of the National Longitudinal Survey (NLSY), a national probability sample of 12,686 men and women between the ages of 14 and 21 in 1979 and ages 17-24 in 1982. After excluding individuals from the sample based on criteria such as lack of work experience and age, the reduced sample size was 809 subjects. In addition, he measured job complexity with the incumbent perceptions of job complexity (IPJC: Gerhart, 1985) and based on the *Dictionary of Occupational Titles* (U.S. Department of Labor, 1977). Finally, job satisfaction, employer changes, occupational changes, pay, and occupational status were measured the same as in the Staw and Ross (1985) study.

Gerhart (1987) first examined the temporal stability and cross-situational consistency of job satisfaction by correlating 1979 and 1982 satisfaction from the NLS and comparing with

correlations from 1966 and 1971 satisfaction from the LSMM (See Table 8). Correlations from both studies are highly similar. Despite the younger sample and shorter time span, these results partially confirm results from the Staw and Ross (1985) study. However, Gerhart suggests "... whenever occupation and employer both change, variance explained decreases to 4%" (p.369). Thus, he stresses that both sets of results illustrate the importance of situational effects on individuals and their attitudes.

Table 8.

Temporal and Cross-Situational Consistency of Job Satisfaction

Employer	Same Occupation		Changed Occupation	
	Gerhart (1987)	Staw and Ross (1985)	Gerhart (1987)	Staw and Ross (1985)
Same				
r	.36	.37	.22	.24
n	139	1,711	234	274
Changed				
r	.30	.23	.19	.19
n	90	1,232	569	1,121

Gerhart (1987) also examined the extent to which prior job satisfaction contributed significant variance to subsequent job satisfaction independent of situational changes in terms of occupation, employer, pay and status. First, he reestimated the Staw and Ross (1985) models by using data from the younger NLSY sample and correcting for measurement error in the regression model. The results indicated that previous job satisfaction and situational variables accounted for significant variance in subsequent satisfaction. Second, he further corrected for measurement error by directly measuring job complexity. In the second set of regression models, he found additional variance in job satisfaction that was directly attributable to changes in job

complexity. Thus, he concluded that both dispositional and situational factors were important in the prediction of job satisfaction.

Although Gerhart (1987) insisted that his study revealed significant variance in job satisfaction as a result of dispositional and situational factors, the study has several limitations that should be addressed. First, the youth cohort of the NLSY was a very young group of respondents who are more likely to make situational changes. Table 9 provides an indexed comparison of the level of situational changes over three years for Gerhart's study and Staw and Ross's (1985) study. Eighty-six and one-half percent of the sample from Gerhart's study made at least one contextual change, and an astonishing 55.1 percent changed both occupation and employer. In contrast, 60.6 percent of the sample from the Staw and Ross study made at least one contextual change with only 25.9 percent making both changes in employer and occupation. Thus, the widespread differences in contextual changes could account for slight changes in the overall explanatory power of situational factors. Second, the measurement of subjective job complexity is compounded with several problems. Specifically, the measure consisted of six individual items that formed separate subscales for the Job Characteristics Inventory and one item that measured task significance. One-item measures tend to have very poor measurement properties for psychological constructs because reliability is difficult to assess (Nunnally & Bernstein, 1994). Thus, one would assume that the results are upwardly biased in favor of situational factors. In addition, the subjective nature of job complexity would imply contamination with dispositional influences. Since the relationship between job characteristics and job satisfaction has been well established, the outcome variable will again be biased in favor of one's disposition. For example, individuals who are more prone to negativity will tend to be more dissatisfied with their jobs and ultimately view the characteristics of their job as more

dissatisfying. Although there are several limitations in Gerhart’s study, the results were roughly equivalent to the Staw and Ross study with the exception of the sample differences and the measurement of job complexity.

Table 9.

Contextual Changes in Staw & Ross (1985) and Gerhart (1987)

	Same Occupation		Changed Occupation	
	Gerhart (1987)	Staw and Ross (1985)	Gerhart (1987)	Staw and Ross (1985)
Same Employer	13.5%	39.4%	22.7%	6.3%
Changed Employer	8.7%	28.4%	55.1%	25.9%

Arvey, Bouchard, Segal, and Abraham (1989)

Arvey et al. (1989) explored the genetic source of job satisfaction by collecting data from thirty-four monozygotic twins reared apart (MZA) in the Minnesota Study of Twins Reared Apart. The MZA design assumes that the twins were randomly placed into different environments. Thus, the intraclass correlation coefficient (ICC) provides a direct estimate of genetic heritability, or the magnitude of the effect (Shrout & Fleiss, 1979). All participating twins were mailed a work history questionnaire that included questions on job satisfaction and work history. Job satisfaction was measured with the short form of the Minnesota Job Satisfaction Questionnaire (MSQ) developed by Weiss, Dawis, England, and Lofquist (1967). The MSQ measures intrinsic satisfaction, extrinsic satisfaction, and general job satisfaction. In addition, a global measure of job satisfaction was also used. Job complexity was based on several scores from *The Dictionary of Occupational Titles* (US Department of Labor, 1977). Two raters independently coded each job based on complexity, motor skills, physical demands,

and unusual working conditions. Finally, the items from both measures were corrected for age and sex effects.

The first hypothesis examined the extent to which job satisfaction exhibited significant heritability. The adjusted ICC for general job satisfaction was .31 ($p < .05$). Thus, 31% of the variance in job satisfaction was attributable to genetic factors and approximately 69% was due to environmental and other factors. In contrast, the global measure of job satisfaction had an ICC of .166 (*ns*). Although the global measure failed to demonstrate significant heritability, measurement error can not be easily detected in one-item measures. Therefore, the lower genetic variance demonstrated in the one-item measure of satisfaction should be interpreted with caution.

Arvey et al. (1989) argued that genetic influences were more likely to influence intrinsic satisfaction than extrinsic satisfaction. Specifically, they proposed that extrinsic characteristics of the job were prone to influence by job experiences rather than genetic components. Thus, the second hypothesis implied that genetics would more strongly influence intrinsic satisfaction as compared to extrinsic satisfaction. The adjusted ICC for intrinsic satisfaction was .32 ($p < .05$). In comparison, the adjusted ICC for extrinsic satisfaction was .11. No significant differences existed between intrinsic and extrinsic satisfaction ($z = 1.04$, *ns*), although the difference was in the specified direction. Thus, the second hypothesis was not supported.

The third hypothesis looked at the extent to which genetics influenced occupational selection. To explore this hypothesis, the DOT-derived scores were analyzed with ICC. The ICC for complexity, motor skills, and physical demands were .44, .36, and .34 which was significant ($p < .05$) with working conditions showing no significance. Thus, the twins selected work environments that appeared to be congruent with their genetic composition. It is possible that the twins selected their work environments based on genotypic fit or that organizations selected

them based on their fit with the organization. Thus, job complexity was partialled out of job satisfaction in order to determine the true genetic contribution to job satisfaction. The results revealed that the ICC changed very little and the significance levels remained the same. Thus, the third hypothesis was supported by the data that suggested heritability in job satisfaction was partially attributable to the propensity to hold similar jobs.

There are several limitations with the Arvey et al. (1989) study. First, as with previous dispositional studies, dispositions were never defined or measured. Rather, the authors assume that consistency and heritability of job satisfaction reflects a general underlying factor of affective disposition. However, the mere consistency of job satisfaction over time may be due to other explanations, such as intelligence (Judge, 1992). Second, the generalizability of this study is called into question with the use of monozygotic twins reared apart. Specifically, it is unknown how similar the genetic composition of these twins is in comparison to the general workforce population. Although the sample size was small and power was limited, the implications of the study illuminate the importance of both genetic and environmental sources of job satisfaction.

Early Dispositional Studies: Direct Evidence in Support of the Dispositional Approach
Staw, Bell, and Clausen (1986)

Although previous dispositional studies provided empirical support for the temporal stability and cross-situational consistency of job satisfaction, there was a lack of empirical studies that explored the justification for dispositional research. Specifically, few researchers had attempted to address the question as to why consistency effects were seen in job attitudes (c.f. Bouchard, 1984; Buss & Craik, 1985). Furthermore, few organizational behavior researchers had ventured into the realm of theory development for the dispositional approach (Weiss & Adler,

1984). By understanding the previous weaknesses in the dispositional literature, Staw et al. (1986) sought to explain the mechanisms underlying consistency effects in job satisfaction. Ultimately, the purpose of their study was to examine the effects of affective disposition over the course of 50 years.

Longitudinal data from the Intergenerational Studies at Berkley was used to investigate the relationship between affective disposition and job satisfaction. Based on Q-sort methodology and exploratory factor analysis, 17 affective personality items were selected that formed a single affective factor. Some of these items were positive (“cheerful” and “warm”) and some were negative (“hostile” and “irritable”). Job satisfaction was measured from questionnaires and structured interviews during two adult waves of data collection. Job satisfaction responses were combined into one factor for the Adult 2 wave and one factor for the Adult 3 wave. Correlations were used to examine the relationships between affective disposition and job satisfaction (See Table 10).

The results of the study found that affective disposition measured in Adult 2 was most strongly related to Adult 2 job satisfaction ($r = .38, p < .01$). In comparison, early adolescence, late adolescence, and Adult 1 affective disposition were most strongly related to Adult 3 job satisfaction (ranging from .34 to .48). Based on these results, affective disposition was moderately and significantly related to job satisfaction. In addition, the magnitude of the relationship between affective dispositions and job satisfaction was similar to the magnitude of relationships for both job characteristics (c.f. Loher, Noe, Moeller, & Fitzgerald, 1985) and social information (c.f. Thomas & Griffin, 1983). Also, the lack of attenuation in job satisfaction presented more evidence in favor of the stability and consistency of job satisfaction.

Table 10.

Correlations Between Affective Disposition and Job Satisfaction

<u>Affective Disposition</u>	<u>Job Satisfaction</u>	
	<u>Adult 2 (n=52)</u>	<u>Adult 3 (n=31)</u>
Early adolescence (ages 12-14)	.27**	.34**
Late adolescence (ages 15-18)	.26**	.36**
Adult 1 (ages 30 – 38)	.31**	.48***
Adult 2 (ages 40 – 48)	.38***	.01
Adult 3 (ages 54-62)	-	.24

p < .05, *p < .01

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Staw and his colleagues (1986) presented empirical evidence that affective disposition influenced job satisfaction over long periods of time and across job situations. However, they advised it was “... unclear from our data how the affect of individuals originated, from either genetic or social sources, and how it may be influenced by external factors over one’s lifetime” (p. 70). Thus, in order to understand the origin of job attitudes, future research should address genetic and environmental factors of individuals. In addition, the relationship between personality variables and job satisfaction invokes untested theoretical linkages. In congruence with Weiss and Adler (1984), Staw and his colleagues implied that future research should address proposed linkages between these variables. Further, they alluded to the overall importance of interactional approaches when developing models of job attitudes.

Although Staw et al. (1986) presented empirical evidence to substantiate further research on the dispositional approach to job satisfaction, there are several limitations to their study. For example, the construction of the measure of affective disposition is suspect for several reasons.

First, the construction of personality statements were based on the authors' assessment of individuals' interviews and case files across all time periods. Thus, the authors contaminated the study with subjective interpretation of personality characteristics. Second, the factor analysis that leads to the single common affective factor violates the assumption of independence (c.f. Judge, 1990). Thus, construct validity of their measure of affective disposition is lacking. Therefore, we must interpret the results of this study as tentative. Third, due to limitations in their data, Staw and his colleagues were unable to examine the full impact of situational characteristics⁴. Thus, we are left with little information on how situational characteristics influence the affective disposition-job satisfaction relationship. Finally, the source of dispositions was also left to future exploration. Staw and colleagues stressed, that in order to further understand the origin of job attitudes, researchers should begin to explore genetic and social influences. Although there were several notable limitations, the results of this study provided some confirmation that affective dispositions were a potential determinant of job satisfaction in addition to objective job characteristics and social information.

Levin and Stokes (1989)

Although previous research had found evidence for consistency and heritability of job satisfaction, researchers assumed that disposition was responsible for their results. In addition, many of these studies had not identified personality characteristics that predisposed individuals to job satisfaction. Thus, Levin and Stokes (1989) used a mixed methods design to examine the extent to which negative affectivity would explain significant variance in job satisfaction after controlling for job characteristics.

The laboratory study of the research design consisted of 140 undergraduate psychology students, who scored either high or low on the Negative Affectivity Scale (NAS: Levin &

Stokes, 1989). Students were randomly assigned to either an enriched task or unenriched task condition. Those students who were assigned to the enriched task had higher levels of satisfaction as compared to students assigned to the unenriched task. Also, high NA individuals were more dissatisfied than low NA individuals under both conditions. One additional finding was that high NA individuals perceived their tasks as more challenging and requiring more skill variety than low NA individuals under both conditions. Several limitations of the laboratory study should be addressed. First, only individuals high or low in NA were selected for the study. Individuals in the middle of the negative affectivity scale were simply left out of the study. If these individuals would have been included, the results would be substantially weakened. Second, the manipulated task conditions were not representative of an organizational situation in which the employee is exposed to real job characteristics. Thus, the external validity of the laboratory study is slightly weakened.

In Levin and Stokes's (1989) field survey of 315 employees from a large international service firm, they found that NA was significantly correlated with job satisfaction ($r = -.31, p < .01$). After controlling for job characteristics, NA explained 3.9% of the variance in the JDS composite index and 4.5% of the variance in the JDI satisfaction with work itself subscale. The field study had several limitations some of which were noted by the authors. First, response bias is a potential problem because respondents were given the questionnaires all at one time. Second, the assessment of job characteristics was subjective in nature. Thus, objective measurement of job characteristics would strengthen this study. Third, causality between NA and job satisfaction can not be determined with cross-sectional data. Thus, longitudinal analysis would provide additional information on the causal nature of this relationship.

In conclusion, the results of both studies suggest that high NA individuals experience negative emotionality that distorts their perceptions of job characteristics which ultimately impacts job satisfaction (Levin & Stokes, 1989). Thus, job characteristics and/or perceptions of the social environment may mediate the relationship between NA and job satisfaction. This study, like the Staw et al. (1986) study, assumed that individual differences in emotionality result in job satisfaction. However, other measures may more appropriately reflect affective disposition. Next, Levin and Stokes only examined one measure that was reported to be indicative of affective disposition. Thus, the generalizability of this study is limited to those individuals with negative affectivity. Future dispositional research should expand on these limitations in an attempt to explain the relationship between affective disposition and job satisfaction.

Weaknesses with Early Dispositional Research

Previous dispositional research has contributed indirect evidence for the potential existence of a dispositional source of job satisfaction. Specifically, both cross-situational and temporal stability of job satisfaction has been demonstrated by Staw and Ross (1985) and Gerhart (1987). Although Gerhart tried to correct some of the mistakes made by Staw and Ross, he essentially conducted the same study with a younger sample and with greater precision of measurement for job characteristics. Furthermore, Arvey et al. (1989) presented several provocative ideas on the origin of dispositions. All in all, these studies have indirectly supported the proposition that individuals possess stable, affective tendencies to approach work and life circumstances and to respond with some corresponding degree of satisfaction.

The previously discussed studies are not without limitations and limit the conclusions that one may draw (c.f. Judge, 1990). First, the majority of these studies used correlational techniques

to establish the consistency of job satisfaction. Typically, job satisfaction was correlated across years and consistency was inferred to establish the existence of dispositions (e.g. Staw & Ross, 1985; Gerhart, 1987). Second, dispositions were never actually defined nor measured in these studies. To overcome these weaknesses, both Staw et al. (1986) and Levin and Stokes (1989) defined and measured affective disposition and correlated it with job satisfaction over time. Further, they used multiple regression techniques to analyze the relationships between dispositional, situational, and job satisfaction variables. Third, early dispositional studies frequently omitted situational variables. When dispositional researchers decided to include situational variables, the variables were often crude proxies for the actual construct of interest (c.f. Staw & Ross, 1985; Gerhart, 1987). Davis-Blake and Pfeffer (1989) argued that 1) organizations represent strong environments that can easily influence and change individual attitudes and behaviors and 2) individuals are highly adaptive organisms that are easily influenced by an organization. In support, several researchers have found that organizations are strong situations that have powerful effects on job attitudes (e.g. Hackman & Oldham, 1980; Salancik & Pfeffer, 1978; Schein, 1985; Wilkins & Ouchi, 1983; Zucker, 1983). In addition, other empirical studies have also found that individuals' dispositions are easily influenced by organizations (e.g. Brousseau, 1978; Jenkins, 1987; Kohn & Schooler, 1978, 1982).

In accordance with the weaknesses discussed above, several areas of improvement exist for early dispositional research. Researchers should clearly define and measure disposition so that its relationship to job satisfaction is more clearly understood (e.g. Davis-Blake & Pfeffer, 1989; Weiss & Adler, 1984). Few studies have defined or measured affective disposition. Furthermore, no theory has been offered to explain why consistency is seen in job satisfaction.

Finally, future causal models should include both dispositional and situational determinants of job satisfaction (Davis-Blake & Pfeffer, 1989).

Accumulation of Direct Evidence in Support of the Dispositional Approach

Positive and Negative Affectivity

Organizational researchers strived to make improvements in dispositional research by including measures of affective disposition, by incorporating new theoretical frameworks, and by expanding methodological design. One such framework was developed by Watson, Clark, and colleagues that argued affective disposition was composed of positive and negative affectivity. Individuals high on positive affectivity are energetic and optimistic and tend to acquire pleasure from ongoing life activities (George, 1992; Tellegen, 1985; Watson & Slack, 1993). In contrast, individuals high in negative affectivity are more pessimistic and have a tendency to focus on one's failures (George, 1992; Tellegen, 1985; Watson & Slack, 1993).

Watson and Slack (1993). Accumulating evidence suggests the individual differences in positive and negative affectivity are significantly related to job satisfaction (Levin & Stokes, 1989; Staw et al, 1986). However, previous studies have only examined one dimension of affectivity. Since more recent research has supported two dimensions of affectivity (Watson, Clark, & Tellegen, 1988), Watson and Slack (1993) used a two-factor model of affectivity and a longitudinal design to examine how positive and negative affectivity relate to job satisfaction over time.

The results of their study were similar to previous dispositional studies in that the relationship between affective disposition and job satisfaction was maintained over time. First, positive affectivity was moderately related to job satisfaction, and this relationship was maintained over time. For example, PA was significant correlated with job satisfaction at Time 1

($r = .29, p < .05$) and Time 2 ($r = .33, p < .05$). However, NA was not significantly correlated with job satisfaction at Time 1 ($r = -.09, ns$) or Time 2 ($r = -.18, ns$). Second, both positive and negative affectivity were related to some dimensions of job satisfaction. For example, PA was significantly correlated with work (Time 1: $r = .42, p < .05$; Time 2: $r = .36, p < .05$) and promotion (Time 1: $r = .26, p < .05$). In addition, NA was significantly correlated with work (Time 1: $r = -.32, p < .05$; Time 2: $r = -.38, p < .05$), pay (Time 2: $r = -.25, p < .05$), supervision (Time 2: $r = -.28, p < .05$) and coworkers (Time 1: $r = -.30, p < .05$; Time 2: $r = -.23, p < .05$). Third, both PA and NA jointly explained significant variance in satisfaction with coworkers and work after controlling for situational factors such as job complexity and perceived job changes. Thus, both situational and dispositional factors are important in explaining job satisfaction. Fourth, emotionality may be better represented by two separate constructs rather than one construct with bipolar ends. Evidence from this study suggests that both positive and negative affectivity differentially predict overall job satisfaction and facet measures of job satisfaction. Furthermore, correlations between positive and negative affectivity were moderate (ranging from $r = -.33$ to $r = -.38$).

Several limitations to this study should be briefly addressed, as they lay the foundation for future research. First, one limitation to this study was the failure to measure objective job characteristics. Since self-report measures of perceived job characteristics possess an element of individual differences, the results of this study could be confounded and weaker results for the contribution of job characteristics may be the result. Second, some researchers have argued that affectivity is better represented by one factor with bipolar ends representing positive and negative affectivity (c.f. Judge, 1992). Since this study looked at affectivity as two distinct constructs, the former proposition was not tested. Third, little attention was directed towards

understanding theoretical processes underlying the relationship between affective disposition and job satisfaction. Watson and Slack considered the importance of a bidirectional model in which subjective well-being and job satisfaction may be reciprocally related. However, these explanations were introduced post hoc and could not be tested for their tenability. Thus, one important area for future research continues to be the further exploration of these psychological processes and the reconsideration of the conceptualization of positive and negative affectivity.

Connolly and Viswesvaran (2000). Some researchers have insisted that positive and negative affectivity are two separate constructs, while others have indicated that they are bipolar ends of the same construct (c.f. Judge, 1992; Schuabroeck, Ganster, & Fox, 1992). Still others have claimed that positive and negative affectivity represent an ongoing state of emotional well being rather than a dispositional trait (Judge & Bretz, 1993). To address these issues and to accumulate extant research, Connolly and Viswesvaran (2000) conducted a meta-analysis of 27 studies and conference presentations.

The primary goals of their study were to examine relationships between positive affectivity and job satisfaction, negative affectivity and job satisfaction, affective dispositions and job satisfaction, and to look at potential moderators of the negative affectivity – job satisfaction relationship. The results of their study found rather strong correlations for positive affectivity ($p = .49$, $k = 15$, $N = 3326$), negative affectivity ($p = -.33$, $k = 27$, $N = 6233$), and affective disposition ($p = .36$, $k = 7$, $N = 1415$). Based on these results, it appears that affectivity and affective disposition explain between 10% and 25% of the variance in job satisfaction. Further, positive affectivity had the strongest relationship with job satisfaction. As discussed previously, a secondary goal of this study was to examine potential moderators of the negative affectivity - job satisfaction relationship. Although several moderators were proposed, only

significant support was found for the JDI ($p = -.33$, $K=6$, $N=1067$) and the MSQ ($p = -.24$, $K=7$, $N=1657$). Thus, the JDI tends to account for more variance in the prediction of job satisfaction as compared to the MSQ.

Several conclusions and limitations should be drawn from this study. First, both positive and negative affectivity and affective disposition had substantial correlations with job satisfaction. Coupling these results with previous studies, both affectivity and affective disposition are important constructs that have significant predictive validity for job satisfaction. Second, both dispositional and situational factors appear to contribute to job satisfaction, thereby supporting the interactional perspective. Specifically, both intrinsic and extrinsic components of the job appear to be just as important as affective disposition and affectivity. Although this study indicated support for the relationships between positive affectivity, negative affectivity, affective disposition, and job satisfaction, there still is lack of understanding of the theoretical processes that underlie these relationships. Furthermore, the source of these predictors is still within question and has not been thoroughly examined. If a genetic predisposition to experience job satisfaction is indeed responsible for these relationships, more theoretical and empirical work is required. Finally, disagreement still exists as to whether measures of affectivity are examining state or trait differences. It appears that researchers in the tradition of Tellegen (1985) see affectivity as being either a state or a trait. When affectivity is conceptualized as a trait, it is assumed to reflect affective disposition. This view is readily apparent in Connolly and Viswevaran's (2000) meta-analysis, as they argue that measures of affective disposition are contaminated with negative affectivity. However, researchers in the tradition of Judge and Bretz (1993) see positive and negative affectivity as representative of state differences and subjective

well-being. These differences will be further discussed in the following review of other measures of affective disposition.

Other Measures of Affective Disposition: The NOSQ

Judge and Bretz (1993). Researchers had typically operationalized affective disposition as individual differences in emotionality (e.g. Levin & Stokes, 1989; Staw et al, 1986; Watson & Clark, 1993). However, Judge and Bretz (1993) speculated that individual differences in emotionality were indicative of positive and negative affectivity, rather than affective disposition. Based on their arguments, they speculated that Weitz's (1952) Neutral Objects Satisfaction Questionnaire (NOSQ) more effectively represented affective disposition as compared to Watson and colleagues (1988) Positive and Negative Affectivity Scale (PANAS). The results of their study indicated that the NOSQ exhibited favorable reliability and greater stability than the PANAS. In addition, fit statistics from the confirmatory factor model indicated that the items adequately represented the NOSQ. Therefore, future dispositional research should address the differences in these conceptualizations of affective disposition.

Judge and Hulin (1993). As noted above, researchers have used positive and negative affectivity to represent affective disposition (e.g. Levin & Stokes, 1989; Watson & Slack, 1993). However, Judge and Hulin (1993) present evidence that affective disposition and emotionality are two different types of constructs. In essence, affective disposition predisposes an individual to respond in a predetermined affective manner; whereas, emotionality is considered to be an experienced affective response. In this study, subjective well being was represented by individual differences in emotionality and life satisfaction, and affective disposition was based on the NOSQ. By using structural equation modeling techniques and multi-source data (self and significant other), the results of the study indicated that affective disposition was independent of

and an antecedent to subjective well being. In addition, support was found for a reciprocal relationship between subjective well being and job satisfaction thereby confirming previous empirical evidence from other studies (c.f. Judge and Watanbe, 1993).

The primary importance of this study was based on the empirical support for 1) the distinction between affective disposition and subjective well-being and 2) the nonrecursive relationship between subjective well-being and job satisfaction. In essence, individuals who work in the similar environments may experience varying levels of happiness depending upon their affective disposition. At the same time, situational constraints, such as autonomy and task identity, and subjective well-being help to determine one's level of job satisfaction. Conversely, one's level of job satisfaction also has reciprocal effects on subjective well-being. The secondary importance of this study was the use of valid psychometric techniques and sound theory to develop a structural model that explained the dispositional source of job satisfaction. In conclusion, it is notable that these results stand as initial, valid evidence to refute Davis-Blake and Pfeffer's (1989) contention that only external environmental influences are important to one's level of job satisfaction.

Judge and Locke (1993). Although the former study provided further evidence in support of the dispositional approach to job satisfaction, the use of attitudinal and social cognitive theories to explain this relationship was virtually nonexistent. Judge and Locke (1993) reasoned that dysfunctional cognitive processes could lead to general unhappiness and job dissatisfaction. Thus, Judge and Locke (1993) replicated and extended Judge and Hulin's (1993) study by borrowing theoretical support from Beck's (1963, 1987) Cognitive Theory of Depression. Specifically, this theory suggests that distorted thought processes in the form of

overgeneralization, polar reasoning, and selective abstraction leads to dysfunctional beliefs and negative attitudes. In addition, they operationalized affective disposition with the NOSQ.

Based on the results of their study, additional support was found for 1) the influence of affective disposition on subjective well being and 2) the bidirectional relationship between subjective well-being and job satisfaction. The relationship between subjective well-being and job satisfaction is such that spillover effects from one's life carry over into one's work. In turn, job satisfaction can also impact subjective well-being in that job satisfaction is a vital component to the more global life satisfaction. Another important contribution from this study is the link between cognitive evaluation processes and subjective well-being. Specifically, individuals who are perfectionists, dependent on others for self-esteem, and overgeneralize from single situations to all situations are more likely to have poor cognitive styles that result in depression and unhappiness. Although previous dispositional researchers have argued that dispositions should be used as a basis for organizational selection (e.g. Arvey et al, 1989; Pulakos & Schmitt, 1983; Staw & Ross, 1985; Staw et al. 1986), Judge and Locke (1993) offer an alternative perspective. Specifically, they suggest that employees' well-being and satisfaction can be increased through the reduction of dysfunctional thought processes via organizational training and cognitive therapy.

One of the most intriguing unanswered questions still centers on the nature of affective disposition. First, dysfunctional cognitive styles may be the result of both environmentally learned and genetically programmed responses from an individual's corresponding disposition. If this is the case, then organizational programs aimed at cognitive reparative therapy may not be successful. Second, the NOSQ is a general measure of affective disposition, but what the scale is measuring is virtually unknown. Thus, the future of the dispositional perspective relies on

developing models of job satisfaction based on operationalization of affective disposition from relevant theoretical frameworks that explore these underlying cognitive processes.

Core Self-Evaluations

Judge, Locke, & Durham, 1997. The resurgence of dispositional research became readily apparent in the 90s, as researchers began to search for affective dispositional sources of job satisfaction (Judge, Locke, & Durham, 1997). Based on recommendations from House, Shane, & Herold (1996) to develop more fine-grained conceptualizations of dispositions, Judge and his colleagues introduced the multidimensional construct of core evaluations. Judge and his colleagues defined core evaluations according to Packer's (1985) definition: "Core evaluations are basic conclusions, bottom-line evaluations, that we all hold subconsciously. These evaluations pertain to three fundamental areas of everyone's life: self, reality, and other people" (p.3). Thus, core evaluations are evaluative, fundamental, and wide in scope. Evaluative traits consist of appraisals or judgments of outcomes. Since job satisfaction tends to be a more evaluative construct, evaluative traits will be more strongly related to job satisfaction rather than descriptive traits. A second assumption is that fundamental traits are central to the individual. A good example of a fundamental trait is self-esteem; whereas, assertiveness may be an extension of higher self-esteem and considered a peripheral trait. Thus, fundamental traits will be more strongly related to job satisfaction than peripheral traits. The third component of core evaluations is that traits must be general and wide in scope. In effect, global traits are more likely to encompass other secondary traits. Since job satisfaction is a global construct, global traits should be more strongly related to job satisfaction. Judge's propositions focus on evaluative, fundamental, and global traits that affect one's interpretation of themselves, other people, and the

world. The nature of these traits in an individual should determine his or her affective orientation and how he or she responds in terms of job satisfaction.

Judge et al. (1997) proposed three types of core evaluations. First, core evaluations of the world consist of beliefs in a benevolent, just, and exciting world in comparison to beliefs in a malevolent, unjust, and dangerous world. Individuals who believe in the former perceive the world as full of opportunities, and individuals who believe in the latter see the world as full of enmity and ill-will. Judge and his colleagues claim that individuals who see the world as benevolent, just, and exciting will experience higher levels of job satisfaction as compared to individuals who view the world as malevolent, unjust, and dangerous. Second, core evaluations of others are based on a dichotomy between trust and cynicism. Trust results from mutual dependence and respect. In contrast, cynicism occurs when an individual attributes others' actions to their own self-interests. Judge and his colleagues contend that individuals who trust others will have higher levels of job satisfaction as compared to those who are more cynical of others. Third, the concept of core self-evaluations was introduced as a multidimensional, affective dispositional trait that was related to job satisfaction. Core self-evaluations consist of self-esteem, generalized self-efficacy, locus of control, and neuroticism. Self-esteem refers to an individual's evaluation of oneself (Harter, 1990; Pierce & Gardner, 2004; Rosenberg, 1965). It is the most evaluative, fundamental, and global dispositional trait as compared to the other traits. Judge and his colleagues indicated that self-esteem would be positively related to job satisfaction. In addition, the relationship between self-esteem and job satisfaction will be stronger than any other core trait. Generalized self-efficacy is the generalized belief that an individual will be capable to motivate the self in pursuing and accomplishing the desired task (Gardner & Pierce, 1998). Generalized self-efficacy is an important component of self-esteem

(Gardner & Pierce, 1998; Locke, McClellan, Knight, 1996). For example, an individual who views himself as competent and worthy (high self-esteem) will be more likely to predict task success (high self-efficacy). Judge and his colleagues proposed that generalized self-efficacy will be positively related to job satisfaction. Locus of control is a generalized expectancy to receive reinforcement either as the result of one's behaviors or due to forces beyond one's control (Levenson, 1981). Locus of control and generalized self-efficacy appear to be very similar. However, locus of control focuses on outcomes, and self-efficacy stresses the importance of performance to achieve those outcomes. Judge and his colleagues proposed that internal locus of control would be positively related to job satisfaction and this relationship would be slightly less than generalized self-efficacy. Neuroticism is the tendency to be self-doubting, fearful, and nervous (c.f. Barrick & Mount, 1991). Neuroticism is highly related to negative affectivity (Watson & Clark, 1984). Judge and his colleagues propose that neuroticism will negatively impact job satisfaction. Although these dispositional characteristics represent one common factor, each dispositional characteristic is distinct yet interrelated to the other core characteristics.

Judge et al. (1997) hypothesized both direct and indirect effects between core self-evaluations and job satisfaction. The first model hypothesizes that the direct effect of core self-evaluations on job satisfaction comes about through emotional generalization. Emotional generalization is comparable to the top-down approach in subjective well-being research where general happiness in life spills over to the work domain (e.g. Judge & Hulin, 1993; Judge & Locke, 1993; Judge & Watanabe, 1993; Judge et al. 1997; Heller, Watson, & Ilies, 2004). As discussed previously, emotional generalization results in an immediate affective reaction to the job. The second model examines mediated effects via situational appraisals. Specifically, core self-evaluations influence the cognitive appraisal process leading to job satisfaction; and at the

same time, core self-evaluations also have direct effects to job satisfaction. The third model also examines mediated effects, but it examines indirect effects through actions such as job selection and tenacity in the face of adversity. The fourth model assumes that core self-evaluations act as a moderating variable in which core self evaluations interact with situationally specific values to influence job satisfaction. Each of these models may be viewed as complementary approaches to studying job satisfaction. Moreover, the introduction to core evaluations remains a rather impressive feat in which Judge and his colleagues have used existing theoretical frameworks to explain the dispositional source of job satisfaction. The next portion of this review will be dedicated to reviewing those studies that further investigate Judge and colleagues' propositions.

Judge, Locke, Durham, & Kluger (1998). As discussed previously, researchers have begun to explore affective dispositional factors that lead to job satisfaction. Specifically, recent theoretical work has noted the importance of core self-evaluations and to a lesser extent, external evaluations (Judge et al., 1997). As discussed previously, core self-evaluations consist of self-appraisals and include the core traits of self-esteem, generalized self efficacy, locus of control, and neuroticism. In comparison, external evaluations are appraisals that individuals make of their environment and include evaluations of others and the world⁵. The purpose of this study was to examine relationships between core self-evaluations, perceived job characteristics, job satisfaction, and life satisfaction. This was accomplished by examining these relationships with three independent sets of data from college students, physicians, and Israeli workers.

Based on the results from three independent samples and both self and significant other reports, Judge et al. (1998) found consistent empirical support for direct effects via emotional generalization and partial mediation via cognitive appraisals. First, both core self-evaluations and perceptions of job characteristics exhibited independent and significant effects on job

satisfaction. Furthermore, core self-evaluations showed independent and significant effects on life satisfaction. Thus, individuals with more positive core self-evaluations experience more happiness in life and more satisfaction at work because they possess the dispositional characteristics to do so. Second, perceptions of job characteristics partially mediated the relationship between core self-evaluations and job satisfaction. Thus, individuals with positive core self-evaluations seek situations that are challenging and rewarding to verify their self-worth which in turn increases satisfaction with their jobs. In essence, individuals with positive self-evaluations are more happy and satisfied but they also see the intrinsic importance of their work. Third, no support was found for proposed moderator effects. These results represent an important link between affective disposition and job satisfaction because affective dispositions were both measured and based on a well-structured theoretical framework. Furthermore, the importance of psychological processes was demonstrated in the form of cognitive appraisals.

Judge and his colleagues (1998) also examined the relationships between core self-evaluations and previous operationalizations of affective disposition. The Positive and Negative Affectivity Schedule (PANAS; Watson, Clark, & Tellegen, 1988) and the Neutral Objects Satisfaction Questionnaire (NOSQ; Weitz, 1952) were used as measures of affective disposition. Core self-evaluations correlated ($r = .48$) with PA, ($r = -.64$) with NA, and ($r = .37$) with the NOSQ. PA and NA explained 22.5% of the variance in self-reported job satisfaction over the four core traits and the NOSQ and 6.5% of the variance in significant-other reported job satisfaction. The four core traits explained 4.2% of the variance in self-reported job satisfaction and 6.3% of the variance in significant other reports of job satisfaction over and above PA and NA and the NOSQ. The NOSQ only explained .7% of the variance in self-reported job satisfaction and 1.1% of the variance in significant other reported job satisfaction. Since core

self-evaluations explained significant variance in job satisfaction that was not explained by either the PANAS or the NOSQ, it appears that core self-evaluations are getting at something different from both of these constructs. Obviously, future research should continue to examine the role of core self-evaluations in the prediction of job satisfaction. In addition, the results of these three studies point to the inferior measurement capabilities of the NOSQ for this type of research. Researchers should be aware of these potential problems with this measure. Finally, the PANAS did explain significant incremental variance over core self-evaluations and the NOSQ despite rather high correlations with the former construct. Apparently, the PANAS is measuring something different from the core traits and their measures. However, the high correlations taken with the evidence that each of these measures loaded onto the same factor provides some indication that each is measuring a common factor such as affective disposition.

Based on the review of this study, several concerns should be addressed. First, the correlational relationships between the core traits are relatively high for the self reports (See Table 11: self-esteem and self-efficacy: $r = .69$, $r = .83$, $r = .63$, $p < .01$), and moderately high for the significant other reports (See Table 12: self-esteem and self-efficacy: $r = .82$, $r = .35$, $r = .32$, $p < .01$). The results of the correlational analysis coupled with the results from the confirmatory factor models for both self- and significant-other reports presents some interesting questions. Since the core traits demonstrate convergent validity, one may question the incremental validity of including all four traits in the model. For example, does each trait add incremental variance over other traits, once they have been controlled? In addition, divergent validity of these traits has not been examined. If each of these traits has differential relationships with criterion variables, then this benchmark would represent another important hurdle in examining the construct validity of core self-evaluations. Next, same source reports showed stronger

relationships between the core traits and job satisfaction as compared to different source reports. These results could be attributable to either response-response bias or because significant others have difficulty in assessing internal traits. Second, PA and NA were operationalized as indicators of affective disposition and they loaded on the same factor as core self-evaluations. However, PA and NA have been linked to life satisfaction in previous research (c.f. Judge and Locke, 1993). Thus, PA and NA may actually be indicators of mood in the case of life satisfaction or affective disposition in the case of a generalized affective factor. More research is needed to explore these relationships. Last, the lack of significance for moderator effects is puzzling because previous results from job characteristics theory have shown the potential importance of moderators (c.f. Fried & Ferris, 1987; Loher et al., 1985). Overall, this study represents an important step in dispositional research that has resulted in a multidimensional, affective, dispositional-based construct based on many empirical studies and a well-developed theoretical framework.

Table 11.

Uncorrected Correlations for College Student Sample, Physician Sample, and Israeli Sample:
Self-Reports

Variable	1	2	3	4
<u>Self-Esteem</u>				
College	.77			
Physician	.90			
Israeli	.72			
<u>Self-Efficacy</u>				
College	.69	.83		
Physician	.83	.90		
Israeli	.63	.81		
<u>Locus of Control</u>				
College	.45	.54	.87	
Physician	.52	.50	.87	
Israeli	.36	.53	.81	
<u>Neuroticism</u>				
College	-.55	-.49	-.38	.86
Physician	-.71	-.67	-.48	.93
Israeli	-.39	-.33	-.31	.85

Note: Reliabilities are included in the diagonals. Additionally, decimals were omitted from correlations. Correlations from college student data set ($N = 122$), physician data set ($N = 164$), and Israeli sample ($N = 122$).

Reprinted with permission from Judge, T.A., Locke, E.A., Durham, C.C., & Kluger, A.N. (1998). Dispositional effects on job satisfaction and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83, 17-34.

Table 12.

Uncorrected Correlations for College Student Sample, Physician Sample, and Israeli Sample:
Significant Other Reports

Variable	1	2	3	4
<u>Self-Esteem</u>				
College	.84			
Physician	.89			
Israeli	.84			
<u>Self-Efficacy</u>				
College	.82	.78		
Physician	.35	.82		
Israeli	.32	.75		
<u>Locus of Control</u>				
College	.56	.63	.83	
Physician	.17	.20	.84	
Israeli	.32	.38	.77	
<u>Neuroticism</u>				
College	-.55	-.50	-.32	.84
Physician	-.35	-.32	-.31	.86
Israeli	-.03	-.08	-.06	.82

Note: Reliabilities are included in the diagonals. Additionally, decimals were omitted from correlations. Correlations from college student data set ($N = 122$), physician data set ($N = 164$), and Israeli sample ($N = 122$).

Reprinted with permission from Judge, T.A., Locke, E.A., Durham, C.C., & Kluger, A.N. (1998). Dispositional effects on job satisfaction and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83, 17

Judge, Bono, & Locke (2000). Continuing from previous theoretical development and one empirical study, Judge, Bono, and Locke (2000) conducted two studies, one cross-sectional using data from both self and significant others and one longitudinal using data from the IGS, to replicate the Judge et al. (1998) study and to extend it by including a measure of job complexity. In the first portion of the study, the researchers examined correlations between self- and significant-other reports, analyzed the factor structure of core self-evaluations, and then tested their structural models based on cross-sectional data. Before they reviewed their hypotheses, the researchers looked at correlations between self-reports and significant-other reports of the traits composing core self-evaluations. The mean corrected correlation between traits was .49, and the

relationship between self-reported traits and job satisfaction was higher than the relationships between significant-other reports and job satisfaction. Thus, convergence between self- and significant-other is moderate at best. As in the previous study, the purpose of significant other reports is to examine the extent to which self-enhancement is occurring in the measures. Next, Judge and his colleagues assessed the quality of the core self-evaluations factor structure by examining the covariance matrix computed from their data. They determined that the data best fit a second-order factor model in which core self-evaluations was a higher order construct consisting of self-esteem, generalized self-efficacy, locus of control, and neuroticism as lower level indicators. Then, based on their hypothesized structural model, Judge and his colleagues found support for a partial mediation model that included perceived job characteristics. The second portion of their study examined the extent to which core self-evaluations, job characteristics, and job satisfaction were stable over time. Based on the results of the longitudinal study, Judge determined that job complexity was an important explanatory variable in the relationship between core self-evaluations and job satisfaction. Thus, individuals with more positive self-concepts are happier and experience higher levels of job satisfaction due to their dispositional makeup, but they also see the intrinsic value of jobs as more challenging and rewarding. Another notable finding was the persistence of the relationship between core self-evaluations and job satisfaction ($r = .46, p < .01$)⁶. This temporal relationship is important because it speaks to the validity of the construct. Specifically, individuals, who held more positive self-concepts as children, were more likely as adults to perceive their job as more rewarding, hold more complex jobs, and to experience higher levels of satisfaction.

Although Judge et al. (2000) presented invaluable information on how dispositions directly influence job satisfaction and how dispositions indirectly influence job satisfaction

through the cognitive appraisal process and via actions through job choice, research is still lacking that explores why individuals with more positive self-concepts chose jobs that are more challenging. To this end, Judge and his colleagues discuss the potential importance of both the goal-setting and leadership literatures as explanatory processes in the relationship between core self-evaluations and job complexity. Future studies should also examine the factor structure of core self-evaluations. Apparently, core self-evaluations are best represented by a second-order factor structure which results in the multidimensional nature of construct. However, core self-evaluations are measured as if it were a reflective construct but it is conceptualized as a formative construct. Thus, it remains imperative to examine not only the psychological processes that underlie this construct but also to review the utility of this multidimensional construct in organizational research.

Judge & Bono (2001). Before moving further into the review of core self-evaluations, it is necessary to examine the strength of the relationship between each core factor and job satisfaction via meta-analytic techniques. If predictive validity is lacking in any of these traits, then there is little reason to continue the study of the relationship between that particular factor and job satisfaction. Although a dearth of studies have examined the core self-evaluations model, the underlying traits of self-esteem, locus of control, and neuroticism have been the subject of almost 30,000 studies in organizational behavior and industrial/organizational psychology⁷ (Judge & Bono, 2001). However, generalized self-efficacy, although very similar to self-esteem, has only been investigated in 172 studies in the PsycINFO database (Judge & Bono, 2001). Surprisingly, Judge and Bono found that no meta-analysis had been conducted on these traits and job satisfaction. Thus, they reviewed the literature and reduced their sample to include 135 organizational studies that used only adults as participants, directly measured the predictor

variables, and specified job satisfaction as the criterion variable. On the basis of their meta-analysis, they found substantial, positive nonzero mean true-score correlations between each of these traits and job satisfaction (See Table 13). The results of this study confirmed previous qualitative reviews by Judge et al. (1997) and further validated the relationship of core self-evaluation traits to job satisfaction.

Judge and Bono (2001) also examined a meta-analysis of the relationships between each of the core traits (See Table 14). All four traits exhibit strong correlations with the lowest correlation between internal locus of control and emotional stability ($p = .51, k = 16, N = 2,175$) and the highest correlation between self-esteem and generalized self-efficacy ($p = .85, k = 14, N = 1,894$). From this initial analysis of simple correlations based on population estimates, these core traits appear to be indicators of a common core construct. Yet at the same time, the incremental validity of each core factor is questionable until further research is conducted.

Table 13.

Meta-Analysis of Core Self-Evaluation Traits and Job Satisfaction

Core trait	k	N	Mean r	SD_r	Mean ρ	SD_ρ
Self-esteem	56	20,819	.20	.10	.26	.11
Generalized self-efficacy	12	12,903	.38	.09	.45	.10
Internal locus of control	80	18,491	.24	.12	.32	.16
Emotional stability	21	7,658	.20	.08	.24	.09

K = number of correlations, N = total sample size, $Mean r$ = average uncorrected correlation, SD_r = standard deviation of average uncorrected correlation, $Mean \rho$ = average corrected correlation, SD_ρ = standard deviation of average corrected correlation

Reprinted with permission from Judge, T.A. & Bono, J.E. (2001). Relationship of core self-evaluation traits- self-esteem, generalized self-efficacy, locus of control, and emotional stability- to job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80-92.

Table 14.

Population Correlations among the Core Traits: Studies from 1957-1997

Core Trait	Self-Esteem	Generalized self-efficacy	Internal locus of control
Generalized self-efficacy			
<i>p</i>	.85		
<i>k</i>	14		
<i>N</i>	1,894		
Internal locus of control			
<i>p</i>	.59	.63	
<i>k</i>	16	14	
<i>N</i>	2,175	1,888	
Emotional stability			
<i>p</i>	.66	.59	.51
<i>k</i>	18	14	16
<i>N</i>	2,297	1,888	2,175

P = correlation corrected for measurement error, *k* = number of correlations, *N* = total sample size

Reprinted with permission from Judge, T.A. & Bono, J.E. (2001). Relationship of core self-evaluation traits- self-esteem, generalized self-efficacy, locus of control, and emotional stability- to job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80-92.

Judge, Erez, Bono, & Thoresen (2002). Previous results suggest that four traits exhibit significant relationships with each other and form a second-order factor (Judge et al., 2000). In order to replicate and extend these results, Judge, Erez, Bono & Thoresen (2002) further investigated the construct validity of core self-evaluations by examining convergent validity, discriminant validity, and the nomological network of core self-evaluations. The results of their study, based on population correlations among the four traits, again illustrate significant, large correlations between each of the traits (Table 15). Compared to the previous meta-analysis, the population correlations are very similar after the inclusion of additional studies from 1996-2000 in PsycINFO. In addition, the average correlation between the four traits was $r = .60$. The second portion of the analysis examined the factor structure of core self-evaluations by using confirmatory factor analysis. The results indicated that a higher order factor best explains the

relationships between the four traits. The third portion of the study examined the extent to which the four traits demonstrated both convergent and discriminant validity. Based on the multitrait-multimethod technique (Campbell & Fiske, 1959), discriminant validity was lacking while convergent validity existed. The last portion of the analysis examined the nomological network of core self-evaluations with several criterion variables to establish criterion-related validity (Cronbach & Meehl, 1955). Results revealed that individual traits added little incremental validity over the common factor for both predictor variables such as the Big Five and criterion variables such as job satisfaction, life satisfaction, stress, and strain.

The results of this study provide initial evidence that core self-evaluations are best represented by a higher order factor. First, correlations between the core traits had an average of $r = .60$. Judge and his colleagues emphasized that strong correlations between these traits results in correlated errors. Thus, the higher factor model was the most robust measurement model in this study. Second, the four traits were consistently related to other important dispositional measures such as the five-factor model. In addition, the pattern of correlations between the core traits and traits from the five-factor model were similar. Therefore, discriminant validity is lacking for the four individual core traits. Third, core self-evaluations explained important incremental variance over the five-factor model and in organizational-relevant outcome variables such as job satisfaction and life satisfaction. However, the individual traits that comprise core self-evaluations did not add significant, incremental variance over the common factor. Based on these results, Judge et al. (2002) urged for researchers to continue to include both individual measures of these traits and an overall additive measure. An interesting question has surfaced based on the results of these studies– if these individual traits represent a higher order factor, is it

best to continue to measure the individual traits and create an overall additive measure, or would it be more parsimonious to develop an overall measure of the higher order factor?

Table 15.

Population Correlations among the Core Traits: Studies from 1966-2000.

Core Trait	Self-Esteem	Generalized self-efficacy	Internal locus of control
Generalized self-efficacy			
<i>p</i>	.85		
<i>k</i>	9		
<i>N</i>	2,431		
Internal locus of control			
<i>p</i>	.52	.56	
<i>k</i>	47	13	
<i>N</i>	14,691	3,088	
Emotional stability			
<i>p</i>	.64	.62	.40
<i>k</i>	19	7	31
<i>N</i>	5,565	1,541	6,538

p = correlation corrected for measurement error, *k* = number of correlations, *N* = total sample size

Reprinted with permission from Judge, T.A., Bono, J.E., Erez, A., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, 83, p. 693-710.

Judge, Erez, Bono, & Thoresen (2003). A number of studies have found that the four core traits load onto a single, higher order latent factor (e.g. Judge et al, 1998; Judge et al, 2001; Judge et al, 2002). These traits have been studied as manifestations of core self-evaluations. Typically, each trait is measured with its own scale which results in a measurement tool consisting of 38 items. In order to determine overall core self-evaluations the items are summated and averaged to create an aggregate construct. Some controversy exists over aggregated constructs, so Judge, Erez, Bono, and Thoresen (2003) chose to develop a psychometrically valid instrument (c.f. Cronbach & Meehl, 1955; Schwab, 1980; Hinkin, 1995; 1998). In general, results from four independent samples revealed support for a new measure –

Core Self-Evaluations Scale (CSES: Judge et al., 2003). The CSES appears to possess adequate construct validity as illustrated by alpha, intersource, and test-retest reliability; confirmatory factor analysis; convergent and discriminant validity; and criterion-related validity. Specifically, the CSES is best represented by one factor and possesses similar empirical relationships with criterion-related variables as did the four core traits (Table 16). Based on usefulness analysis (Darlington, 1990), the CSES adds incremental validity over the aggregated factor in the prediction of job and life satisfaction. However, when the CSES was used in place of the four core traits, some incremental validity was lost. The opposite was just as true for the use of the four core traits in place of the CSES. The importance of the CSES is that it provides organizational researchers with an important measurement tool to assess core self-evaluations as a latent construct. Multidimensional constructs are often the norm in organizational research, but they are often incorrectly specified in structural models and difficult to work with (c.f. Law, Wong, & Mobley, 1998; Law & Wong, 1999).

Several limitations of this study should be discussed. First, one point of concern would be the strong relationship between the CSES and several traits in the Five Factor Model (McCrae & Costa, 1987; Mount, Barrick, & Strauss, 1994). Specifically, the CSES had strong correlations with conscientiousness ($p = .54$) and extraversion ($p = .50$). However, the usefulness analysis revealed that CSES still added variance in the prediction of both job and life satisfaction when the FFM was controlled. Also, the FFM added variance to both job and life satisfaction when the CSES was controlled. Thus, these models of personality appear to assess different personality constructs and exhibit discriminant validity. Second, locus of control exhibited a much lower relationship with CSES as compared to the other core traits ($p = .51$). Similar results have also been found in other studies that examine the four core traits such that correlations between locus

of control and the other traits tends to be lower (Judge et al., 1998; Judge, Bono, & Locke, 2000; Judge & Bono, 2001; Judge et al., 2002). One potential explanation for these results is that locus of control is measured with Levenson's (1981) Internal, Powerful Others, and Chance (IPC) Scale. Typically, research with the core self-evaluations construct has aggregated these scales into one measure of locus of control. However, the IPC consists of three dimensions that form three separate factors and should be examined as specified in the theoretical model (Levenson, 1974). In essence, Judge and his colleagues (2003) lost the fine-grained conceptualization of locus of control and muted their subjects to a mean score. This is very interesting because Judge et al. (2002) cautioned against aggregating their own construct at the expense of lost empirical validity. Still another explanation for these weaker relationships is the lack of reliability in the locus of control scales (c.f. Lefcourt, 1991). An important step in future research is to address to the viability of the continued inclusion of locus of control with the other core traits.

Table 16.

Correlations of Core Self-Evaluation Scale (CSES) with Other Variables

	<i>Mean</i> <i>r_c</i>	<i>k</i>	<i>N</i>
Self-Esteem	.86	4	786
Generalized self-efficacy	.81	4	786
Neuroticism	.79	4	786
Locus of control	.51	4	786
Conscientiousness	.54	4	786
Extraversion	.50	4	786
Agreeableness	.16	2	301
Openness to experience	.09	2	301
Job satisfaction	.53	2	455
Life satisfaction	.60	3	506

Mean r_c = average corrected correlation, k = number of correlations, N = total sample size

Reprinted with permission from Judge, T.A., Bono, J.E., Erez, A., & Thoresen, C. J. (2003). The core self-evaluations scale: Development of a scale. *Personnel Psychology*, 2003, 56, 303-331.

Judge, Bono, Erez, & Locke (2005). As stated previously, an important goal in core self-evaluations research is to examine the psychological processes that link core self-evaluations to job satisfaction. Previous empirical research has examined job characteristics as an intervening variable in the relationship between core self-evaluations and job satisfaction (e.g. Judge et al. 1998; Judge et al. 2000). Specifically, individuals with more positive self-concepts chose jobs that were perceived as more challenging and that were more complex. In return, these individuals experienced higher levels of job satisfaction. Although these findings represent an important step in elucidating the relationship between core self-evaluations and job satisfaction, other psychological processes may underlie this relationship.

To this end, Judge, Bono, Erez, & Locke (2005) use Sheldon and Elliot's (1998) self-concordance model to argue that individuals select goals that are congruent with their self-concept. In turn, individuals who chose goals that are more congruent with their disposition will tend to experience higher levels of job and life satisfaction. Based on both student and occupational studies, Judge and his colleagues found that individuals with more positive self-regard chose self-concordant goals that made them happier with life and with their jobs. In essence, these individuals appear to be more able to select appropriate goals that lead to continuing happiness at work and in life. As in previous studies, direct links were also found between core self-evaluations and job satisfaction. To reiterate, the overall importance of this study is that 1) motivation can also be explained via the notion of congruency between one's disposition and one's pursuit of goals, and 2) additional evidence has been supportive of the core self-evaluations-job satisfaction relationship.

Summary of the Dispositional Approach to Job Satisfaction

In the past decade, studies on the dispositional source of job satisfaction have grown with particular emphasis placed on the integration of previous dispositional research into a collective, theoretical model. This model is better known as the core self-evaluations model (Judge et al., 1997). Core self-evaluations are fundamental evaluations of the self and consist of four core traits- self-esteem, generalized self-efficacy, locus of control, and neuroticism. Harter (1990) defined self-esteem as "how much a person likes, accepts, and respects himself overall as a person" (p.255). Generalized self-efficacy was defined as "beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1997, p. 2). Neuroticism was considered to be one of the traits in the five factor model of personality. Neuroticism is the tendency to be insecure, nervous, and fearful (Goldberg, 1990).

Locus of control was conceived as a “generalized expectancy to perceive reinforcement either as contingent upon one’s own behaviors or as the result of forces beyond one’s control and due to chance, fate, or powerful others” (Levenson, 1981, p. 15). Several studies have related core self-evaluations to job satisfaction (e.g. Judge et al., 1998; Judge et al., 2000; Judge & Bono, 2001). Furthermore, other studies have illuminated several theoretical processes that assist in linking core self-evaluations to job satisfaction (e.g. Judge et al., 2000; Judge et al., 2005).

The Interactional Approach to Job Satisfaction

As discussed above, the widespread debate from both pure situationists and pure dispositionists raged on for many years in social psychology. However, this ongoing debate led to many interesting years of eliminating rival hypotheses and to eventual acceptance of the interactionist perspective (e.g. Rowe, 1987; Kenrick & Funder, 1988; Carson, 1989).

Organizational behavior theorists have also noted the importance of adopting the interactional perspective to explain that both dispositional and situational factors are important for explaining attitudes, cognitions, and behavior (e.g. Terborg, 1981; Schneider, 1983).

In contrast to the purely situational and dispositional approaches, the interactional perspective emphasizes the relationship between person and situation. Two underlying models that support the interactional perspective will be discussed. The first model focuses on the relationship between job attributes and situationally specific values. Researchers such as Vroom (1964); Smith, Kendall, & Hulin (1969); and Locke (1976) have developed models with emphasis placed on either the cognitive evaluation of met needs or the affective importance of job and organizational attributes as determinants of job satisfaction. Hackman and Oldham’s (1976) individual difference portion of their job characteristics model is representative of this type of interactive approach. Specifically, job satisfaction is hypothesized to vary as a result of

the ongoing interaction between an individual's level of growth need strength and job characteristics (c.f. Kulik, Oldham, & Hackman, 1987). Other empirical research that has been conducted based on this model integrates both objective job characteristics and workplace social cues. In an attempt to refute the job characteristics approach, social information processing researchers found support for the integrated perspective (c.f. Griffin, 1983; O'Reilly & Caldwell, 1979; White & Mitchell, 1979). Later on, researchers examined the efficacy of the integrative perspective and found substantial support based on mixed methods and laboratory experiments (c.f. Glick et al., 1986; Griffin, Bateman, Wayne, & Head, 1987).

The second interactional model examines the degree of fit between dispositional characteristics and the environment. The extensive literature on vocational choice, especially by Holland (1966, 1973, 1865), illustrates the importance of dispositional effects on career choice. Specifically, Holland predicts that occupational choice is a direct reflection of one's disposition. Movement between occupations is seen by Holland as an opportunity to find a career that is more congruent with one's personality. Dawis and Lofquist's (1984) Theory of Work Adjustment looks at the importance of the dynamic interaction between the person and the job as opposed to Holland's emphasis on job choice. If one's adjustment style does not improve the lack of fit with the organizational environment, then the individual will move to a new work situation to improve satisfaction. Although both of these vocational theories argue for the dominance of dispositional effects on the environment, Dawis and Lofquist's Theory of Work Adjustment is much more explanatory and dynamic in nature in comparison to the descriptive and static nature of Holland's Theory of Personality and Vocational Choice. Schneider (1987) borrowed from the literature on vocational behavior and presented his revised Person-Environment model. Specifically, his research, otherwise known as the Attraction-Selection-

Attrition Framework, presented arguments for the dominance of personality characteristics on organizational structure and climate.

Although both of these interaction models have been studied quite extensively, they differ in several important ways (c.f. Schneider, 1987). First, the first model assumes that behavior is a function of the relationship between the person and the environment. Specifically, an individual's expectations and values interact with organizational incentives and rewards systems to produce attitudes and behaviors. In contrast, the second model assumes that the environment is shaped by the people behaving within it, and in return, the environment influences these same people. Second, the first model emphasizes the importance of the situation. Specifically, the organization represents a strong environment where individual characteristics are subsumed into the larger entity and behavior is constrained by organizational rules and procedures. In contrast, the second model places emphasis on the ability of the person to select his environment which fits his/her personality. Typically, this person joins an organization that is composed of similar individuals who together heavily influence the organizational climate, procedures, and structure. Third, the first model assumes that expectations and values are situationally-specific. In contrast, the second model assumes that expectations and values are cross-situationally consistent and temporally stable. Finally, and most important, the first model illustrates unidirectional cause and effect (Terborg, 1981). In contrast, the second model illuminates reciprocal action and transaction between the person and the situation (Schneider, 1987).

Demographic Differences in Job Satisfaction

Individual differences in demographics are often seen in the job satisfaction literature (c.f. Spector, 1997). However, the magnitude of these correlates is often insignificant. Some

notable exceptions are age and organizational tenure. For example a meta-analysis of 19 studies found a mean correlation of .22 between age and job satisfaction (Brush et al. 1987). Thus, age and job satisfaction are related such that job satisfaction increases with age. However, another study found support for curvilinear effects between age and job satisfaction (Clark, Oswald, & Warr, 1996). Whatever the reason for these effects, age does appear to impact job satisfaction. In regards to organization tenure, job satisfaction is thought to increase with tenure. Based on a meta-analysis of 14 studies, Brush and his colleagues found a mean correlation of .13 between organization tenure and job satisfaction. However, in this same meta-analysis, little empirical support was found for education, ethnicity, gender, and job tenure. Although these demographic variables are important, past dispositional research has found only weak effects for these variables (c.f. Judge & Locke, 1993).

To conclude, the purpose of this chapter was to discuss three theoretical explanations for job satisfaction. In organizational behavior research, the situational approach to job satisfaction is characterized by organizational settings that define structural factors. In essence, job satisfaction is derived from the nature of the job and job conditions or the work environment. Next, the dispositional perspective suggests that individuals are predisposed to respond positively or negatively to the job context regardless of job design, job enrichment, or informational cues. The third explanation for job satisfaction is the interactional approach. The interactional approach assumes that job satisfaction is the result of both person and situational factors. Finally, demographic differences in job satisfaction were reviewed. In the next chapter, a new organizational attachment construct, called job embeddedness will be introduced.

CHAPTER 3

LITERATURE REVIEW: JOB EMBEDDEDNESS

This chapter introduces the reader to job embeddedness by defining the construct and analyzing evidence for construct validity. While examining this evidence, various forms of construct validity are presented- content validity, convergent validity, and divergent validity. The chapter concludes with a comprehensive examination of the nomological network of job embeddedness.

For almost a decade, Mitchell and his colleagues have underscored the importance of studying new directions in turnover research in order to complement years of previous research on traditional turnover models (c.f. Lee & Mitchell, 1994; Lee, Mitchell, Wise, & Fireman, 1996; Lee, Mitchell, Holtom, McDaniel, & Hill, 1999; Lee et al, 2004; Mitchell & Lee, 2001; Mitchell et al, 2001). Typically, turnover has been viewed as a function of perceived ease and desirability of movement (March & Simon, 1958). As such, traditional models of turnover have looked at either intermediate linkages between job satisfaction and turnover (e.g. Mobley, 1977; Steers & Mowday, 1981), or have reconceptualized the model to include a general withdrawal construct (e.g. Hom & Griffeth, 1991; Hom & Kinicki, 2001). Further, some models have postulated the importance of both cognitive differences in leaving and the importance of job alternatives (e.g. Hulin, 1991; Hulin, Roznowski, & Hachiya, 1985) and others have noted the contribution of organizational variables (e.g. Price, 1977; Price & Mueller, 1981). However, another model of turnover, the unfolding model of turnover, integrates concepts from previously mentioned models and claims that employees leave organizations via a variety of decision processes (e.g. Lee & Mitchell, 1994; Lee et al., 1996; Lee et al., 1999; Mitchell & Lee, 2001). Their explanation for the unfolding model of turnover appears rather simple and is quite

appealing- 1) traditional models of turnover that include ease and desirability of movement have explained very little overall variance (e.g. Griffeth, Hom, & Gaertner, 2000; Hom & Griffeth, 1995), and 2) in many situations people leave for reasons other than dissatisfaction (e.g. Lee & Mitchell, 1994; Lee et al., 1996; Lee et al., 1999). Moreover, employees may leave organizations for reasons not specified by traditional models of turnover. To this end, Mitchell and Lee (2001) introduce a new construct, named job embeddedness, in order to understand why individuals stay with their organizations.

Analyzing the Construct Validity of Job Embeddedness

Since job embeddedness is a new construct and has been reported in only three published studies, it seems most appropriate to analyze the construct validity of job embeddedness. The process of construct validation consists of 1) theory development, evaluation, and expansion and 2) the identification, construction, and refinement of indicators of the construct as it is embedded in the theoretical system (King & King, 1990). Based on several classic articles dealing with construct validation (e.g. Campbell & Fiske, 1959; Cronbach & Meehl, 1955), there are find four main steps involved in this process: 1) *definition*: specification of the domain of the construct, 2) *operationalization*: transforming the unobservable construct into identifiable behaviors, 3) *evaluation of convergent and discriminant validity*: determining the extent to which the measure correlates with other measures designed to assess similar constructs and to which the measure does not correlate with dissimilar measures, and 4) *evaluation of nomological validity*: examination of relationships between new measures and variables with which they are hypothesized to correlate based on theoretical specification. Although it has been suggested that construct validity subsumes all forms of validity including, but not limited to, content validity, criterion-related validity, convergent and discriminant validity, and factor structure validity (c.f.

Messick, 1993), the importance of all forms of validity, regardless of taxonomy, is related to inferences that can be drawn from a set of observations. From this point forward, the validity of the job-embeddedness construct will be discussed. Then, based on inferences drawn from the review of current studies on job embeddedness and on relevant theoretical mechanisms underlying the job embeddedness-job satisfaction relationship, several hypotheses will be presented.

Evaluation of Content Validity

Content validity is the degree to which the elements of a measurement tool represent the targeted construct for assessment purposes (e.g., *Standards for educational and psychological testing*, 1985; Anastasi, 1988; Messick, 1993; Nunnally & Bernstein, 1994; Suen, 1990; Walsh, 1995). Furthermore, content validity is a critical aspect in the construct validation process (Anastasi, 1988; Messick, 1975). Content validity is important as it affects the inferences that can be drawn from the data. Specifically, an invalid instrument may result in erroneous conclusions about proposed theoretical relationships because the instrument reflects other variables outside of the construct domain and overrepresents, underrepresents, or omits critical facets of the proposed construct (Haynes, Richard, & Kubany, 1995).

The content validation process is a multimethod, quantitative and qualitative process that is applicable to all components of the assessment instrument (Haynes et al., 1995). Specifically, content validation consists of carefully defining the construct domain and all facets of the construct (e.g. Nunnally & Bernstein, 1994; Suen, 1990; Walsh, 1995), examining all situational elements that may affect the assessment instrument (Murphy & Davidshofer, 1994), using expert judges to examine the assessment instrument and the scaling procedures (e.g. Guion, 1978; Hambleton & Rogers, 1991; Lawshe, 1975; Lynn, 1986; Tittle, 1982), distributing similar

proportions of items for facets of the construct (Haynes et al, 1995), reporting the results of all content validation procedures (Haynes et al., 1995), and use of other psychometric validation procedures to examine the overall validity of the assessment instrument (Haynes et al., 1995). Although some organizational assessment instruments have been subjected to these procedures, many do not reference the steps in the content validation process. Thus, it is imperative for researchers to at least provide a detailed account of the process they used to support content validity of their construct.

Defining Job Embeddedness

Job embeddedness was introduced as a new construct in turnover research in order to provide a potential explanation as to why people stay with their organization (e.g. Lee et al., 2004; Mitchell & Lee, 2001; Mitchell et al., 2001). Job embeddedness represents the totality of work and nonwork influences on the individual that result in a person becoming enmeshed in a social web of forces. As such, it consists of three main factors- links, fit, and sacrifice- that predict the extent to which one will develop strong attachments to the organization and/or to the community. Thus, job embeddedness is best thought of as a three by two matrix with six dimensions.

The first dimension, links, is based on discernable connections with the community and the organization. Community links may include the extent of relationships with close friends and family members, marital status, and home ownership. In contrast, organization links may include position tenure, organizational tenure, industry tenure, the extent of interactions with coworkers, and participation on organizational committees. The concept of organizational links was developed based on organizational research dealing with social integration (c.f. Katz & Kahn, 1978; O'Reilly, Caldwell, & Barnett, 1989). However, it is also conceptually similar to

constituency commitment (c.f. Becker, 1992; Hunt & Morgan, 1994; Reichers, 1985). Further, community links were based on previous empirical work on the importance of normative influences (c.f. Hom & Hulin, 1981; Prestholdt, Lane, & Matthews, 1987) and kinship responsibilities (c.f. Price & Mueller, 1981; Turban, Campion, & Eyring, 1992). Kinship responsibilities have their roots in the economic costs of migration (Cornay, 1972) and in familism and vertical mobility potential in the sociological migration literature (Leslie & Richardson, 1972; Miller, 1976).

The second dimension, fit, is defined as the extent to which the individual is compatible with the organization and with the community environment. Organization fit examines the extent to which one's values are congruent with organizational values; one's knowledge, skills, and capabilities match the requirements of the job; and one's relationships with coworkers are harmonious. Community fit encompasses one's feelings and perceived compatibility towards the community in which one resides. Theoretical support for organizational fit was based on Schneider's (1987) Attraction-Selection-Attrition model that has stimulated qualitative and quantitative reviews on person-organization fit and person-job fit (c.f. Cable & Judge, 1996; Cable & Parsons, 2001; Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005; O'Reilly, Chatman, & Caldwell, 1991). Community fit has not been extensively studied in turnover research, but it appears conceptually and theoretically similar to arguments made in relation to global community satisfaction (c.f. Sirgy & Cornwell, 2001).

The third dimension, sacrifice, examines the perceived psychological benefits associated with the organization and community. As such, sacrifice looks at what one would give up if they left the organization and/or the community. Organization-related sacrifice includes perceived job-related benefits such as healthcare coverage, retirement benefits, and compensation

packages. In contrast, community-related sacrifice examines the perceived benefits of community safety and external stakeholder respect. Sacrifice was developed based on implications of the importance of employee-related investments to reduce turnover (c.f. Gupta & Jenkins, 1980; Shaw, Delery, Jenkins, & Gupta, 1998). As previously discussed, job embeddedness is a multidimensional aggregate construct such that greater attachments results in more embeddedness and fewer attachments results in less embeddedness.

Field theory (Lewin, 1951) and research on field independent-field dependent cognitive styles (Witkin, Dyk, Faterson, Goodenough, & Karp, 1962) helped to theoretically influence the development of job embeddedness. Differentiation in cognitive styles is attributable to the surrounding environment which influences a person's perceptions of its components. Field dependent individuals focus on the whole rather than the parts and use their surrounding environment to process information. In contrast, field independent individuals focus on the parts rather than the whole and have the ability to disembed specified information. Lewin also discusses the importance of the whole system in terms of the life space. The life space "represents psychological reality- it depicts the totality of facts that determine behavior at that moment in time" (Weiner, 1992, p. 115). Specifically, Lewin believed that one's behavior was a function of both person and the environment. Based on these theories, Mitchell and Lee (2001) stressed that an individual may be loosely or strongly attached to various factors within the organization and the community. Further, an individual who is deeply embedded will have a number of strong attachments while an individual who is weakly embedded will have far fewer attachments.

Generation of Item Pool and Use of Expert Judges

The initial generation of items for job embeddedness was difficult to ascertain because the discussion of the procedures was very limited (c.f. Mitchell & Lee, 2001; Mitchell et al.,

2001). However, by inference it appears they developed and refined their assessment instrument based on empirical results and corresponding inferences drawn from conceptual relationships specified in the unfolding model of voluntary turnover. This model was developed based on years of intellectual pontification, existing research on traditional models of turnover, existing organizational literature that examined on-the-job and off-the-job factors that contribute to staying, research on image theory, and numerous interviews with people who left their jobs (Mitchell & Lee, 2001).

Apparently, this information coupled with the modification of traditional attitudinal items and interviews from grocery store and hospital employees resulted in the initial item pool for job embeddedness. The item pool consisted of 42 items across 6 dimensions. The number of items per dimension range from three items to ten items. In addition, questions had Likert-type, open-ended, and yes-no formats.

Concerning the use of judges to examine the instrument, it appears that only the previously mentioned researchers acted as judges of the items. To overcome this weakness, an exploratory factor analysis was conducted on the items across three samples, but the researchers only noted that the factor structure was similar across samples. Reliability was assessed using Cronbach's alpha across each of the six dimensions with ranges of .61 to .86. Some of the alpha reliabilities were less than acceptable (.70 for exploratory measures: Nunnally, 1978).

Proportionality of Items

As discussed previously, the number of items per dimension ranged quite significantly. For some reason, more items were generated for organizational-related sacrifice than for other dimensions. Further, the authors did not explain the differences in proportionality of items per dimension.

Results of Content Validation

Unfortunately, the results of the content validation procedures are lacking in many areas for the job embeddedness construct. This may reflect the newness of the construct. The researchers note that job embeddedness is in the early stages of development and more conceptual refinements may be required (Lee et al., 2004; Mitchell & Lee, 2001; Mitchell et al., 2001).

To provide some credit, Mitchell and his colleagues (2001) noted that some conceptual similarity was possible between several factors of embeddedness and various organizational constructs (See Table 17). However, they cautioned that their construct was less affect-driven as compared to other constructs traditionally used in the turnover literature. In addition, they noted that many of these constructs only deal with on-the-job factors and neglect off-the-job factors. Contrary to their argument that job embeddedness was less affect driven, Mitchell et al. (2001) and Lee et al. (2004) found that on-the-job embeddedness shared more variance with job attitudes as compared to off-the-embeddedness. Based on these arguments, the content validity of job embeddedness remains in question. Not only was the development of the measure lacking in several areas, but the measure also appears to be confounded with existing organizational measures. Since the construct validation process requires much more than just analyzing one form of validity (c.f. Landy, 1986), I will also examine the discriminant validity of the construct.

Table 17.	
Organizational Constructs Similar to Job Embeddedness	
Factor	
Organizational	
Sacrifice	<ul style="list-style-type: none"> • Pay satisfaction (Heneman & Schwab, 1985) • Continuance commitment (Allen & Myer, 1990) • Cost of quitting (Mobley, 1977, 1982) • Job investments (Farrell & Rusbult, 1981; Rusbult & Farrell, 1983)
Fit	<ul style="list-style-type: none"> • Organizational identity (Mael & Ashforth, 1992; Whetten & Godfrey, 1998) • Person-organization fit (Schneider, 1987; Chatman, 1991; Kristof, 1996) • Person-job fit (Saks & Ashforth, 1997; Werbel & Gilliland, 1999)
Links	<ul style="list-style-type: none"> • Constituency commitment (Reichers, 1985; Becker, 1992; Hunt & Morgan, 1994)
Community	
Sacrifice	
Fit	
Links	<ul style="list-style-type: none"> • Kinship responsibilities (Price & Mueller, 1981; Turban, Campion, & Eyring, 1992) • Normative influences (Ajzen & Fishbein, 1977; Hom & Hulin, 1981)

Evaluation of Convergent and Divergent Validity

Convergent validity is the principle that theoretically similar constructs and their measures should be highly correlated with each other. Since job embeddedness was purported to be a distinct construct from job satisfaction, we should maintain operational consistency and investigate the relationship as specified until negative results confirm our theory-laden suspicions⁸. Mitchell et al. (2001) found that job embeddedness was positively and significantly correlated with job satisfaction (grocery store employees: $n = 232$, $r = .43$, $p < .01$; hospital employees: $n = 232$, $r = .57$, $p < .01$). Also, job satisfaction had positive and significant relationships with on-the-job embeddedness (grocery store employees: $n = 232$, $r = .60$, $p < .01$; hospital employees: $n = 232$, $r = .65$, $p < .01$) and with off-the-job embeddedness (grocery store employees: $n = 232$, $r = .17$, $p < .01$; hospital employees: $n = 232$, $r = .30$, $p < .01$). Based on data from employees in a large international financial institution, Lee et al. (2004) also found

significant relationships between on-the-job embeddedness and job satisfaction ($n \geq 809$, $r = .73$, $p < .01$) and off-the-job embeddedness and job satisfaction ($n \geq 809$, $r = .23$, $p < .01$). The cross-construct correlations between on-the-job embeddedness and job satisfaction raises some intriguing questions about whether or not on-the-job embeddedness is truly a different construct from job satisfaction. Surprisingly, no research to date has examined either the conceptual or theoretical nature of this relationship.

At a conceptual level, the cross-construct relationship does make sense because components of the on-the-job embeddedness include aspects of both intrinsic and extrinsic satisfaction. For example, organizational-related sacrifice includes items pertaining to benefits, responsibility, and salary. In addition, organizational fit includes items pertaining to satisfaction with coworkers and perceived responsibility. Typically, these items are included in facet measures of job satisfaction (e.g. JDS: Hackman & Oldham, 1974; JSS: Spector, 1985b; MSQ: Weiss, Dawis, London, & Lofquist, 1967). In addition, the dimension of organizational fit includes items that are similar to items from perceived measures of fit (e.g. Abdel-Halim, 1981; Cable & Judge, 1996). In a recent meta-analysis conducted by Kristof-Brown et al. (2005), both Person-Job (P-J) and Person-Organization (P-O) fit have been found to be strongly related to job satisfaction (P-J fit: $k = 47$, $N = 12,960$, $\rho = .56$; P-O fit: $k = 65$, $N = 42,922$, $\rho = .44$). Based on these observations, there is additional empirical and theoretical support for the observed relationship between on-the-job embeddedness and job satisfaction.

Recall that discriminant validity is the principle that theoretically different constructs should not be highly correlated with each other. In regards to off-the-job embeddedness, it is reasonable to assume that the relationship with job satisfaction is weaker because measures of job satisfaction do not directly account for off-the-job satisfaction. Moreover, this weaker, but

still significant, relationship may be attributable to the well-established empirical relationship between life and job satisfaction (c.f. Judge & Watanabe, 1993; Tait et al., 1989). Thus, if components of off-the-job embeddedness include some conceptual overlap with life satisfaction components, then we would expect to see this observed relationship.

To further illustrate the extent of relationships between job embeddedness and job satisfaction, Table 17 provides correlations of on-the-job and off-the-job embeddedness with overall job satisfaction and facets of job satisfaction. Specifically, twenty-three of thirty correlations are positive and significant between various measures of job embeddedness and overall and facet job satisfaction. Based on these correlations, it is reasonable to assume that some overlap is occurring between the current measure of job embeddedness and existing measures of job satisfaction. Therefore, the current operationalization of on-the-job embeddedness exhibits convergent validity with job satisfaction, and off-the-job embeddedness shows signs of divergent validity with job satisfaction.

Table 18.

Correlations of Aggregated Job Embeddedness, Disaggregated Job Embeddedness, and Job Satisfaction with Voluntary Turnover and Facet Satisfaction

	Job Satisfaction	Job Embeddedness	On-the-job embeddedness	Off-the-job embeddedness
Job satisfaction	-	.43	.60	.17
Job satisfaction, pay	.64	.38	.42	.22
Job satisfaction, promotion	.67	.27	.46	.02
Job satisfaction, supervision	.67	.22	.32	.07
Job satisfaction, fringe benefits	.50	.32	.37	.18
Job satisfaction, contingent rewards	.81	.32	.47	.11
Job satisfaction, operating conditions	.56	-.03	.17	-.10
Job satisfaction, coworkers	.63	.43	.40	.27
Job satisfaction, nature of work	.64	.52	.55	.27
Job satisfaction, communication	.74	.12	.34	-.05

n ranges from 219 to 232 for all other variables, all correlations are $p < .01$ except for those correlations that are highlighted

Evaluating the Nomological Network

Mitchell, Holtom, Lee, Sablinski, & Erez (2001)

Since job embeddedness is a new construct and does exhibit potential to become a more refined construct through the appropriate construct validation techniques, I will discuss the current approaches to examining the nomological network of job embeddedness. First, the majority of turnover theory has included desirability of movement and ease of movement as

main contributors in the decision of staying or leaving (e.g. Hom & Griffeth, 1995; Mobley, 1977; Mowday, Porter, & Steers, 1982; Price & Mueller, 1986). Desirability of movement has been examined from the perspective of job satisfaction and organizational commitment; whereas, ease of movement has been analyzed from the standpoint of perceived job alternatives. However, more recent empirical work has expanded this framework to include job embeddedness. As discussed previously, job embeddedness is purported to be distinct, yet related, to traditional attitudinal predictors. In fact, aggregated job embeddedness was shown to contribute to turnover after accounting for job satisfaction, organizational commitment, job alternatives, job search, and gender (Mitchell et al., 2001). Thus, those individuals who are embedded appear to be more likely to stay with their job. In addition, embeddedness appears to add something different to the repertoire of constructs that predict voluntary turnover. Thus, on-the-job embeddedness is highly related to job satisfaction, but it appears to be conceptually distinct. Although I noted the similarities between dimensions underlying on-the-job embeddedness and existing attitudinal constructs, there are far fewer constructs that are similar to off-the-job embeddedness. So, off-the-job embeddedness and job satisfaction are moderately related, yet distinct.

Based on our previous review of the literature in combination with the limitations of the statistical procedures, there are several weaknesses to the Mitchell et al. (2001) study. First, the strength of the relationship between job embeddedness and turnover appears dependent on job satisfaction. As noted, job embeddedness is highly correlated with job satisfaction. Yet, it adds some additional variance in the prediction of turnover beyond that of job satisfaction. In addition, when a facet measure of job satisfaction was used with the sample of grocery store employees, the significance level of both constructs was reduced. When an overall measure of job satisfaction was used with hospital employees, the significance level of both constructs increased

in the equation including gender, organizational commitment, and job satisfaction. Further, the standard errors of both job embeddedness and job satisfaction were moderately high which appears to be an indication of collinearity. Second, the derived and empirical concepts need additional work as noted by my review and Mitchell and colleagues (2001) suggestions. Third, this study did not examine the exclusive contribution of on-the-job embeddedness and off-the-job embeddedness to turnover. Based on differential levels of correlations with job satisfaction, job embeddedness should be disaggregated into these two distinct concepts. Fourth, the nomological network is very limited at this point. So, additional antecedents and outcomes should be the subject of future investigations.

Lee, Mitchell, Sablinski, Burton, & Holt (2004)

More recent research by Lee et al. (2004) has focused on disaggregating job embeddedness in order to demonstrate how on-the-job embeddedness and off-the-job embeddedness differentially predict the decision to participate and the decision to perform. Specifically, the decision to participate includes volitional absences and voluntary turnover, and the decision to perform encompasses organizational citizenship and job performance. First, based on data from employees in an international financial firm, it was shown that off-the-job embeddedness improved the prediction of voluntary turnover and absences when job satisfaction and organizational commitment were controlled. Further, on-the-job embeddedness did not contribute significant variance to voluntary turnover. In essence, off-the-job embeddedness is an important factor that contributes to thoughts about what would happen if the person was absent or left their job. Also, the lack of relationship between on-the-job embeddedness and voluntary turnover is most likely attributable to shared variance with job attitudes. Second, on-the-job embeddedness improved the prediction of job performance and organizational citizenship when

job satisfaction and organizational commitment were controlled. Further, the effect of off-the-job embeddedness was reduced to near zero. Thus, those individuals who fit their job and organization, have more normative influences, and who value organizational benefits will be more motivated to perform and to contribute to the organization in the form of discretionary behaviors. Third, on-the-job embeddedness moderated the relationships between a) volitional absences and turnover and b) job performance and turnover. Hence, those individuals who are more embedded on their job tend to be absent less frequently, have higher levels of job performance, and are less likely to voluntarily leave the organization. Fourth, both forms of embeddedness moderated the negative relationship between organizational citizenship and voluntary turnover such that individuals who are more embedded in their organization and their community will be more likely to contribute discretionary behaviors to the organization and less likely to leave.

A critical limitation of this study is that the empirical concepts failed to emerge as hypothesized. An exploratory factor analysis revealed a three-factor solution consisting of a) Factor 1: organizational commitment items, overall job satisfaction items, organizational fit items, and organizational sacrifice items, b) Factor 2: community fit and community sacrifice items, and c) Factor 3: organizational and community links items. As suspected and discussed previously, empirical items of organizational fit and organizational sacrifice have a great deal of overlap with job satisfaction and organizational commitment. The second factor makes sense because it includes similar empirical items and could be labeled off-the-job embeddedness. However, the third factor was somewhat unexpected and is most appropriately labeled as links. If the items had been more carefully developed, the number of expected factors would have been equal to the number of dimensions being developed (c.f. Hinkin, 1998).

Since current research on job embeddedness is rather limited, it is appropriate to expand the nomological network. This expansion will include additional theoretical mechanisms to explain hypothesized relationships between core self-evaluations, organizational embeddedness, community embeddedness, and job satisfaction. In addition, several aspects of the measurement model of disaggregated job embeddedness will be investigated.

CHAPTER 4

CAUSAL MODEL OF CORE SELF EVALUATIONS, JOB EMBEDDEDNESS, AND JOB SATISFACTION

To date, there has been no model that has examined the influence of dispositions on job embeddedness, nor has job embeddedness been considered an antecedent to job satisfaction. This is quite surprising given that both dispositions and situations influence one's level of job satisfaction and the practical implications associated with it. Moreover, there is ample evidence to support these relationships. Therefore, the purpose of this chapter is to propose a model of job embeddedness that includes elements from Judge and colleagues' work on core self-evaluations (Judge et al., 1998; Judge et al., 2000; Judge et al., 2002; Judge et al., 2003), Mitchell and colleagues' work on job embeddedness (Lee et al., 2004; Mitchell et al., 2001), and job satisfaction (See Figure 1). The most important causal links included in this model are: 1) core self-evaluations to job satisfaction, 2) core self-evaluations to organizational and community embeddedness and 3) organizational and community embeddedness to job satisfaction. These relationships will be discussed in detail below.

Structural Model

Core Self-Evaluations and Job Satisfaction

A direct relationship between core self-evaluations and job satisfaction was proposed by Judge et al. (1997) as a direct effects model. As discussed previously, this model comes about through emotional generalization. Emotional generalization is a process where an individual's feelings spill over into one's job. It has been shown that individuals with more positive self-regard tend to experience higher levels of job satisfaction (Best et al., 2005; Judge et al. 1998; Judge et al., 2000; Judge & Bono, 2001; Judge et al., 2002; Judge et al., 2003; Judge et al.,

2005). Judge et al. (1998) found core self-evaluations had an average corrected correlation with job satisfaction of .30 for self-reports and .22 for significant other reports. Judge et al. (2000) found that core self-evaluations correlated .41 ($p < .01$) with job satisfaction based on self reports and a correlation of .19 ($p < .05$) for significant other reports. Based on a meta-analysis of 169 studies ($N = 59,871$) of the four core traits and job satisfaction, Judge and Bono (2001) found an overall corrected correlation of .37. Thus, it appears core self-evaluations will have a positive effect on job satisfaction.

Hypothesis 1 (H-1): Core self-evaluations will be positively related to job satisfaction.

Core Self-Evaluations, Organizational Embeddedness, and Community Embeddedness

Interactional Studies. Although I am aware of no previous research that has examined a link between core self-evaluations, organizational embeddedness, and community embeddedness, it is plausible that these constructs are related. Specifically, the choice model of interactionism may explain the dynamics underlying these relationships. First, the choice model of interactionism predicts that individuals chose to spend their time in situations that are consistent with their personality (Mischel, 1977). Based on this model, individuals will not place themselves in situations that are incongruent with their personality. Snyder (1981) further advocates this position by stating: “Quite possibly, one’s choice of settings in which to live one’s life may reflect features of one’s personality” (p. 310). At the same time, the environment also exerts pressure on the person and also affects one’s choice of situations. For example, an individual chooses to work for an organization that only promotes employees who work long hours and complete projects before due dates. When the employee arrives to the organization, he/she must continually choose situations: working long hours and completing projects early or working the minimum amount of hours and barely completing projects. Regardless of the

decision, the main point is that the relationship between the environment and the person is ongoing. The choice model of interactionism is also congruent with Lewin's (1951) field theory. Specifically, when an individual works in a particular organization or lives in a specific community, this individual constantly makes decisions based on her personality and the surrounding environment. To Lewin, this surrounding environment, the life space, dictates one's behavior where $B = f(P, E)$. Several studies have found support for the choice model of interactionism. Diener, Larsen, and Emmons (1984) found that individuals select situations that possess attributes that are similar to one's disposition. For example, extroverts chose to participate more frequently in recreational situations and less frequently in work situations. In addition, organizational researchers have found that individuals self-select themselves into organizations because they perceive organizational values as being congruent with their own values and needs (e.g. Cable & Judge, 1994; Judge & Bretz, 1992; Turban & Keon, 1993). To the extent the choice of situations are compatible with the individual's personality, the individual should become more embedded in both the organizational and the community.

The Similarity-Attraction Effect. Another explanation for this relationship is the similarity-attraction effect. The similarity-attraction effect has been one of the most studied paradigms in social psychology (Byrne, 1997), and it may contribute to our understanding of the relationship between core self-evaluations, organizational embeddedness, and community embeddedness. Across a wide variety of situations and diverse populations, similarity to a target has been associated with interpersonal attraction. The similarity effect has been investigated with several models that include the reinforcement affect model of attraction (Byrne & Clore, 1970; Clore, 1966; Clore & Byrne, 1971), the information integration model (Anderson, 1971; Kaplan & Anderson, 1973), and the cognitive evaluation model (Montoya & Horton, 2004).

First, the reinforcement-affect model of attraction has an interesting history that can be traced back to Byrne's early work that examined the relationship between attitude similarity and attraction (Byrne, 1961; Byrne, 1962; Byrne & Nelson, 1965). Byrne's model is based on classical conditioning principles in which unconditioned stimuli act as reinforcers in order to elicit an implicit affective response. The implicit affective response acts as mediator in the relationship between the unconditioned stimuli and the evaluative response. More specifically, the model stipulates that attraction towards X is a function of the relative number of positive and negative reinforcements associated with X (Byrne & Clore, 1970; Clore, 1966; Clore & Byrne, 1971). Similarity acts as positive reinforcement because it "...supports the validity of one's beliefs and confirms the social worth of one's lifestyle and decisions" (Kiesler, 1978, p. 233). In comparison, dissimilarity acts as negative reinforcement because it elicits unpleasant feelings and uncertainty with one's self. Simply put, similar others make us feel good and dissimilar others make us feel bad. Attraction to similar others has been shown to be robust for information with attitudes and opinions, demographic characteristics, personality traits, and physical attractiveness, and the effect has been seen in schoolchildren, undergraduates, and married couples (c.f. Byrne, 1971). There are some instances where the similarity effect is lessened. For example, the similarity effect is weaker for personality traits than for attitudes, peripheral attitudes as compared to fundamental attitudes, and in field studies rather than laboratory studies (c.f. Montoya & Horton, 2004). Specifically, negative personality traits weaken interpersonal attraction (e.g. Ajzen, 1974; Novak & Lerner, 1968).

Second, in an attempt to overcome these weaknesses, the information integration model (Anderson, 1971; Kaplan & Anderson, 1973) contends that attraction is based on the accumulation and meaning of evaluative information about the target's attributes. In this case,

this model asserts that individuals hold beliefs about attributes such as attitudes and personality that they believe are good. In return, attributes of the target act as informational stimuli; and the stimuli are compiled to form an overall judgment of the target. Hence, this model emphasizes the importance of the conscious awareness of information and places less emphasis on the contribution of reinforcing stimuli. Moreover, the underlying difference between these models is based on Tolman's cognitive view of learning versus Hull's mechanistic view of learning (Anderson, 1971). In support of the information integration model, several researchers have found that attraction was a function of the affective value of information supplied in the form of perceived desirability of personality traits rather than the reinforcement value of similarity (e.g. Tesser, 1969; Stalling, 1970; Ajzen, 1974). For example, if we are told that a person has similar attitudes to our own, we like that person because of our expectations about his personality, not because of the unconditioned reinforcing stimuli (Kaplan & Anderson, 1973). Moreover, if an individual possesses negative traits, negative trait similarity will not lead to attraction in this model because the valence of information is negative. Although the information integration model further illuminates why negative trait dissimilarity does not necessarily lead to attraction, it neglects an intermediate evaluative step: cognitive evaluation of the target.

Third, the cognitive evaluation model (Montoya & Horton, 2004) extends the information integration model by including a cognitive evaluation step and modifies the reinforcement affect model by including the information and cognitive evaluation steps before interpersonal attraction. The importance of this model is that it encompasses the tripartite model of attitudes and includes affective, behavioral, and cognitive components. In addition, it overcomes the previously discussed weakness of the other models that explain similarity effects. Although the

cognitive evaluation model is a new similarity model, research has provided initial support for the model (c.f. Montoya & Horton, 2004).

Based on the integration of these models, we can better understand the processes that link core self-evaluations to organizational and community. For example, an individual with more positive core self-evaluations is confronted with choosing between an organization or community that shares similar or dissimilar beliefs and values. This individual will be more likely to choose the organization and community that shares similarity of beliefs and values because 1) similar attitudes are reinforcing, 2) these attitudes confirm the valence of positive information, and 3) this positive information leads to the expectancy that organizational and community members will share common beliefs and values and possess similar personality traits. It should also be noted that those individuals who have low core self-evaluations will not be attracted to organizations and communities even if these entities somehow shared these negative, similar attitudes. Specifically, similarity on negative attributes would result in negative information about the target, cognitive evaluation would be poor, and attraction would not result.

Although it was not a specific aim of Mitchell and colleagues' (2001) study, it was noted that organizational and community embeddedness had differential relationships with several variables. Further, Lee et al. (2004) found further empirical support for disaggregating job embeddedness. Based on both of these studies and previous theoretical explanations, we would expect that core self-evaluations would be positively related to both organizational and community embeddedness.

Hypothesis 2a (H-2a): Core self-evaluations will be positively related to organizational embeddedness.

Hypothesis 2b (H-2b): Core self-evaluations will be positively related to community embeddedness.

Organizational Embeddedness, Community Embeddedness, and Job Satisfaction

Since empirical research is limited to a few studies on organizational and community embeddedness, it is important to approach these relationships from a broader conceptualization of job embeddedness and then narrow focus to the disaggregated constructs. Job embeddedness was introduced as an alternative to traditional attitudinal constructs, so the theoretical relationship between the job embeddedness and job satisfaction has been neglected. There are several explanations as to why this relationship has been ignored (c.f. Mitchell & Lee, 2001). First, the creators of job embeddedness argue that it appears to be associated with staying rather than leaving. Second, they suggest that job embeddedness is an accumulation of organizational and community forces that keep the individual on the job. Third, they argue that job embeddedness is a non-affective measure. Although these points are well-taken, there are several counterpoints as to why the relationship between job embeddedness and job satisfaction should not be ignored. For example, there may be some validity into examining differential predictors of staying or leaving, but the current operationalization of turnover is still reserved to the traditional dichotomous nature of the variable. Many researchers use this operationalization to indicate one continuum where staying is at one end and leaving at the other. Thus, the only time differential predictors of staying versus leaving would matter is in the question of intent to stay or under the guise of staying cognitions rather than withdrawal cognitions, in essence staying and leaving would need to be two different constructs. Even Mitchell and his colleagues (2001, 2004) used turnover, not staying, as their criterion variable. Furthermore, job satisfaction has been examined as a proximal precursor as to why individuals stay, or leave, their job (e.g. Cotton & Tuttle,

1986; Griffeth et al., 2000; Steel & Ovalle, 1984; Tett & Meyer, 1993). Next, as previously discussed, it is important that job embeddedness is disaggregated into organizational and community embeddedness. When job embeddedness is disaggregated, it may add something unique over traditional attitudinal measures. Finally, Mitchell et al. (2001) contend that the content of most job satisfaction measures is affective in nature, and job embeddedness is different from these measures as it captures both affective and cognitive domains. However, no pure affective or cognitive measure of job satisfaction exists. In fact, the majority of job satisfaction measures are a combination of both affective and cognitive components (Weiss, 2002). Thus, their argument is weakened based on empirical and conceptual arguments. By debunking some of these myths, the next step is to highlight several theoretical mechanisms connecting organizational and community embeddedness to job satisfaction.

Since no research has examined the directionality of this relationship, I would argue that organizational and community embeddedness leads to job satisfaction. Recalling information from interactional psychology lends some support to the directionality of the relationship. Specifically, congruence between personality and situational characteristics should result in more positive affect (Diener et al., 1984; Pervin, 1968). Referring back to the Diener and colleagues' (1984) study, they also found that individuals experienced more positive affect when participating in situations that were congruent with their personality. Organizational researchers have also found that similarity between organizational values, job demands, job characteristics, and employees' needs and values results in positive and significant levels of job satisfaction (Kristof-Brown et al., 2005). In our case, those individuals with more positive core self-evaluations will perceive those normative influences, values, and psychological benefits as being congruent with their personality and in turn should be more satisfied with their jobs.

A second mechanism that explains the relationship between organizational and community embeddedness and job satisfaction is the similarity-attraction effect. When an individual becomes more embedded in the organization and the community, we would expect more positive cognitive evaluations of these entities. From information gathered and formed into cognitive evaluations, the individual will become more attracted to their organization and community. Although attraction is commonly seen as an attitude towards the target, attraction is sometimes viewed as an affective evaluation towards the target (Montoya & Horton, 2004). There is also a direct mechanism between perceived similarity of attitudes and attraction. Based on the following proposition “any stimulus that has reinforcing properties can determine evaluative responses toward other stimuli through association with them” (Byrne, 1971, p. 280), we can extrapolate this model to the disaggregated job embeddedness-job satisfaction relationship. Initially, our unconditioned stimuli are the factors that act as indicators of job embeddedness. Over time, these factors become conditioned stimuli and the individual becomes more stuck in the web of embeddedness. In our case, it is this overall level of embeddedness that acts as the conditioned stimulus. In turn, the evaluative response is job satisfaction. Based on the underlying mechanisms in the similarity effect, we would expect those individuals who are more embedded to experience higher levels of job satisfaction. Based on our previous discussion, we have also found that disaggregated measures of job embeddedness are significantly and positively correlated with job satisfaction and that previous organizational literature lends support to the results of these findings (Mitchell et al., 2001; Lee et al., 2004).

Hypothesis 3a (H-3a): Organizational embeddedness will be positively related to job satisfaction.

Hypothesis 3b (H-3b): Community embeddedness will be positively related to job satisfaction.

Core Self-Evaluations, Organizational Embeddedness, Community Embeddedness, and Job Satisfaction

I propose that organizational and community embeddedness acts as important mediating mechanisms in the relationship between core self-evaluations influence job satisfaction. First, choice of situation is an important process that may explain individual differences in emotional response (c.f. Judge et al., 1997; Judge & Larsen, 2001). By applying this mechanism to job satisfaction, individuals have the freedom to choose situations that fit their personalities. If the choice results in a good match between the person and the situation, then job satisfaction is likely to result (Diener et al., 1984).

Although early studies of the core self-evaluation model included job characteristics as the sole mediating variable between core self-evaluations and job satisfaction (Judge et al., 1998; Judge et al., 2000), more recent research has examined several psychological processes that underlie this relationship. For example, Erez and Judge (2001) used goal setting theory to explain several self-regulatory mechanisms that lead to higher levels of job performance. In addition, Best and his colleagues (2005) used conservation-of-resources (COR) theory to demonstrate how organizational constraints and job burnout lead to job dissatisfaction. Finally, Judge et al. (2005) used self-determination theory to explain how individuals select goals that are compatible with their disposition. Although Judge et al. (2005) made great strides in investigating evocation processes that underlie individual differences in emotional responses (c.f. Judge & Larsen, 2001), researchers have largely ignored selective processes that exhibit mediating effects. To this end, it is possible to explore these underlying processes via similarity effects that are captured under the attraction paradigm (c.f. Byrne, 1997). In particular, similarity effects, as discussed in Byrne and Clore's (1967) Reinforcement-Affect Model, Anderson's (1967) Information Integration Model of Attraction, and Montoya and Horton's (2004) Cognitive Evaluation Model

of Attraction, play an integral role in understanding additional psychological processes that lead to individual differences in emotional responses. Furthermore, the fit model of interactionism is also an important explanatory mechanism. This model posits that when there is fit between persons and situations higher levels of affect should result (c.f. Diener et al., 1984). Thus, organizational and community embeddedness are important mediating mechanisms in the relationship between core self-evaluations and job satisfaction. Two single mediating models are proposed followed by a multiple mediating model that includes both organizational and community embeddedness (See Figures 1 and 2).

Hypothesis 4a (H-4a): Organizational embeddedness will partly mediate the effect of core self-evaluations on job satisfaction such that part of the positive influence of core self-evaluations on job satisfaction will be due to stronger organizational embeddedness.

Hypothesis 4b (H-4b): Community embeddedness will partly mediate the effect of core self-evaluations on job satisfaction such that part of the positive influence of core self-evaluations on job satisfaction will be due to stronger community embeddedness.

Hypothesis 4-c (H-4c): Both on the organizational and community embeddedness will partly mediate the effect of core self-evaluations on job satisfaction such that part of the positive influence of core self-evaluations on job satisfaction will be due to stronger organizational and community embeddedness.

Having presented the hypotheses, the next step involves the introduction and explanation of the measurement models for each construct. Measurement models define the relationships

between the observed and latent variables. The theoretical basis for the measurement model depends upon prior conceptualizations of each latent construct.

Measurement Model

An overview of the measurement model used in this study is provided in Figure 3. The overall measurement model consists of core self-evaluations, organizational embeddedness, community embeddedness, and job satisfaction as latent constructs. The purpose of this measurement model is to depict the links between the scores on the measuring instrument and the hypothesized construct they are intended to represent (c.f. Byrne, 1998). This model is also referred to as the confirmatory factor analysis model (CFA Model). Since the measurement model consists of multiple latent constructs that are empirically identified with different survey instruments, each latent construct will be briefly reviewed in this chapter followed by a more comprehensive explanation in Chapter 5.

The structure of core self-evaluations consists of three alternative conceptualizations. Core self-evaluations has been typically measured with self-esteem, generalized self-efficacy, locus of control, and neuroticism (CSELC: Core self-evaluations with locus of control; Judge et al., 1998). However, previous research has found that locus of control has the smallest correlations with the other core traits and the lowest factor loadings with the latent construct (c.f. Judge & Bono, 2001). Thus, Judge and colleagues (2003) suggested that a work based measure of locus of control may show higher correlations with the other core traits. Therefore, core self-evaluations may also be measured with self-esteem, generalized self-efficacy, work locus of control, and neuroticism (CSEWLC: Core self-evaluations with work locus of control). Since both of the previously mentioned operationalizations consist of multiple constructs and corresponding measures, it makes sense that a more parsimonious measure was needed. Thus,

core self-evaluations may also be measured with the Core Self-Evaluations Scale (CSES; Judge et al., 2003).

Although job embeddedness is a newer construct, researchers have often disaggregated it into two latent constructs- organizational and community embeddedness (c.f. Lee et al. 2004; Mitchell et al., 2001). Organizational embeddedness is measured with organizational fit, sacrifice, and links. In contrast, community embeddedness is measured with community fit, links, and sacrifice. For the purposes of this study, it is important to note that these models are hypothesized to consist of reflective measures. This stands in contrast to assertions by Mitchell and his colleagues (2001) who argued these measures are actually formative indicators of the constructs.

For measuring job satisfaction, organizational researchers typically use overall or facet measures of job satisfaction (Spector, 1997). Overall measures of job satisfaction look at one's global level of job satisfaction. In comparison, facet measures of satisfaction examine individual satisfaction with various facets of the job. Brayfield & Rothe's (1951) global measure of job satisfaction was used to examine overall job satisfaction. In contrast, facet job satisfaction was represented by nine facets- pay, promotion, supervision, benefits, rewards, operating procedures, coworkers, nature of work, and communication. Each facet is conceptually and empirically distinct and may be combined together to form an overall measure of job satisfaction (Spector, 1997). For the purposes of the measurement model, the nine facets from the Job Satisfaction Survey (JSS; Spector, 1997) and an overall measure of job satisfaction (OJS; Brayfield and Rothe, 1951) will be used as separate indicators of the latent construct that represents overall job satisfaction.

Before concluding this chapter, a heuristic model will be presented. The purpose of this model is to provide a broad overview of the hypothesized structural models. One of the most important aspects of the heuristic model is centered on the use of multiple measures for the latent constructs. In essence, it is possible to obtain a better representation of these latent constructs by using a random selection of valid indicators (c.f. Nunnally & Bernstein, 1992). The final aspect of this model is focused on the integration of both single mediating models into a multiple mediating model.

Heuristic Model

A heuristic model was used in order to explain the hypothesized structural models (See Figure 4). This model indicates that three structural models will be examined. These models will include a single mediating model with organizational embeddedness as the mediator, another single mediating model with community embeddedness as the mediator, and a multiple mediating model in which both organizational and community embeddedness act as mediators.

To conclude, the purpose of this chapter was to propose a model of job embeddedness that included core self-evaluations as the predictor variable, organizational and community embeddedness as the mediating variables, and job satisfaction as the outcome variable. Each of these relationships was discussed in great detail followed by hypotheses for each relationship. Then, hypothesized measurement models were presented for each construct in the hypothesized structural model. In the final portion of the chapter, a heuristic model was introduced to the reader.

Figure 1

Hypothesized Single Mediating Models

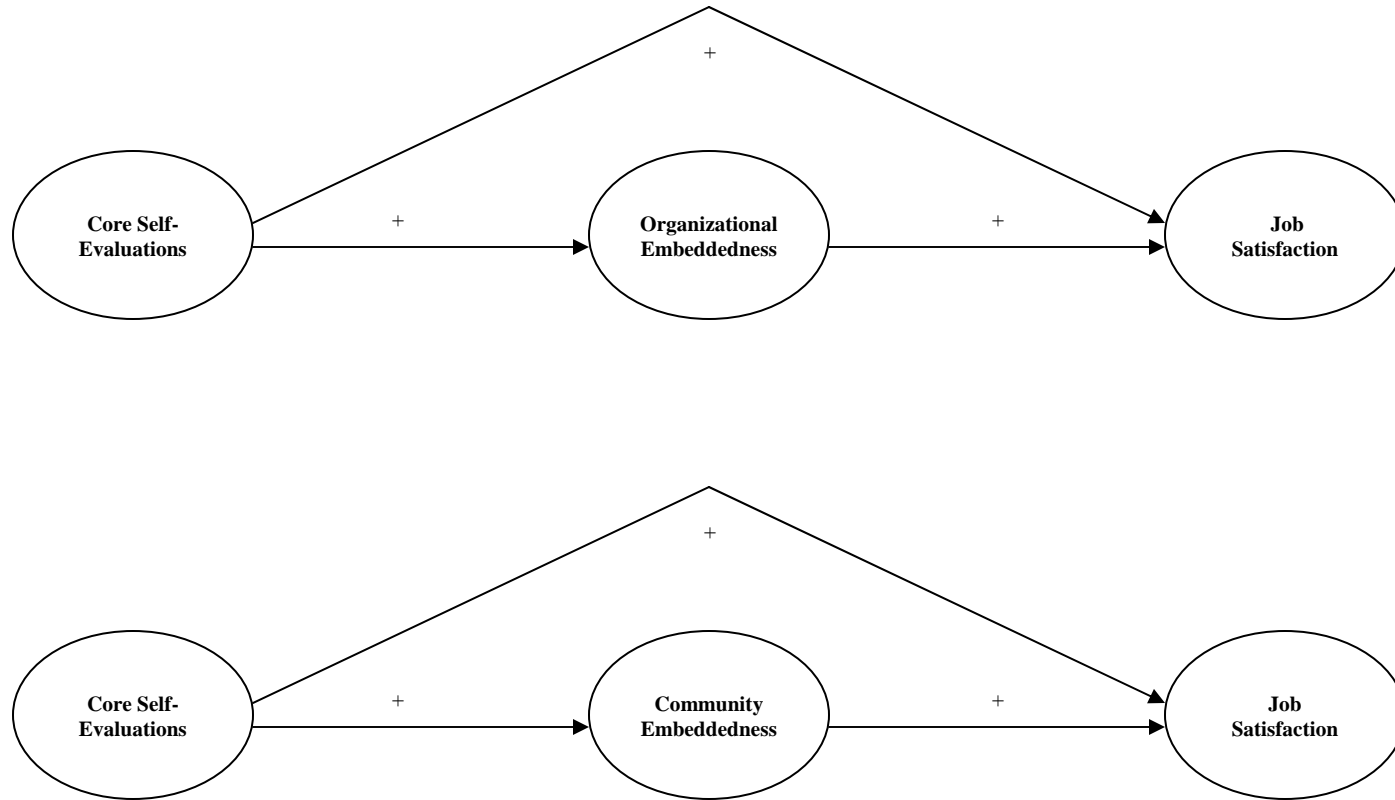


Figure 2

Hypothesized Multiple Mediating Model

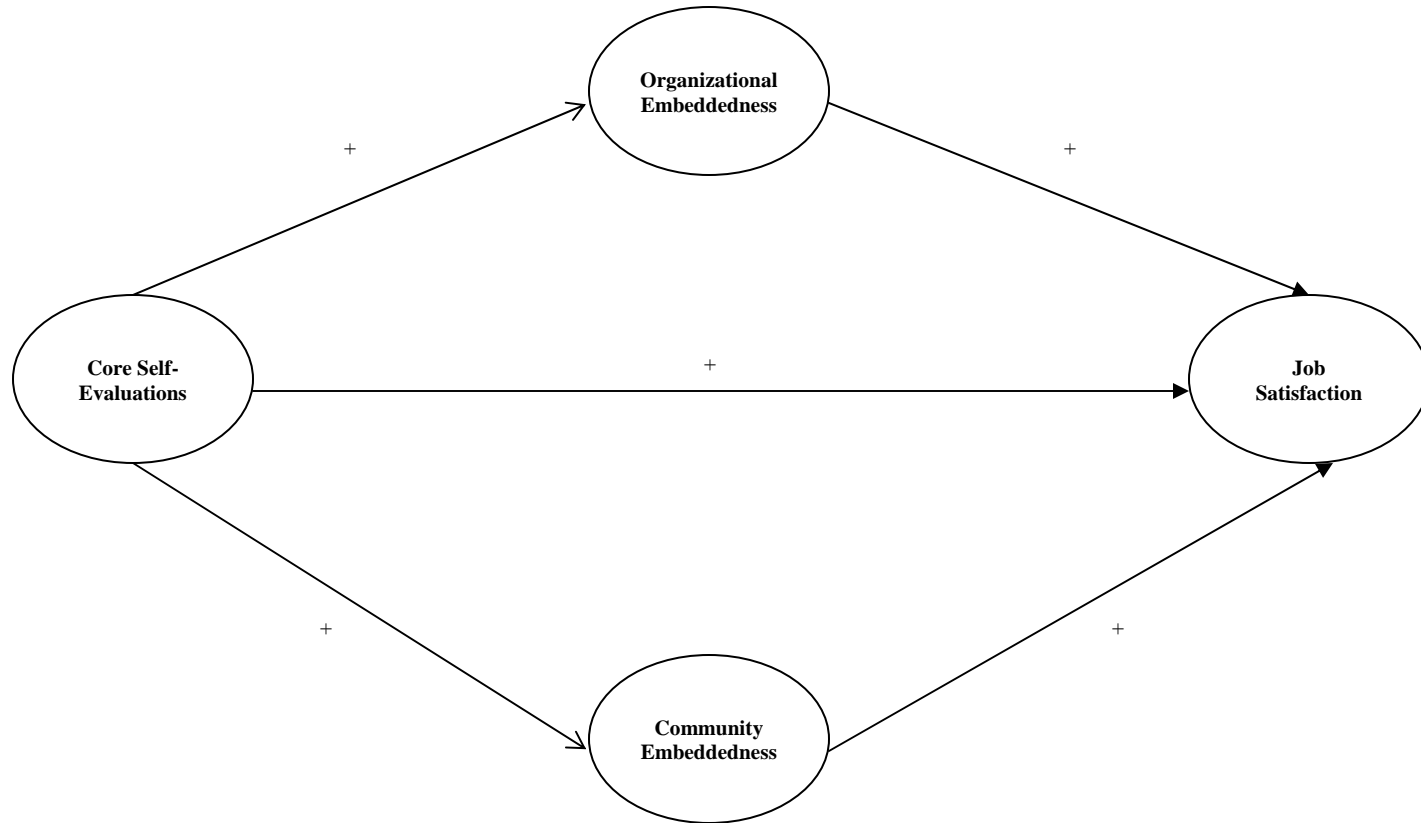


Figure 3
Measurement Model

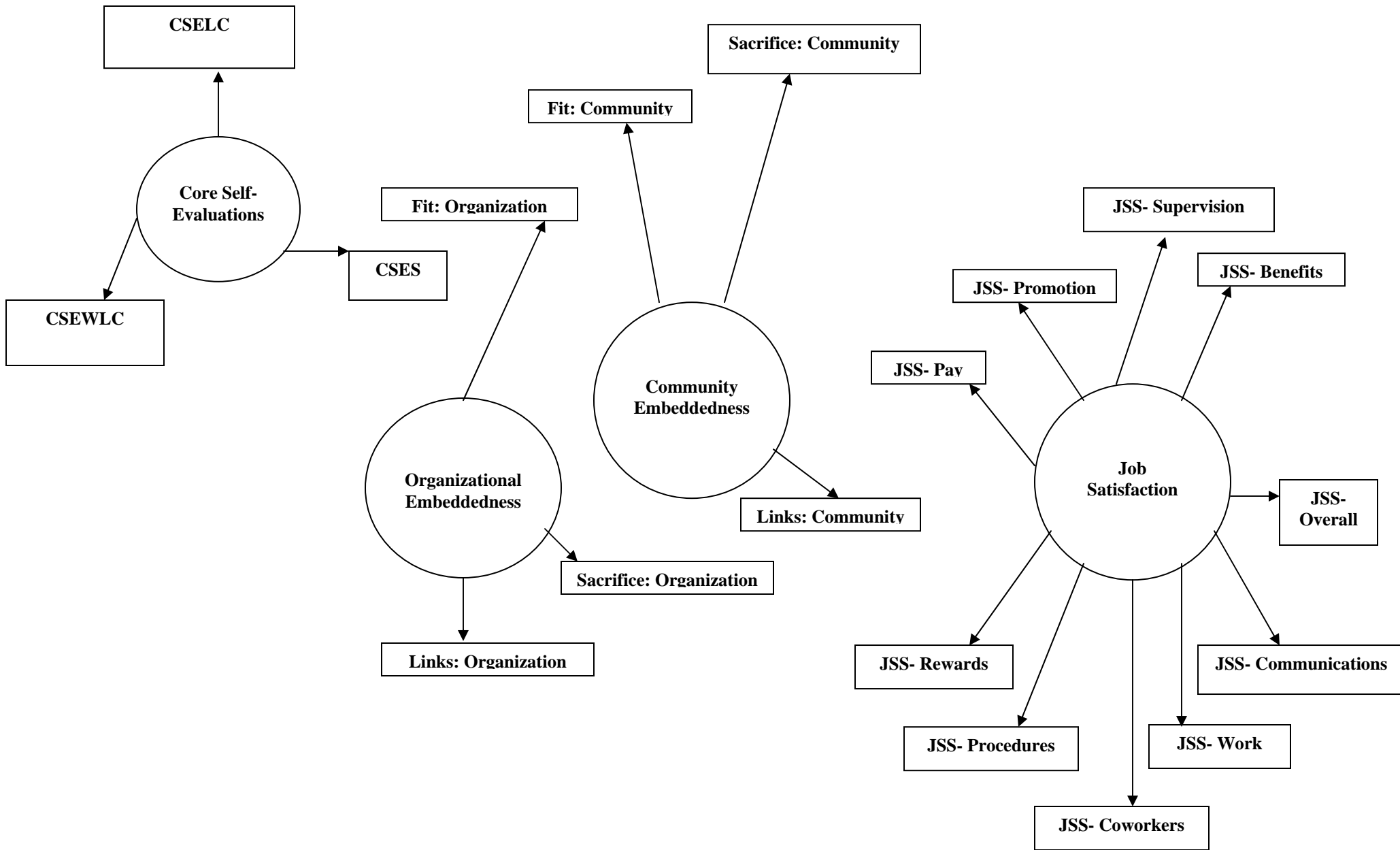
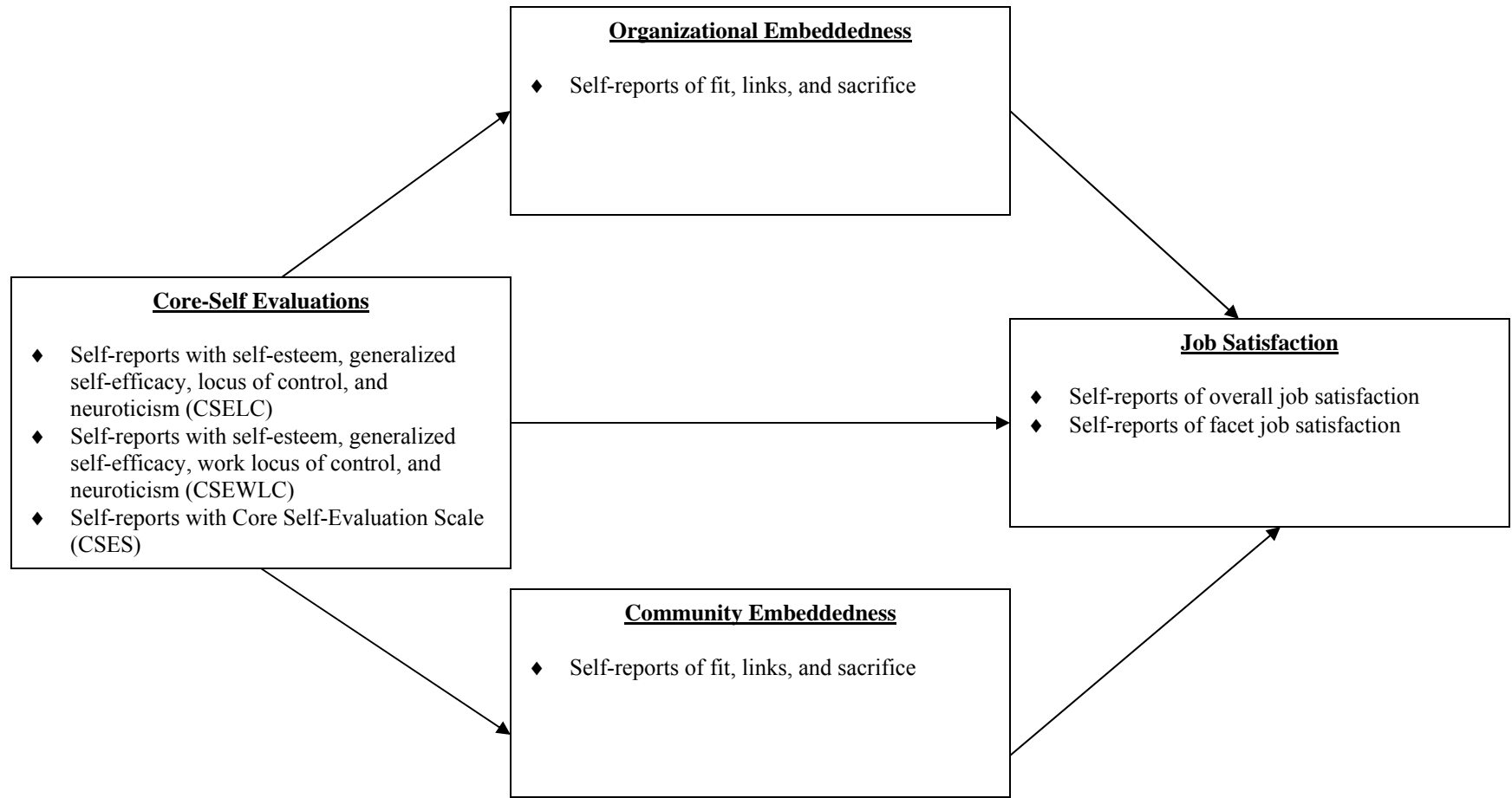


Figure 4
Heuristic Model



CHAPTER 5

METHODS

In early 2007, several field studies were conducted using real employees in their natural work environments to examine the proposed relationships in this dissertation (See Figure 4). Specifically, data was gathered from undergraduate, senior, business students in the capstone business course at a medium-size, southern university and a small, northeastern university. Next, the data was collected from classified staff in a medium-size southern university where these employees were asked to voluntarily participate in completing a questionnaire that asked them about their attitudes towards their community, job, and life in general. The purpose of this chapter is to discuss data collection procedures, participants, measures, and data analysis techniques.

Participants and Procedures

Sample Size

The appropriate sample size for this study will be based on several general rules of thumb for factor analyses. First, Pedhazur and Schmelkin (2000) suggest that the sample size should be based on 50 participants per factor. However, other researchers such as Tabachnick & Fidell (1996) propose that 300 cases are adequate for factor analyses. Still other researchers provide sample guidelines such that 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1000 is excellent (Comrey & Lee, 1992). In conclusion, the appropriate sample size depends on both the population of interest and the sample covariance matrix that is to be a reasonable approximation of the population.

Data Collection Procedures and Participants

Undergraduate student sample. Approval to collect data from students in the capstone business course at the medium-size southern university was obtained from the department chair.

Access was given to all students in the capstone course. At the small-university in the northeast, approval to collect data from students in the senior business ethics course was obtained from the department chair. Access was given to all students in the senior ethics course. Approval to distribute the survey was obtained by Virginia Polytechnic Institute and State University and the University of Central Arkansas Institutional Review Board (See Appendices A and B).

The survey, along with the cover letter and consent form, were given to students at the beginning of class, and the students were asked to voluntarily complete the survey (Appendices C and D). The anonymity of responses was assured with the cover letter. All responses and inquiries were directed to the researcher at Virginia Tech/University of Central Arkansas. Voluntary self-report measures were used to collect data on individuals' names demographic characteristics, core self-evaluations, on-the-job embeddedness, off-the-job embeddedness, and job satisfaction. The students completing the survey were offered bonus points. In contrast, the students who chose not to participate were offered an alternative bonus assignment.

Surveys were distributed to 185 undergraduate business students in the capstone course at the southern university and 80 undergraduate business students in a senior business ethics course at the northeastern university. Of these 265 surveys, 228 (86.0%) surveys were returned. Two surveys were not usable because they were identifiable but blank. Thus, the total usable sample was 226 surveys for a response rate of 85.3%. The majority of this sample worked part-time (67.2%) with only a small percentage being full-time workers (27.0%) or full-time students (5.8%). With respect to job titles, participants in the study had various positions as bookkeepers, computer technicians, resident assistants, restaurant servers, and retail clerks. Within this sample, 56.2% were men and 43.8% were women. The average tenure for this sample was 1.60 years (s.d. = 1.58) with the range of tenure from less than one month to 11 years. The overall average

age was 22.76 years (s.d. = 4.08), but ages ranged from 19 years to 49 years. In regards to ethnicity, 11.1% were African American, .4% was American Indian, 81.9% were Caucasian, 3.1% were Latino, and 3.5% were listed as other. Besides qualitative differences in geographic location, no significant differences were found between the two student samples.

Organizational sample. Approval to collect data from classified staff was obtained from the Assistant Vice President for Human Resources. The human resources department at the university created a list of classified staff that included their supervisor's name and e-mail address, department name and campus mail address, and the employee's name. Thus, access was given to all classified staff from six divisions at the university. Approval to distribute the survey was obtained by Virginia Polytechnic Institute and State University and the University of Central Arkansas Institutional Review Board (See Appendices A and B).

An employee survey and cover letter were distributed via campus mail to classified staff in two waves (Appendices E-H). The anonymity of responses was assured with the cover letter. All responses and inquiries were directed to the researcher at Virginia Tech/University of Central Arkansas. Data was collected, using voluntary self-report measures, on the individuals' names, employee numbers, demographic characteristics, core self-evaluations, on-the-job embeddedness, off-the-job embeddedness, and job satisfaction. To increase response rates, each survey was accompanied by a reply envelope that contained no identifying information. Respondents were asked to place the completed answer sheets in the envelope and mail the surveys to the researcher via campus mail. Participation in the study was strictly voluntary and participants were entered in a random drawing for gift certificates.

Surveys were distributed to 474 classified staff in six divisions in the organization. Of the 474 surveys, 123 surveys (25.9%) were returned. 98 surveys were collected in the first wave of

data collection and an additional 25 surveys were returned in the second wave. One survey was not used because the consent forms were not signed. Thus, the total usable sample was 122 which represents a 25.7% response rate. The entire sample (n=122) worked full-time. With respect to job titles, the sample included, but not limited to, marketing directors, custodial workers, administrative assistants, accountants, and university police. Within the sample, 68% were female and 32% were male. The mean age was 45.68 years (s.d. = 12.07) with age ranging from 21 years to 76 years. The average tenure with the organization was 8.46 years (s.d. = 8.53) but ranged from less than one month to 35 years. In regards to ethnicity, 12.3% were African American, 85.2% were Caucasian, .8% were Latino, and 1.7% were listed as other. The level of education varied widely among the sample with .8% having less than a high school education, 18.9% with a high school diploma or GED, 32.0% with some college, 20.5% with a bachelor's degree, 6.6% with some graduate work, 9.0% with a master's degree, 9.8% with coursework past the master's degree, and 2.5% with a doctoral degree. Finally, nonrespondents were compared to the respondents, and no significant differences were found for age, education, ethnicity, gender, or organizational tenure.

Measures

Self-Esteem. Self-esteem was measured with Rosenberg's (1989) 10-item Self-Esteem Scale (See Appendix I). It includes items such as "I take a positive attitude toward myself," and "I certainly feel useless at times" (reverse-scored). This scale used a five-point Likert response system with *strongly disagree* (1) and *strongly agree* (5) as endpoints. All items are averaged to create a single self-esteem score for each respondent. Strong agreement equates to higher self-esteem, while weak agreement reflects lower self-esteem. Blasovich and Tomaka (1991) have

found prior scale reliabilities ranging from .77 to .88. The coefficient alpha was .88 for the undergraduate sample and .84 for the classified staff sample.

Generalized Self-Efficacy. Generalized self-efficacy was measured with Judge et al.'s (1998) 8-item generalized self-efficacy scale (See Appendix J). It consists of items such as "I can handle the situations that life brings," and "I often feel like a failure" (reverse-scored.) This scale used the same five-point response system as the other scales- *strongly disagree* (1) and *strongly agree* (5) as endpoints. All items are averaged to create a generalized self-efficacy score for each respondent. Strong agreement reflects high generalized self-efficacy, and weak agreement equates to low generalized self-efficacy. Several studies have found an average reliability of .85 (Judge et al., 2003). The coefficient alpha was .89 for the undergraduate sample and .88 for the classified staff sample.

Locus of Control. Locus of control was measured with 8 items from Levenson's (1981) Internality, Powerful Others, and Chance scale (See Appendix K). As with the other measures, the scale ranged from *strongly disagree* (1) to *strongly agree* (5) to indicate participants' level of agreement with items such as "I have often found that what is going to happen will happen" (reverse-scored) and "I am usually able to protect my interests." All items were averaged to develop a single locus of control score for each respondent. Strong agreement represents an internal locus of control, while weak agreement reflects an external locus of control. Previous research has indicated a reliability of .85 (Judge et al, 1998). The coefficient alpha was .70 for the undergraduate sample and .59 for the classified staff sample.

Neuroticism. Neuroticism was measured with the 12-item Eysenck Personality Inventory Neuroticism scale (Eysenck & Eysenck, 1968; See Appendix L). It consists of items such as "I'm a nervous person" to "I often feel fed up." This scale used the same five-point response

system as the other core scales- *strongly disagree* (1) to *strongly agree* (5). All items were averaged to create a neuroticism score for each respondent. Stronger agreement with these items reflects neuroticism. The average reliability for this scale is .83 (Caruso, Witkiewitz, Belcourt-Dittloff, & Gottlieb, 2001). The coefficient alpha was .90 for both samples.

Work Locus of Control. Work locus of control was measured with Spector's (1988) 16-item Work Locus of Control Scale (See Appendix M). As with the other measures, the scale ranged from *strongly disagree* (1) to *strongly agree* (5) to indicate participants' level of agreement with such items as "A job is what you make of it," and "People who perform their jobs well generally get rewarded." All items were averaged to develop a single locus of control score for each respondent. Again, strong agreement reflects internal locus of control at work, and weak agreement equates to an external locus of control at work. Previous research has indicated reliabilities ranging from .75 to .85 (Spector, 1988). The coefficient alpha was .80 for the undergraduate sample and .79 for the classified staff sample.

Core Self-Evaluations with Locus of Control (CSELC). Core self-evaluations were indirectly measured with a composite that consisted of self-esteem, generalized self-efficacy, locus of control, and neuroticism. This composite was constructed by adding each of the scores from the measures of the previously mentioned constructs and dividing by 4. Previous research has indicated a reliability of .84 (Judge et al., 2000). The reliability was .93 for the undergraduate sample and .94 for the classified staff sample.

Core Self-Evaluations with Work Locus of Control (CSEWLC). Core self-evaluations were also indirectly measured with a composite that consisted of self-esteem, generalized self-efficacy, work locus of control, and neuroticism. This composite was constructed as an additive, mean composite in which scores on each of the measures of the aforementioned constructs were

added together and then divided by 4. No research to date has examined this conceptualization of core self-evaluations. The reliability was .93 for the undergraduate sample and .93 for the classified staff sample.

Core Self-Evaluations (CSES). Core self-evaluations were directly measured with the 12-item core self-evaluation scale (Judge et al., 2003; See Appendix N). Sample items are “When I try, I generally succeed,” and “I am filled with doubts about my competence” (reverse-scored). This measure utilizes a five-point response system with *strongly disagree* (1) and *strongly agree* (5) as endpoints. All items are averaged to create a single core self-evaluations score for each respondent. Strong agreement reflects more positive self-regard; whereas, weak agreement represents low positive self-regard. Although this is a new measure, Judge et al. (2003) found a reliability of .83 in four studies. The coefficient alpha was .80 for the undergraduate sample and .84 for the classified staff sample.

Job Embeddedness. Job embeddedness is measured using a scale developed by Mitchell et al (2001; See Appendix O). This measure consists of 34 items that assess six different dimensions- organization fit, organizational-related sacrifice, organizational links, community fit, community-related sacrifice, and community links⁹. The items consist of Likert-type, fill-in-the blank, and yes-no responses. For the items that use the Likert-type items, the five-point response system was used with responses ranging from *strongly disagree* (1) to *strongly agree* (5). The items can be summated to form an overall measure of job embeddedness or can be summated into organizational embeddedness and community embeddedness measures¹⁰. Stronger agreement with each of the items results in the respondent being more embedded. Weaker agreement with the items results in the respondent being less embeddedness. Previous research has indicated reliabilities of .84 and .82 for organizational and community

embeddedness respectively (Lee et al, 2004). Organizational embeddedness had a coefficient alpha of .86 for the undergraduate sample and .87 for the classified staff sample. Community embeddedness had a coefficient alpha of .79 for the undergraduate sample and .80 for the classified staff sample. For both samples (undergraduate and classified staff sample), the dimensions comprising organizational embeddedness had reliabilities of .84 and .87 for organizational fit, .84 and .81 for organizational-related sacrifice, and .76 and .65 for organizational links. Also, the dimensions making up community embeddedness had reliabilities of .86 and .89 for community fit, .64 and .52 for community-related sacrifice, and .67 and .59 for community links. Previous research has found similar reliabilities for these dimensions of job embeddedness (Mitchell et al., 2001).

Job Satisfaction. Job satisfaction was measured based on an overall job satisfaction scale and a facet job satisfaction scale. Overall job satisfaction was measured with 6-items from the Brayfield & Rothe (1951) overall job satisfaction scale (See Appendix P). It includes items such as “I am often bored with my job,” and “Most days I am enthusiastic about my work.” This scale used a five-point Likert response system with *strongly disagree* (1) and *strongly agree* (5) as endpoints. The items can be summated to form an overall measure of job satisfaction. Stronger agreement with the items represents higher levels of overall job satisfaction. Weaker agreement with the items represents lower levels of overall job satisfaction. Reliability of .90 has been reported with the 6-item measure (Agho, Price, & Mueller, 1992). In this study, a coefficient alpha of .90 was obtained for the undergraduate and .87 for the classified staff sample.

Facet job satisfaction was measured with Spector’s (1997) 36-item Job Satisfaction Survey (JSS; See Appendix Q). It includes items such as “I feel I am being paid a fair amount for the work I do,” and “I have too much to do at work” (reverse scored). The JSS consists of nine

facets related to job satisfaction (Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards, Operating Procedures, Coworkers, Nature of Work, and Communication), which can be summated to form an overall measure of job satisfaction or individual measures of each facet. All facets of the JSS were used in my survey. Typically, respondents use a 6-point scale (1 = *disagree very much* to 6 = *agree very much*) to indicate how they feel about various aspects of their job. However, the five-point Likert response system, *strongly disagree* (1) to *strongly agree* (5), was used for consistency with the other measures. Strong agreement represents stronger satisfaction with that facet, and weak agreement represents weaker facet satisfaction. In regards to reliabilities for individuals facets, Spector (1997, p. 10) found values of .75 for pay, .73 for promotion, .82 for supervision, .73 for benefits, .76 for rewards, .62 for operating procedures, .77 for coworkers, .78 for nature of work, and .71 for communication. For the undergraduate sample, reliabilities were obtained for each of the facets- .79 for pay, .83 for promotion, .86 for supervision, .78 for benefits, .86 for rewards, .36 for operating procedures, .77 for coworkers, .81 for nature of work, and .79 for communication. For the classified staff sample, reliabilities were the following: .77 for pay, .79 for promotion, .86 for supervision, .71 for benefits, .81 for rewards, .56 for operating procedures, .79 for coworkers, .88 for nature of work, and .86 for communication.

Overall job satisfaction was also measured with the Spector's (1997) JSS¹¹. Each of the individual facets can be summated to form a measure of overall job satisfaction. The JSS has a reliability .91 for overall satisfaction (Spector, 1997, p. 10). For overall job satisfaction measured with the JSS, the coefficient alpha for overall satisfaction was .93 for the undergraduate sample and .92 for the classified staff sample.

Analytic Strategy

Structural equation modeling was used to test all hypotheses and corresponding fit of models (Bollen, 1989; Byrne, 1998). Data analysis was conducted in two stages as suggested by Anderson and Gerbing (1988). LISREL 8.8 was selected to examine the measurement and structural models (Jöreskog & Sörbom, 1993). Input for the estimation of the model was obtained from SPSS 11.5 in the form of a covariance matrix.

Since the fundamental hypothesis underlying structural equation modeling examines the extent to which the observed covariance matrix is similar to the model implied covariance matrix, several fit indices will be used to examine the hypothesized models. First, the chi-square (χ^2) test statistic was used to examine the null hypothesis. In general, the null hypothesis is accepted when the p -value of the chi square (χ^2) test statistic is greater than .05. This indicates that the model represents a good fit to the data. However, with large sample sizes, the chi-square test statistic will become significant (Bentler & Bonnett, 1980). Thus, the chi-square (χ^2) test statistic will be divided by degrees of freedom to assess the extent of model fit. A general convention of 3.0 or less is used to assess fit (Carmines & McIver, 1981; Hatcher, 1994). However, there are several problems with the χ^2 statistic. First, it is sensitive to departures from multivariate normality such that highly skewed observed variables will adversely affect the statistic (Jöreskog & Sörbom, 1993). For example, with large sample sizes, departures from normality result in even higher χ^2 values than with model misspecification errors. Second, the χ^2 statistic is asymptotic where variations in sample size result in either nonsignificant χ^2 results for small samples or significant χ^2 results for large sample sizes (Bentler, 1990; Jöreskog & Sörbom, 1993). Therefore, there are more appropriate measures to determine the extent of model fit. The first set of fit indices are known as absolute fit indices as they examine model fit without making

comparisons to the null model. First, the Root Mean Square Error of Approximation (RMSEA) examines how well the hypothesized model fits the population covariance matrix (Steiger, 1989; Steiger & Lind, 1980). Models with a RMSEA of .05 or less are considered good models, and values as high as .10 indicate mediocre fit. Models with a RMSEA of .10 or greater typically indicate poor model fit. Second, the Standardized Root Mean Square Residual (SRMR) examines discrepancies between the implied and sample covariance matrices and uses an average value for all standardized residuals (Bentler, 1995; Hu & Bentler, 1998; Jöreskog & Sörbom, 1981). Values range from zero to 1.00 with values of .05 or less indicating a good fitting model. As with the previous fit index, values ranging from .08 to .10 indicate mediocre fit, and values greater than .10 represent poor model fit. The SRMR is a very important fit measure because it makes no assumptions about test statistic distributions (Bentler, 1996, September 12). The next set of fit indices are known as relative fit indices, as they compare the predicted model to the null model. Each of these indices will follow similar guidelines for determining model fit. Third, the Normed Fit Index (NFI) is based on the comparison of the predicted model to the null model and evaluates the improvement in fit (Bentler & Bonnett, 1980; Hu & Bentler, 1998). The values for this index range from zero to 1.00 with values of greater than .90 indicating good fit. In addition, values ranging from .85 to .90 represent mediocre fit, and values less than .85 indicate poor fit. The NFI is sensitive to sample size and underestimates fit in small samples (Bentler, 1990; Hu & Bentler, 1998). Fourth, the Comparative Fit Index (CFI) will be used as an alternative fit index, as it is based on a noncentral chi-square distribution that allows for unbiased estimation of small sample sizes (Bentler, 1989; Bentler, 1990; Hu & Bentler, 1998). Fifth, the Tucker-Lewis index, also known as the Non-Normed Fit Index (NNFI), will be used as it indicates the percentage of improvement in the model from the null model to the saturated model (Bentler & Bonnett, 1980).

Sixth, asymptotic z-statistics will be used to indicate the statistical significance of the parameter or structural estimates. Although LISREL output provides a t-value, this value is actually the z-statistic and should be greater than ± 1.96 for a significant level of .05 or ± 2.56 for a significance level of .01 (Byrne, 1998, p. 104). Seventh, the squared multiple correlation (R^2) for each observed variable indicates the extent to which the measure adequately reflects the construct or the structural estimate (Bollen, 1989). Finally, the composite reliability (ρ_c) and average variance extracted (ρ_v) will be calculated for each latent variable. Values greater than .60 are recommended for ρ_v ; whereas, values greater than .50 are suggested for ρ_c (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). In conclusion, the chi square (χ^2) test statistic along with absolute and relative fit indices will be used to assess the overall quality of the measurement and hypothesized structural models.

Some organizational researchers have advocated the use of item parcels when the number of parameters becomes large or when data is nonnormally distributed in structural equation modeling (Bagozzi & Edwards, 1998; Bagozzi & Heatherton, 1994; Bandalos, 2002). Since these situations often result in poorly fitted models, the use of item parcels enables more stable parameter estimates, reductions in skewness and kurtosis, increases in power and reliability, and decreases in Type I error rates (Bandalos, 2002). Furthermore, from a psychometric standpoint, parceling is akin to the law of large numbers where the true score is best represented by more items and results in less bias and more efficiency (Little, Cunningham, Shahar, & Widaman, 2002)¹². Therefore, facet parcels were used for both the measurement and structural models. Since the ultimate goal of this study was to examine the implications of the relationships between the latent constructs, the total aggregation method (or facet representative parceling) was used in which items depicting each scale or facet were aggregated as a common

indicator of a global latent construct (c.f. Bagozzi & Edwards, 1998; Little et al., 2002)¹³. It is important to note that with facet representative parceling only the unique components of the items are brought into the parcel. Thus, the residuals have a tendency to become large¹⁴. To summarize, facet representative parcels will be used for all measures in this study.

Several explanations are due in regards to the examination of the mediational hypothesis via structural equation modeling (SEM). Some of the most cited sources for mediation include the model introduced by Baron and colleagues (Baron & Kenny, 1986; Judd & Kenny, 1981; Kenny, Kashy, & Bolger, 1998). Typically, this approach uses multiple regression to test three equations. However, SEM may also be used to examine mediation. SEM is preferred over regression strategies because they tend to underestimate the effect size of the mediated effect as measurement error increases in the predictor and mediator variables (Holmbeck, 1997).

Several steps must be taken to establish the significance of the mediated effect in SEM (c.f. Hoyle & Smith, 1994; Holmbeck, 1997; Kenny et al., 1998; MacKinnon, Lockwood, Hoffman, West, and Sheets; 2002; Shrout & Bolger, 2002). Holmbeck's (1997) method for testing mediation resembles Baron and Kenny's (1986) method in multiple regression. He suggests the following steps must be followed to support mediation- 1) adequate fit of the model that includes the latent predictor variable and the latent outcome variable along with a significant predictor-outcome path,, 2) adequate fit of the predictor-mediator-outcome model along with significant predictor-mediator and mediator-outcome paths, 3) adequate fit of the predictor-mediator-outcome model under two separate conditions- a) when the predictor-outcome path is constrained to 0 and b) when the predictor-outcome path is not constrained, 4) reduction in the predictor-outcome path from the direct effect model to the full structural model, and 5) significance of the indirect effect in the full structural model. Hoyle and Smith's (1994) strategy

to test for mediation is much simpler and entails- 1) an examination of the direct effect model that includes the predictor-outcome with adequate fit and 2) adequate fit of the predictor-mediator-outcome model that includes a decrease in the predictor-outcome path from the direct effects model to the hypothesized structural model and a significant indirect effect in the hypothesized structural model. Still yet MacKinnon and his colleagues (2002) have advocated the use of longitudinal modeling coupled with adequate fit of the entire structural model and a significant indirect effect. Regardless of the initial steps in establishing mediation, several common themes can be seen that include 1) an adequate fit of the hypothesized structural model that includes the predictor-mediator-outcome relationships, 2) a significant indirect effect, and 3) either a non-zero path between the predictor and outcome to indicate partial mediation or a path that does not differ from zero to indicate full mediation. In fact, MacKinnon, Goldberg, Clarke, Elliot, Cheong, Lapin, Moe, and Krull (2001) use this method to test for both single and multiple mediators. They also calculate the percentage of the total effect that is due to the mediated effect. The percentage mediated is determined by using the absolute value of the indirect effect in the numerator and the sum of the absolute value of the direct and indirect effect in the denominator (c.f. Alwin & Hauser, 1975). In conclusion, mediation will be examined via SEM and according to the techniques set forth by MacKinnon and his colleagues (MacKinnon et al., 2001; MacKinnon et al., 2002).

To conclude, this chapter presented information on the data collection process and statistical procedures used to examine the hypotheses developed in Chapter 5. First, given the statistical procedures that will be used, several methods to calculate appropriate sample sizes were reviewed. Next, demographic information was provided on the samples used in this dissertation. Then, the measures used in this study were highlighted, and information was

provided on reliabilities for each measure used in each sample. Finally, the chapter concluded with a brief discussion on structural equation modeling, fit indices, item parceling techniques, and mediation models in SEM. The next chapter will present the results of hypothesis testing.

CHAPTER 6

RESULTS

The previous chapter explained the data collection process, participants, survey measures, and data analysis procedures. This chapter focuses on the results of the analyses and hypotheses testing. As discussed in the previous chapter, data analysis was conducted with two distinct models (Anderson & Gerbing, 1982; Jöreskog & Sörbom, 1984). Specifically, confirmatory measurement models for each construct will be examined. The purpose of the confirmatory model is to examine the relationships between observed and latent variables. The second step involves the estimation of structural models based on causal relations between latent variables. The order of this chapter includes analysis and presentation of descriptive information, confirmatory models, and structural models.

Descriptive Information

Descriptive information was provided on means, standard deviations, skewness, and kurtosis for both the undergraduate sample (See Table 19) and the classified staff sample (See Table 20). First, the data were tested for univariate and multivariate normality. To meet the assumptions of univariate normality in covariance structure analysis, the acceptable cutoff value is 2.0 for skewness and 8.0 for kurtosis (Kline, 1998; West, Finch, & Curran, 1995)¹⁵. For the undergraduate sample, generalized self-efficacy was negatively skewed (-1.19) with a leptokurtic distribution (3.10). These results suggest that a small number of participants have extremely low generalized self-efficacy while the majority is concentrated around the mean of 4.33. Next, for the undergraduate sample, the results showed that organization links were positively skewed (1.03) with a leptokurtic distribution (4.27). This means that a small number of participants from the undergraduate sample perceived themselves as being highly embedded in their organization

and the rest of the participants were concentrated around the mean of 1.32. In comparison, organizational links with the classified staff sample was also positively skewed (1.00) with a leptokurtic distribution (2.48). Thus, not only are some individuals from the classified staff sample highly embedded in their organization, but the majority is concentrated about the mean of 2.13. Next, for the undergraduate sample, community links were positively skewed (1.63) with a leptokurtic distribution (2.51). Thus, few participants in the undergraduate sample were highly embedded in their communities and the majority was concentrated around the mean of 1.18. Finally, for the classified staff sample, the nature of work was negatively skewed (-1.51) with a leptokurtic distribution (4.97). Thus, the majority of participants from the classified staff sample were highly satisfied with the content of their job ($x = 4.07$), whereas, a small number of individuals were highly dissatisfied with their job tasks. It is important to note that these values were not expected for generalized self-efficacy or for the job satisfaction facet measure of the nature of work, but they were anticipated for organization and community links. To elaborate, the measures for links were open-ended questions which resulted in continuous-level data with no discrete categorizations. However, as noted earlier, these measures were transformed which made it more difficult to obtain univariate normality due to range restriction. Next, it has been suggested that Mardia's PK should be less than 3 to assume multivariate normality (Mardia, 1970; Romeu & Ozturk, 1993). By using PRELIS, it was determined that Mardia's PK was 1.18 for the undergraduate sample and 1.20 for the classified staff sample. In conclusion, although some weaknesses were noted with a few of the scales, the assumptions for univariate and multivariate normality were met.

Table 19

Descriptive Statistics for Undergraduate Sample

Variables	Mean	SD	Skewness	Kurtosis
1. Self-esteem	4.21	.55	-.91	1.21
2. Generalized self-efficacy	4.33	.51	-1.19	3.10
3. Locus of control	3.80	.42	.04	.46
4. Neuroticism	2.54	.77	.25	.06
5. Work locus of control	3.80	.39	-.13	.33
6. CSELC	3.95	.45	-.53	1.04
7. CSEWLC	3.95	.43	-.48	.77
8. CSES	3.79	.49	-.42	.63
9. Fit: Organization	3.53	.78	-.29	-.08
10. Sacrifice: Organization	2.99	.74	.03	-.05
11. Links: Organization	1.32	.60	1.03	4.27
12. Organizational embeddedness	2.61	.53	.12	-.10
13. Fit: Community	3.58	.80	-.41	.31
14. Sacrifice: Community	3.46	.73	-.13	-.13
15. Links: Community	1.18	.24	1.63	2.51
16. Community embeddedness	2.74	.48	-.23	-.07
17. Overall job satisfaction	3.31	.85	-.19	-.09
18. JSS- Overall job satisfaction	3.42	.55	-.07	.20
19. JSS- Pay	3.10	.86	-.16	-.12
20. JSS- Promotion	3.02	.85	-.21	-.24
21. JSS- Supervision	3.92	.81	-.79	.51
22. JSS- Benefits	3.06	.80	-.21	.01
23. JSS- Rewards	3.40	.87	-.31	-.09
24. JSS- Operating procedures	3.51	.59	-.02	-.06
25. JSS- Coworkers	3.81	.68	-.48	1.05
26. JSS- Nature of work	3.53	.80	-.27	.12
27. JSS- Communication	3.43	.85	-.45	.15

Note: Estimates are for undergraduate sample where $N=226$.

Table 20

Descriptive Statistics for Classified Staff

Variables	Mean	SD	Skewness	Kurtosis
1. Self-esteem	4.14	.48	-.29	-.12
2. Generalized self-efficacy	4.18	.51	-.36	.36
3. Locus of control	3.66	.36	.34	.63
4. Neuroticism	2.51	.75	.07	-.21
5. Work locus of control	3.60	.36	-.35	.26
6. CSELG	3.87	.43	.04	.00
7. CSEWLC	3.86	.43	-.14	.09
8. CSES	3.67	.50	.03	1.03
9. Fit: Organization	3.82	.65	-.48	.53
10. Sacrifice: Organization	3.41	.57	-.10	.46
11. Links: Organization	2.13	.79	1.00	2.48
12. Organizational embeddedness	3.11	.52	.06	-.28
13. Fit: Community	3.87	.73	-.91	1.77
14. Sacrifice: Community	3.75	.62	-.08	-.34
15. Links: Community	1.66	.30	-.79	-.19
16. Community embeddedness	3.25	.47	-.35	.24
17. Overall job satisfaction	3.81	.69	-.52	.77
18. JSS- Overall	3.52	.47	-.20	.27
19. JSS- Pay	2.85	.80	-.50	-.34
20. JSS- Promotion	2.87	.77	-.39	-.38
21. JSS- Supervision	4.22	.66	-.84	.85
22. JSS- Benefits	3.63	.62	-.45	.66
23. JSS- Rewards	3.33	.83	-.28	.31
24. JSS- Operating procedures	3.26	.63	-.54	1.70
25. JSS- Coworkers	3.96	.63	-.75	1.47
26. JSS- Nature of work	4.07	.68	-1.51	4.97
27. JSS- Communication	3.46	.84	-.83	.35

Note: Estimates are for the classified staff sample where $N=122$.

Reliabilities are presented in Table 21 for the undergraduate sample and in Table 22 for the classified staff sample. The reliability for each measure was discussed in the last chapter. Thus, only those reliabilities that were lower than the Nunnally's (1978) convention of .70 will be discussed. Locus of control was unreliable for the classified staff sample ($\alpha = .58$). It has been argued in previous research that the low reliability of locus of control is partially attributable to its multidimensional nature (c.f. Lefcourt, 1981). Therefore, only those items that measured internality were included in a supplemental analysis. However, no improvement was seen in the reliability of locus of control or in the size of the correlations between locus of control and the other core traits. Therefore, the original scale was retained. Several dimensions of job embeddedness were unreliable. Community-related sacrifice had a reliability of .64 and community links had a reliability of .67 for the undergraduate sample. In addition, for the classified staff sample, community-related sacrifice had a reliability of .52 and community links had a reliability of .59. Also, organizational links had a reliability of .65 for the classified staff sample. In response to this, deficiencies of the structure and reliability of these measures was discussed in Chapter 3. In addition, these low reliabilities are consistent with findings in the job embeddedness literature (c.f. Mitchell et al., 2001; Lee et al., 2004). Only one job satisfaction facet scale was unreliable. The JSS scale of operating procedures had a very low reliability of .36 for the undergraduate sample and .56 for the classified staff sample. These results were somewhat surprising considering that Spector (1997) obtained an alpha of .62 based on a much larger cross-occupational sample of almost 1500 participants. All in all, the low reliabilities of these measures will reduce the strength of relationships with other scales in this study. In addition, these results will be compounded for those measures that also have low reliabilities.

Intercorrelations among the study variables are shown in Table 21 and Table 22. For both samples, locus of control had the lowest correlations with the other core traits and other variables. These results were comparable to previous core self-evaluations research (Judge et al., 1998; Judge et al. 2000) but lower than estimates from Judge and Bono's (2001) meta-analysis. Looking at the work locus of control scale, it was apparent that it had even lesser correlations with the core traits but higher correlations with the other variables. As will be noted in the next section, the majority of correlations were in the expected direction.

Table 21

Correlations and Reliabilities for Undergraduate Sample

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1. Self-Esteem	.88																										
2. Generalized Self-Efficacy	.81	.89																									
3. Locus of Control	.44	.51	.70																								
4. Neuroticism	-.54	-.54	-.30	.90																							
5. Work Locus of Control	.32	.31	.41	-.16	.80																						
6. CSEL	.86	.87	.64	-.81	.35	.94																					
7. CSEWLC	.87	.86	.52	-.81	.49	.97	.93																				
8. CSES	.74	.69	.50	-.60	.40	.79	.79	.80																			
9. Fit: Organization	.20	.21	.14	-.11	.26	.20	.23	.20	.84																		
10. Sacrifice: Organization	.06	.09	.05	-.06	.16	.08	.11	.08	.61	.84																	
11. Links: Organization	.12	.17	.12	-.07	.10	.15	.14	.07	.20	.16	.76																
12. Organizational Embeddedness	.17	.21	.14	-.11	.24	.19	.22	.16	.85	.82	.55	.86															
13. Fit: Community	.17	.15	.17	-.13	.21	.19	.20	.19	.29	.29	.15	.33	.86														
14. Sacrifice: Community	.25	.18	.15	-.02	.18	.17	.18	.12	.38	.40	.17	.43	.62	.64													
15. Links: Community	.07	.07	.03	-.12	-.09	.10	.07	.05	-.01	.07	.08	.06	.14	.09	.67												
16. Community Embeddedness	.24	.19	.18	-.10	.20	.21	.22	.18	.35	.38	.18	.42	.90	.88	.29	.79											
17. Overall Job Satisfaction	.10	.10	.05	-.11	.20	.11	.15	.11	.73	.63	.12	.69	.15	.28	.01	.23	.90										
18. JSS- Overall	.10	.12	.01	-.15	.24	.13	.19	.18	.70	.70	.09	.70	.24	.27	.02	.28	.76	.93									
19. JSS- Pay	.02	.01	.04	-.13	.11	.07	.09	.10	.50	.62	.05	.55	.26	.21	.14	.27	.52	.74	.79								
20. JSS- Promotion	.09	-.05	.01	-.04	.08	-.02	-.01	.00	.48	.68	.09	.58	.25	.22	.00	.25	.45	.70	.65	.83							
21. JSS- Supervision	.21	.17	.07	-.11	.35	.18	.25	.22	.45	.32	.10	.41	.19	.23	-.07	.21	.47	.69	.31	.29	.86						
22. JSS- Benefits	-.06	-.03	-.16	.00	.00	-.06	-.03	.02	.38	.61	.08	.50	.13	.15	.05	.16	.41	.66	.54	.51	.35	.78					
23. JSS- Rewards	.14	.15	.02	-.15	.21	.15	.20	.18	.64	.63	.08	.63	.18	.28	.05	.26	.67	.85	.67	.60	.54	.55	.86				
24. JSS- Operating Procedures	.14	.17	.07	-.18	.20	.18	.22	.24	.18	-.04	-.03	.06	-.01	-.02	-.12	-.04	.13	.29	.10	-.06	.23	-.01	.11	.36			
25. JSS- Coworkers	.12	.13	-.04	-.15	.13	.13	.17	.11	.34	.31	-.02	.30	.10	.13	.09	.14	.45	.65	.27	.24	.55	.28	.47	.30	.77		
26. JSS- Nature of Work	.11	.12	.07	-.08	.25	.12	.16	.12	.69	.60	.13	.66	.22	.30	.05	.28	.82	.75	.50	.45	.44	.35	.62	.14	.49	.81	
27. JSS- Communication	.08	.09	.02	-.11	.19	.10	.15	.16	.60	.46	.07	.53	.11	.15	-.07	.13	.65	.77	.41	.45	.54	.40	.58	.23	.54	.56	.79

Note: Decimals are omitted. Coefficient alpha reliability estimates are located on the diagonal. $N = 226$. $p \leq .05$ at $r \geq \pm .13$ and $p \leq .01$ at $r \geq \pm .17$.

Table 22

Correlations and Reliabilities for Classified Staff Sample

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
1. Self-Esteem	86																											
2. Generalized Self-Efficacy	77	88																										
3. Locus of Control	48	54	58																									
4. Neuroticism	-60	-59	-39	90																								
5. Work Locus of Control	34	38	39	-42	70																							
6. CSEL	86	87	68	-84	47	94																						
7. CSEWLC	84	85	56	-85	61	97	93																					
8. CSES	63	66	55	-53	43	72	70	84																				
9. Fit: Organization	29	30	36	-31	53	38	42	35	87																			
10. Sacrifice: Organization	13	20	34	-22	48	27	30	24	74	81																		
11. Links: Organization	18	08	26	-20	11	21	18	14	27	27	65																	
12. Organizational Embeddedness	25	23	40	-30	45	35	37	30	81	84	70	87																
13. Fit: Community	31	26	21	-37	29	36	39	26	46	25	17	35	89															
14. Sacrifice: Community	35	38	37	-44	38	47	48	37	62	54	34	63	53	52														
15. Links: Community	04	07	12	-23	03	13	12	12	15	12	18	19	20	16	59													
16. Community Embeddedness	35	34	30	-45	35	45	47	35	57	38	25	49	93	76	39	80												
17. Overall Job Satisfaction	33	36	42	-32	51	42	45	39	79	61	29	69	37	47	17	45	87											
18. JSS- Overall	23	31	37	-35	53	39	44	46	71	72	24	69	27	50	13	39	71	92										
19. JSS- Pay	02	09	19	-07	42	12	17	25	52	57	15	51	09	37	05	21	46	73	77									
20. JSS- Promotion	08	17	41	-24	47	27	29	37	61	66	16	59	16	42	04	26	59	82	74	79								
21. JSS- Supervision	13	25	32	-27	31	29	30	21	52	50	28	54	13	33	12	23	50	65	25	45	86							
22. JSS- Benefits	11	20	07	-10	20	15	18	31	14	37	14	29	18	22	-02	21	16	44	34	26	13	71						
23. JSS- Rewards	21	20	33	-32	51	33	38	41	66	66	22	63	25	44	11	35	60	85	70	77	55	28	81					
24. JSS- Operating Procedures	10	11	-16	-19	12	12	18	15	17	08	-14	03	15	11	03	15	10	39	15	07	15	24	24	56				
25. JSS- Coworkers	22	32	33	-31	24	36	34	32	37	35	21	39	16	19	25	23	46	59	18	36	53	16	34	19	79			
26. JSS- Nature of Work	42	38	38	-24	27	41	39	42	56	42	23	50	23	43	02	32	76	59	29	49	34	17	38	09	41	88		
27. JSS- Communication	13	16	24	-32	50	28	34	26	52	52	15	49	23	39	17	33	49	73	46	53	45	14	55	29	41	30	86	

Note. Decimals are omitted. Coefficient reliability estimates are located on the diagonal. $N = 122$. $p \leq .05$ at $r \geq \pm .17$ and $p \leq .01$ at $r \geq \pm .24$.

Tests of Hypotheses

Hypothesis 1

Hypothesis 1 suggests that core self-evaluations will be positively related to job satisfaction. Recalling from the methods section, core self-evaluations was evaluated with three scales and job satisfaction was appraised with 11 scales. Amongst the scales for core self-evaluations, the pattern of correlations was very similar within each sample and different between samples. Specifically, the relationships were much stronger for the classified staff sample.

For the CSELC scale, seven out of 11 correlations reached significance for the undergraduate sample and eight reached significance for the classified staff sample. With the undergraduate sample, the CSELC scale was significantly related to the overall JSS scale ($r = .19, p < .01$), the JSS supervision scale ($r = .25, p < .01$), the JSS rewards scale ($r = .20, p < .01$), the JSS operating procedures scale ($r = .22, p < .01$), the JSS coworker scale ($r = .17, p < .01$), the JSS nature of work scale ($r = .16, p < .05$), and the JSS communication scale ($r = .15, p < .05$). In contrast for the classified staff sample, the CSELC scale was significantly related to the OJS scale ($r = .42, p < .01$), the overall JSS scale ($r = .39, p < .01$), the JSS promotion scale ($r = .27, p < .01$), the JSS supervision scale ($r = .29, p < .01$), the JSS rewards scale ($r = .33, p < .01$), the JSS coworkers scale ($r = .36, p < .01$), the JSS nature of work scale ($r = .41, p < .01$), and the JSS communication scale ($r = .28, p < .01$). For the classified staff sample and the overall scales for job satisfaction, this pattern of findings is a direct replication of Judge and his colleagues (Judge et al., 2000; Judge et al., 1998).

Next, the CSEWLC scale had slightly stronger relationships with all job satisfaction scales, especially with the classified staff sample. Among the undergraduate sample, six of the

11 scales relationships were positive and significant. Thus, the CSEWLC scale was positively and significantly related to the OJS scale ($r = .15, p < .05$), the overall JSS scale ($r = .18, p < .01$), the JSS supervision scale ($r = .22, p < .01$), the JSS rewards scale ($r = .18, p < .01$), the JSS operating procedures scale ($r = .24, p < .01$), and the JSS communication scale ($r = .16, p < .05$). For the classified staff sample, all 11 relationships were significant: the OJS scale ($r = .45, p < .01$), the JSS overall satisfaction scale ($r = .44, p < .01$), the JSS pay scale ($r = .17, p < .05$), the JSS promotion scale ($r = .29, p < .01$), the JSS supervision scale ($r = .30, p < .01$), the JSS benefits scale ($r = .18, p < .05$), the JSS rewards scale ($r = .38, p < .01$), the JSS operating procedures scale, ($r = .18, p < .05$), the JSS coworkers scale ($r = .34, p < .01$), the JSS nature of work scale ($r = .39, p < .01$), and the JSS communication scale ($r = .34, p < .01$). Thus, an examination of the correlations between the CSEWLC scale and multiple job satisfaction scales demonstrates that core self-evaluations are more strongly related to job satisfaction with the classified staff sample but not the undergraduate sample. In addition, these results are some of the first evidence to suggest that CSEWLC may act as an equally good predictor of job satisfaction as compared to CSELC.

Finally, the CSES, as with the CSELC and the CSEWLC scales, had similar patterns of relationships for both samples. For the undergraduate sample, five out of 11 correlations were significant. These correlations include the JSS overall satisfaction scale ($r = .18, p < .01$), the JSS supervision scale ($r = .22, p < .01$), the JSS rewards scale ($r = .18, p < .01$), the JSS operating procedures scale ($r = .24, p < .01$), and the JSS communication scale ($r = .16, p < .05$). Among the classified staff sample, 10 out of the 11 relationships were highly significant. These relationships were overall job satisfaction ($r = .39, p < .01$), JSS overall ($r = .46, p < .01$), JSS pay ($r = .25, p < .01$), JSS promotion ($r = .37, p < .01$), JSS supervision ($r = .21, p < .01$), JSS benefits

($r = .31, p < .01$), JSS rewards ($r = .41, p < .01$), JSS coworkers ($r = .32, p < .01$), JSS nature of work ($r = .42, p < .01$), and JSS communication ($r = .26, p < .01$). For the classified staff sample, the results for the relationships between the CSES and the global measures of job satisfaction (overall job satisfaction and the JSS overall) are consistent with previous findings (Judge et al., 2003).

Essentially within each sample, each of the scales that measured core self-evaluations demonstrated similar levels of correlations for the relationship between core self-evaluations and job satisfaction. Regardless of the sample, those individuals with more positive core self-evaluations were also more satisfied with their job. It is this type of robust finding that has led many researchers to suggest that dispositions have direct and significant effects on job satisfaction. In conclusion, moderate support was indicated for Hypothesis 1 based on the undergraduate sample with less support for the OJS scale, the JSS pay scale, the JSS benefits scale, the JSS coworkers scale, and the JSS nature of work scale. In contrast, stronger support was found for Hypothesis 1 with the classified staff sample but there were notable weaknesses with the JSS pay scale, the JSS benefits scale, and the JSS operating procedure scale.

Hypotheses 2a

Hypothesis 2a holds that core self-evaluations will be positively related to organizational embeddedness. Core self-evaluations were measured with three scales. Organizational embeddedness consisted of the organizational fit scale, organizational-related sacrifice scale, organizational links scales, and an additive composite of these scales named organizational embeddedness. In general, the pattern of correlations for each core self-evaluations scale was similar within the sample and different between the samples. Specifically, the correlations were much stronger for the classified staff sample.

For the CSEL scale, three out of four correlations were significant for the undergraduate sample and all correlations were significant for the classified staff sample. As shown in Table 21 for the undergraduate students, the CSEL scale was positively and significantly related to organizational fit ($r = .20, p < .01$), organizational links ($r = .15, p < .05$), and organizational embeddedness ($r = .19, p < .01$) but not organizational-related sacrifice ($r = .08, ns$). In comparison, all of the relationships were stronger for the classified staff sample- organizational fit ($r = .38, p < .01$), organizational-related sacrifice ($r = .27, p < .01$), organizational links ($r = .21, p < .01$), and organizational embeddedness ($r = .35, p < .01$).

Next, when core self-evaluations were measured by the CSEWLC scale, the relationships between the individual dimensions and the composite were consistent with findings from the CSEL scale. For both samples, CSEWLC was positively and significantly related to organizational embeddedness (undergraduate sample: $r = .22, p < .01$; classified staff sample: $r = .37, p < .01$). For the additional organizational embeddedness scales with the undergraduate sample, CSEWLC was positively and significantly related to organization fit ($r = .23, p < .01$) and organizational links ($r = .14, p < .05$) but not organizational-related sacrifice ($r = .11, ns$). Among the classified staff sample, CSEWLC was significantly related to organization fit ($r = .42, p < .01$), organizational-related sacrifice ($r = .30, p < .01$), and organizational links ($r = .18, p < .01$).

Subsequently, when core self-evaluations were measured with the CSES, the pattern of relationships for both the composite of organizational embeddedness and the individual dimensions were attenuated as compared to the CSEL and CSEWLC scales. For both samples, CSES was positively and significantly related to organizational embeddedness (undergraduate sample: $r = .16, p < .05$; classified staff sample: $r = .30, p < .01$). Next, for the undergraduate

sample, only organizational fit was positively and significantly to CSES ($r = .20, p < .01$). The CSES was significantly related to organizational-related sacrifice ($r = .08, ns$) or organizational links ($r = .07, ns$). With the classified staff sample, the CSES was significantly related to organizational fit ($r = .35, p < .01$) and organizational-related sacrifice ($r = .24, p < .01$) but not organizational links ($r = .14, ns$).

In conclusion, these results demonstrate partial support for Hypothesis 2a with notable weaknesses in the relationships between the core self-evaluations scales and organizational links. Within each sample, all scales demonstrated similar levels of correlations for the relationship between core self-evaluations and job satisfaction, but the relationships were attenuated with the undergraduate sample. Regardless of the sample, those individuals with more positive core self-evaluations were also more embedded in their organizations. Hypothesis 2a was partially supported with the undergraduate sample with notable weaknesses in the relationships with organizational related sacrifice for all scales and organizational links with the CSES. For the classified staff sample, Hypothesis 2a had stronger support with the exception of the weaker relationships between each of the scales and organizational links.

Hypothesis 2b

Hypothesis 2b predicts that core self-evaluations will be positively related to community embeddedness. As noted earlier, core self-evaluations were measured with three scales. Community embeddedness consisted of the community fit scale, community-related sacrifice scale, community links scales, and an additive composite of these scales called community embeddedness. In general, the pattern of correlations for each core self-evaluations scale was similar within the sample and different between the samples. Specifically, the correlations were much stronger for the classified staff sample.

With the core self-evaluations scale, three out of the four correlations were significant for both samples. Looking at Table 21 for the undergraduate sample, core self-evaluations as measured with the CSELC scale was moderately and significantly related to community embeddedness ($r = .21, p < .01$). Furthermore, the CSELC scale was positively and significantly related to the individual dimensions of community fit ($r = .19, p < .01$) and community-related sacrifice ($r = .17, p < .01$). However, CSELC was not significantly related to community links ($r = .10, ns$). By examining Table 22 for the classified staff sample, the results show that core self-evaluations as measured by the CSELC scale was strongly related to community embeddedness ($r = .45, p < .01$). In fact, the CSELC scale was positively and significantly related to both community fit ($r = .36, p < .01$) and community-related sacrifice ($r = .47, p < .01$) but not community links ($r = .13, ns$).

For the CSEWLC scale, the pattern of relationships was very similar to the correlations with the CSELC scale. With the undergraduate sample, core self-evaluations as measured with the CSEWLC scale was positively and significantly related to community embeddedness ($r = .22, p < .01$). As further evidence for support of this relationship, the CSEWLC scale was positively and significantly related to community fit ($r = .20, p < .01$) and community-related sacrifice ($r = .18, p < .01$) but not community links ($r = .07, ns$). Among the classified staff sample, core self-evaluations was strongly related to community embeddedness ($r = .47, p < .01$). Furthermore, the CSEWLC scale was significantly related to community fit ($r = .39, p < .01$) and community related sacrifice ($r = .48, p < .01$) but not community links ($r = .12, ns$).

Next, when core self-evaluations were measured with the CSES, the correlations were slightly smaller. For both samples, core self-evaluations as measured with the CSES was positively and significantly related to community embeddedness ($r = .18, p < .01$ and $r = .35, p$

< .01). Among the undergraduate sample, only community fit was significantly related to CSES ($r = .19, p < .01$). Meanwhile, community-related sacrifice and community links were weakly related to CSES ($r = .12, ns$ and $r = .05, ns$). For the classified staff sample, both community fit and community related sacrifice were moderately and significantly related to CSES ($r = .26, p < .01$ and $r = .37, p < .01$), but community links was less strongly related to CSES ($r = .12, ns$).

In summary, these results show partial support for Hypothesis 2b with notable weaknesses in the relationships between the core self-evaluations scales and community links. Thus, core self-evaluations positively influence one's level of community embeddedness. For the undergraduate sample, Hypothesis 2b was moderately supported due to the weaknesses with community links for all scales and community-related sacrifice for the CSES scale. With the classified staff sample, Hypothesis 2b was moderately supported but the pattern of correlations was much stronger. Again, notable weaknesses were found with community links across all scales within the classified staff sample.

Hypothesis 3a

Hypothesis 3a predicts that organizational embeddedness will be positively related to job satisfaction. As discussed earlier, organizational embeddedness was measured with three scales and an additive composite. Also, job satisfaction was conceptualized with 11 different scales. In general, the pattern of correlations was similar across organizational fit, organizational related sacrifice, and organizational embeddedness for both samples with far less support being found for organizational links.

Concerning organizational embeddedness, all of the correlations were significant for the undergraduate and classified staff samples with the exception of the JSS operating procedures scale ($r = .06, ns$ and $r = .03, ns$). For the undergraduate sample, the results indicated that

organizational embeddedness was positively and significantly related to overall job satisfaction and the job satisfaction facets with correlations ranging from .30 to .70. Among the classified staff sample, the pattern of relationships between organizational embeddedness and job satisfaction was highly similar to the undergraduate sample with correlations ranging from .29 to .69.

In regards to the individual dimensions of organizational embeddedness, the strongest relationships for both samples were found with organizational fit and organizational-related sacrifice. Among the undergraduate sample, organizational fit was positively and significantly related to all conceptualizations of job satisfaction with a range of .34 to .70. Although the pattern of relationships between organizational fit and the job satisfaction scales was similar for the classified staff sample with a range of .17 to .79, the relationship with the JSS rewards scale was not significant ($r = .14, ns$). As noted earlier, organizational-related sacrifice was strongly and significantly related to the majority of job satisfaction scales for the undergraduate sample with a range of .31 to .70. Furthermore, this same pattern of relationships was found with the classified staff sample with a range of .35 to .72. However, organizational-related sacrifice was not related to the JSS operating procedures scale for either sample ($r = -.04, ns$, and $r = .08, ns$). Finally, for organizational links, far less support was found for the correlations with both samples. For organizational links, only one correlation out of 11 was significant for the undergraduate sample (JSS nature of work: $r = .13, p < .05$). However, six out of 11 correlations were significant for the classified staff sample (OJS: $r = .29, p < .01$; JSS overall: $r = .24, p < .01$; JSS supervision: $r = .28, p < .01$; JSS rewards: $r = .22, p < .05$; JSS coworkers: $r = .21, p < .05$; JSS nature of work: $r = .23, p < .05$).

For both samples, the pattern of relationships of organizational embeddedness, organizational fit, and organizational related sacrifice with the job satisfaction scales was very similar. As hypothesized, organizational embeddedness was positively and significantly related to job satisfaction. Specifically, Hypothesis 3a was partially supported for the undergraduate sample due to the fact organizational embeddedness and two of its dimensions, organizational fit and organizational-related sacrifice, were strongly related to multiple job satisfaction scales. In addition, Hypothesis 3a received partial support for the classified staff sample because organizational embeddedness and all three of its dimensions were moderately related to the majority of job satisfaction scales. It is also important to note that organizational links had more consistent relationships with the job satisfaction scales for the classified staff sample.

Hypothesis 3b

Hypothesis 3b holds that community embeddedness will be positively related to job satisfaction. As noted earlier, community embeddedness was measured with three scales and an additive composite. Also, job satisfaction was conceptualized with 11 different scales. In general, the pattern of correlations was attenuated for the undergraduate sample. In addition, far less support was found for community links.

With community embeddedness, all of the correlations were significant for both samples with the exception of the relationship with the JSS- operating procedures scale ($r = -.04, ns$ and $r = .15, ns$). For the undergraduate sample, the results showed that community embeddedness was positively and significantly related to job satisfaction with a range of .14 to .28. For the classified staff sample, these relationships were stronger ranging from .23 to .45.

Since community embeddedness was an aggregate of three individual dimensions, each of these dimensions and their relationships to all job satisfaction scales are briefly reviewed. The

strongest relationships for both samples were found with community fit and community-related sacrifice. For the undergraduate sample, community fit was moderately and significantly related to eight of 11 job satisfaction scales with a range of .13 to .25. However, three of the job satisfaction scales were not significantly related to community fit (JSS operating procedures: $r = -.01$, *ns*; JSS coworkers: $r = .10$, *ns*; JSS communication: $r = .11$, *ns*). For the classified staff sample, community fit was related to only six of 11 job satisfaction scales with a range of .18 to .37 and was not significantly related to the remaining job satisfaction scales (JSS pay: $r = .09$, *ns*; JSS promotion: $r = .16$, *ns*; JSS supervision: $r = .13$, *ns*; JSS operating procedures: $r = .15$, *ns*; JSS coworkers: $r = .16$, *ns*). For both samples, community-related sacrifice showed the most consistent and strong relationships with job satisfaction. For the undergraduate sample, 10 of the 11 correlations were positive and significant ranging from .13 to .30 with the exception of the JSS operating procedures scale ($r = -.02$, *ns*). In comparison, the pattern of relationships for the classified staff sample was stronger ranging from .19 to .50, but community-related sacrifice was not significantly related to JSS operating procedures ($r = .11$, *ns*). For community links, far less support was found for the correlations with both samples. Only one correlation was significant for the undergraduate sample (JSS pay: $r = .14$, $p < .05$). However, with the classified staff sample, three correlations were significant (OJS: $r = .17$, $p < .05$; JSS coworkers: $r = .25$, $p < .01$; JSS communication: $r = .17$, $p < .05$).

To conclude, Hypothesis 3b was partially supported with the undergraduate sample due to the fact that community embeddedness was strongly related to multiple job satisfaction scales. In addition, both community fit and community-related sacrifice were related to the majority of job satisfaction scales. However, community links was not related to job satisfaction. Next, Hypothesis 3b was partially supported with the classified staff sample, as empirical support was

found for many of the relationships between community embeddedness, community fit, and community-related sacrifice and the job satisfaction scales. Moreover, far less support was found for the relationships between community links and the job satisfaction scales.

Hypotheses 4a-4c

As discussed previously, two single mediating models are estimated followed by a multiple mediating model that includes both organizational and community embeddedness (See Figures 1 and 2). To review these hypotheses, Hypothesis 4a states that organizational embeddedness will partly mediate the effect of core self-evaluations on job satisfaction. Next, Hypothesis 4b holds that community embeddedness will partly mediate the effect of core self-evaluations on job satisfaction. Finally, Hypothesis 4c posits that both organizational and community embeddedness will partly mediate the effect of core self-evaluations on job satisfaction. Each of these hypotheses will be examined by using structural equation modeling. Specifically, data analysis was conducted in two stages in which the measurement model was estimated separately followed by the structural model (Anderson & Gerbing, 1988).

Measurement Model

Although it was not a direct goal of this study, the factorial validity of organizational and community embeddedness were evaluated as a preliminary step in the analysis of the measurement model. Specifically, many of the correlations between the dimensions of organizational embeddedness and the job satisfaction scales were strong and significant (See Tables 21 and 22). As noted in previous chapters, these constructs have been shown to exhibit considerable convergent validity (Mitchell et al., 2001; Lee et al., 2004). Furthermore, Mitchell and his colleagues (2001) noted that organizational embeddedness and various dimensions of job satisfaction had conceptual similarity but argued for distinct constructs. Thus, the factorial

validity of these constructs remains in question. Although the correlations between community embeddedness and job satisfaction were much weaker in this dissertation as compared to organizational embeddedness, the factorial validity of community embeddedness in relation to job satisfaction has not been analyzed. Based on previous empirical research (c.f. Mitchell et al., 2001; Lee et al., 2004) and the results of this dissertation, it appears that community embeddedness and job satisfaction are distinct constructs. In order to address these questions, the factorial validity of organizational and community embeddedness were separately examined through a series of nested model comparisons.

For the undergraduate sample, Table 23 displays the results of the confirmatory factor analysis that examined whether or not organizational embeddedness and job satisfaction were two distinct constructs. The first model consists of organizational embeddedness and job satisfaction dimensions loading onto a single latent factor labeled job satisfaction. In contrast, the second model is a two-factor model that consists of two correlated, latent factors with a correlation of .99. Since both models were reasonable and similar approximations of the sample covariance matrix ($\chi_{(65)}^2 = 472.81$ and $\chi_{(64)}^2 = 473.52$), the models were compared using chi-square difference tests and model fit indices. With the exception of the RMSEA of .17 and the χ^2 / df of 7.27 and 7.40, these results suggest that both models fit the data moderately well as evidenced by the SRMR of .08, NFI of .89, CFI of .91, and NNFI of .89. Because the fit indices were similar for both models and the chi-square difference test exceeded the critical value of 1.96 to reject the null model in favor of both models, either model is arguably the best fitting model. Furthermore, the two-factor model did not result in a significant improvement in model fit. Therefore, a reasonable argument could be made in favor of the single factor model as it is more parsimonious. This view is further supported as previous empirical research has indicated

that these constructs exhibit a high degree of convergent validity (c.f. Mitchell et al., 2001; Lee et al., 2004). In sum, the single factor measurement model was the best fit to the data which is represented in Figure 5.

Measurement evaluation of the single factor model was conducted to determine the extent to which the manifest variables reflect their underlying construct. Table 24 includes the standardized loadings, average variance extracted and error variance, z-values, and composite and indicator reliabilities. All of the factor loadings were significant ($z \geq +1.96$), but organizational links ($z = 2.09$) and operating procedures ($z = 2.25$) were less significant as compared to the other factor loadings. Next, the average variance extracted of .44 was less than the general convention of .50 (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). The reason for this lower value was that the error variance accounted for by the manifest variables was high (ranging from .31 to .98). The composite reliability of .90 exceeded the critical value of .60 (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). Furthermore, indicator reliabilities ranged from .02 to .73 with organizational links with operating procedures only accounting for 2.0% of the variance in job satisfaction. Although the single factor model was touted as the most adequate measurement model, there are several weaknesses with the manifest variables.

As previously discussed, there were some problems with the manifest variables for the single factor model. Furthermore, researchers have argued that job satisfaction and organizational embeddedness are distinct, yet related constructs (Lee et al., 2003; Mitchell et al., 2001). However, the results of this dissertation have indicated that these constructs are best represented by a single latent construct. In a post hoc analysis known as model modification or a specification search (Kaplan, 1988; MacCallum, 1986), several changes were made to develop a

more parsimonious and theoretically consistent model¹⁶. Thus, five residual correlations were allowed with each greater than .25. It should be noted that these residuals were only freely estimated, if and only if, the estimates made theoretical sense (Jöreskog & Sörbom, 1993; MacCallum, 1986; MacCallum, Roznowski, & Necowitz, 1992; Sörbom, 1989)¹⁷. Further, these residual correlations were freed one at a time and reevaluated after each freed estimate. For example, the modification indices suggested that a significant improvement in model fit would occur if the residuals of JSS- nature of work and OJS were allowed to correlate (MI = 64.14). Recalling that OJS is a measure of overall satisfaction, closer inspection of the JSS facet measure of nature of work revealed that this measure also encompassed aspects of overall job satisfaction and not just facet job satisfaction. Thus, the errors between JSS- nature of work and OJS are expected to correlate. Next, it was also found that a significant improvement in model fit would occur if the residuals of JSS- coworkers and JSS- supervision were allowed to correlate (MI = 30.97). Upon further inspection of these measures, it was determined that some variation in these constructs was not explained by the single latent construct. In fact, these measures determine the extent to which an individual experiences affect towards a coworker or supervisor. So, the residuals for these measures were correlated. Third, substantial improvement in model fit could be achieved if the residuals between JSS- promotion and organizational sacrifice were allowed to correlate (MI = 25.93)¹⁸. Thus, there is variation among these two measures that is not captured by job satisfaction. These results are not surprising given that the investment model of job satisfaction supports these relationships (Farrell & Rusbult, 1981). In particular, these measures are also components of organizational rewards. Fourth, if the residuals between JSS- promotion and JSS- pay were allowed to correlate, a large improvement in model fit would occur (MI = 21.70). In particular, the residual correlation between these facets is supported by Farrell and

Rusbult's (1981) investment model. So, it makes sense that some variation in these constructs is due not only to job satisfaction but also to other unmeasured constructs. Fifth, freeing the residuals between JSS- benefits and organizational sacrifice was expected to result in a moderate change in model fit ($MI = 17.33$)¹⁹. As noted earlier, these measures are related to the reward components of Farrell and Rusbult's (1981) investment model. In conclusion, these modifications were based on strong theoretical underpinnings and were not pursued for the purpose of obtaining a best fitting model. Table 23 provides the fit statistics for the measurement model after the model was modified by allowing residual correlations between JSS- nature of work and OJS, JSS- promotion and JSS- pay, JSS-promotion and organizational sacrifice, JSS- coworkers and JSS- supervision, and JSS- benefits and organizational sacrifice. Results suggest that this model was an excellent fit (See Table 23: $\chi_{(60)}^2 = 233.98$, SRMR = .06, NFI = .94, CFI = .95, NNFI = .94) with the exception of the $\chi^2 / df = 3.90$ and the RMSEA of .11. Furthermore, significant improvement in model fit was seen in this model as compared to the null model ($\chi_{(78)}^2 = 3480.78$, $\Delta\chi^2 = 3246.72$, $\Delta df = 18$). Since the measurement properties of the single factor model did not result in drastic changes after modification, this information is available in Appendix S. In conclusion, the single factor model was the best fitting model for the undergraduate sample.

Table 23

Goodness of Fit Statistics for Organizational Embeddedness and Job Satisfaction Measurement Model – Undergraduate Sample

Model	χ^2	df	χ^2/df	RMSEA	SRMR	NFI	CFI	NNFI
Null Model	3480.70	78	44.62					
Model 1 Single factor model	472.81	65	7.27	.17	.08	.89	.91	.89
Model 2 Two-factor model	473.52	64	7.40	.17	.08	.89	.91	.89
Null vs. Model 1	3007.89	13						
Null vs. Model 2	3007.18	14						
Model 1 vs. Model 2	-.71	1						
Model 3 Single factor model after modification	233.98	60	3.90	.11	.06	.94	.95	.94
Null Model vs. Model 3	3246.72	18						

Note: χ^2 = chi-square; df = degrees of freedom; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; NFI = normed fit index; CFI = comparative fit index; NNFI = non-normed fit index

Figure 5

Measurement Model for the Single Factor Model – Undergraduate Sample

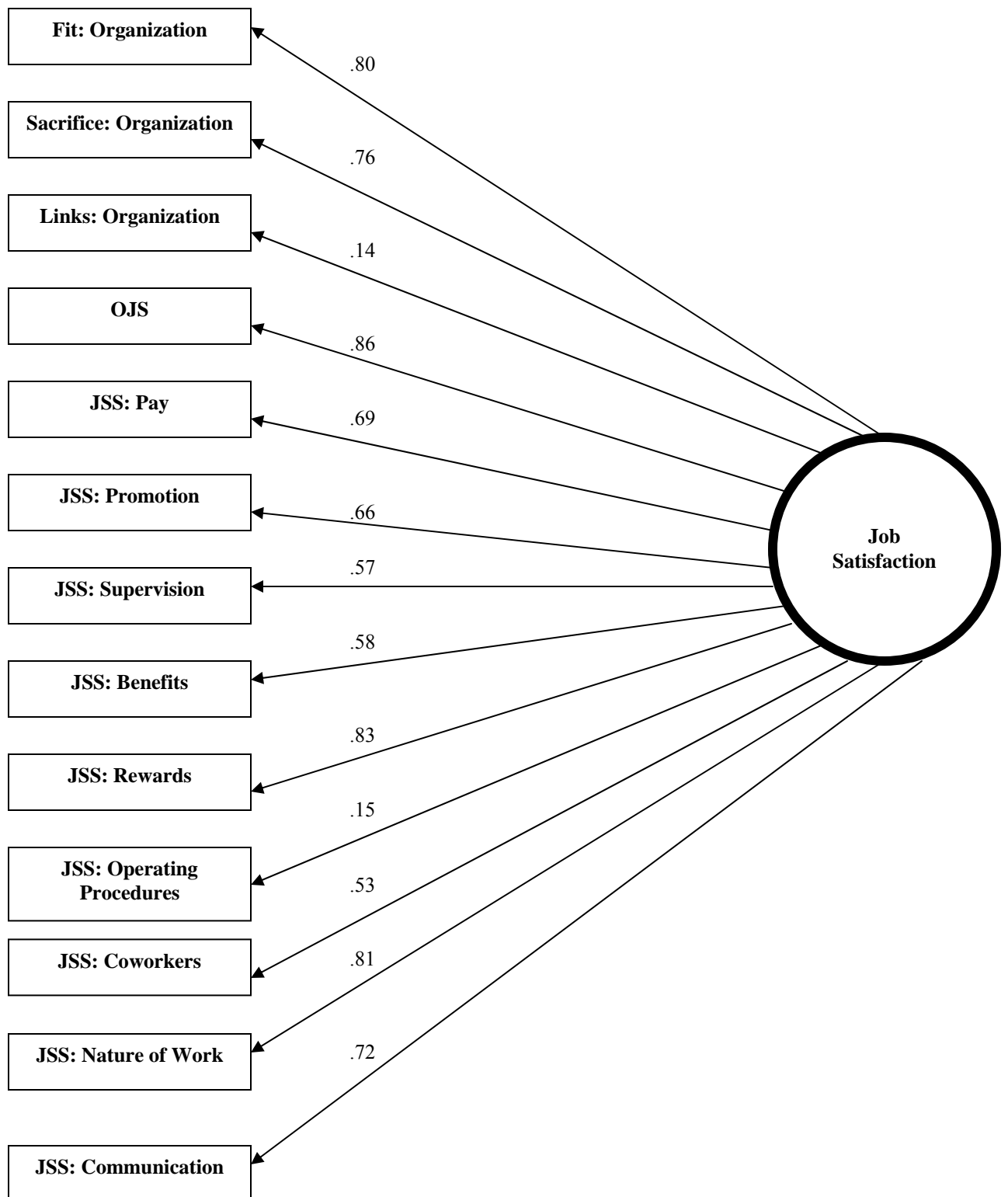


Table 24

Measurement Properties for the Single Factor Model – Undergraduate Sample

Indicator	Standardized Loading	Average Variance Extracted^a	z-value	Composite Reliability^c
		.44		.90
		Error Variance^b		Indicator Reliability^d
Fit: Organization	.80	.37	14.10	.63
Sacrifice: Organization	.76	.42	13.30	.58
Links: Organization	.14	.98	2.09	.02
OJS	.86	.27	15.77	.73
JSS: Pay	.69	.52	11.61	.48
JSS: Promotion	.66	.57	10.83	.43
JSS: Supervision	.57	.67	9.12	.33
JSS: Benefits	.58	.66	9.33	.34
JSS: Rewards	.83	.31	15.04	.69
JSS: Operating Procedures	.15	.98	2.25	.02
JSS: Coworkers	.53	.72	8.33	.28
JSS: Nature of Work	.81	.34	14.61	.66
JSS: Communication	.72	.48	12.20	.52

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the amount of measurement error associated with each indicator. ^c Composite reliability is the degree of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

For the classified staff sample, Table 25 displays the results of the confirmatory factor analysis that examined whether or not organizational embeddedness and job satisfaction were two distinct constructs. As with the undergraduate sample, the first model consists of organizational embeddedness and job satisfaction loading onto a single latent factor called job satisfaction. In contrast, the second model is a two-factor model that consists of two correlated latent factors with a correlation of .93. Both models were very similar in regards to model fit ($\chi_{(65)}^2 = 262.99$ and $\chi_{(64)}^2 = 262.36$). With the exception of the RMSEA of .16 and the χ^2 / df of 4.05 and 4.10, these results suggest that both models fit the data moderately well as evidenced by the SRMR of .08, NFI of .85, CFI of .88, and NNFI of .85. As with the undergraduate sample, the fit indices were similar for both models; and the chi-square difference test exceeded the critical value of 1.96 to reject the null model in favor of both models. However, the single factor model was more parsimonious. Further, the correlation between the two factors was .93. Thus, the single factor measurement model was the best fit to the data which is represented in Figure 6.

The single factor model was further examined to determine the extent to which the manifest variables reflect their underlying construct. Table 26 includes the standardized loadings, average variance extracted and error variance, z-values, and composite and indicator reliabilities. All of the standardized factor loadings were significant ($z \geq +1.96$). However, operating procedures ($z = 2.03$) was less significant as compared to the other factor loadings. Furthermore, the average variance extracted of .42 was slightly less than the undergraduate sample and the .50 threshold (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). The reason for this low value was that the error variance of organizational links, benefits, and operating procedures were high (.91, .91, and .96). Next, the composite reliability of .89 exceeded the critical value of .60 (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981) and was similar to the value found

with the undergraduate sample. Next, indicator reliabilities ranged from .04 to .77. Once again, the single factor model was decidedly the most adequate measurement model, but some weaknesses were found with the manifest variables.

As with the undergraduate sample, a post hoc analysis using model modification was conducted in order to develop a more parsimonious and theoretically consistent model²⁰. The same rigorous steps were followed before any residuals were allowed to correlate. Thus, four residual correlations were found with values no greater than .31. Three of these correlations were the same as with the undergraduate sample thereby providing evidence that these residual correlations did not occur by chance. First, modification indices suggested that a significant improvement in model fit would occur if the residuals of JSS- nature of work and OJS were allowed to correlate (MI = 48.46). Second, a significant improvement in model fit would occur if the residuals of JSS- pay and JSS- promotion were allowed to correlate (MI = 22.89). Third, improvement in model fit could be achieved if the residuals between OJS and organizational fit were allowed to correlate (MI = 19.95)²¹. Thus, there is variation among these two measures that is not captured by job satisfaction. These results are not surprising given that components of these measures encompass aspects of organizational fit. Fourth, freeing the residuals between JSS- coworkers and JSS- supervision was expected to result in a moderate change in model fit (MI = 13.99). In conclusion, these modifications were based on strong theoretical underpinnings and were not pursued for the purpose of obtaining a best fitting model. Furthermore, the strongest support was found for correlations between JSS- nature of work and OJS, JSS- promotion and JSS- pay, and JSS- coworkers and JSS- supervision. In contrast, weaker support was found for OJS and organization fit because these results were not found with the undergraduate sample²². Table 25 provides the fit statistics for the measurement model after the

model was modified by the previously mentioned residuals to correlate. Results suggest that this model was an excellent fit (See Table 25: $\chi^2_{(61)} = 129.22$, $\chi^2 / df = 2.12$, SRMR = .07, NFI = .91, CFI = .95, NNFI = .93) with the exception of the RMSEA of .10. Furthermore, significant improvement in model fit was seen in this model as compared to the null model ($\chi^2_{(78)} = 1692.87$, $\Delta\chi^2 = 1563.65$, $\Delta df = 17$). Since the measurement properties of the single factor model were similar after modification, this information is presented in Appendix T. In conclusion, the single factor model was the best fitting model for the classified staff sample.

Table 25

Goodness of Fit Statistics for Organizational Embeddedness and Job Satisfaction Measurement Model – Classified Staff Sample

Model	χ^2	df	χ^2/df	RMSEA	SRMR	NFI	CFI	NNFI
Null Model	1692.87	78	21.70					
Model 1 Single factor model	262.99	65	4.05	.16	.08	.85	.88	.85
Model 2 Two-factor model	262.36	64	4.10	.16	.08	.85	.88	.86
Null vs. Model 1	1429.88	13						
Null vs. Model 2	1430.51	14						
Model 1 vs. Model 2	-.63	1						
Model 3 Single factor model after modification	129.22	61	2.12	.10	.07	.91	.95	.93
Null Model vs. Model 3	1563.65	17						

Note: χ^2 = chi-square; df = degrees of freedom; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; NFI = normed fit index; CFI = comparative fit index; NNFI = non-normed fit index

Figure 6

Measurement Model for the Single Factor Model – Classified Staff Sample

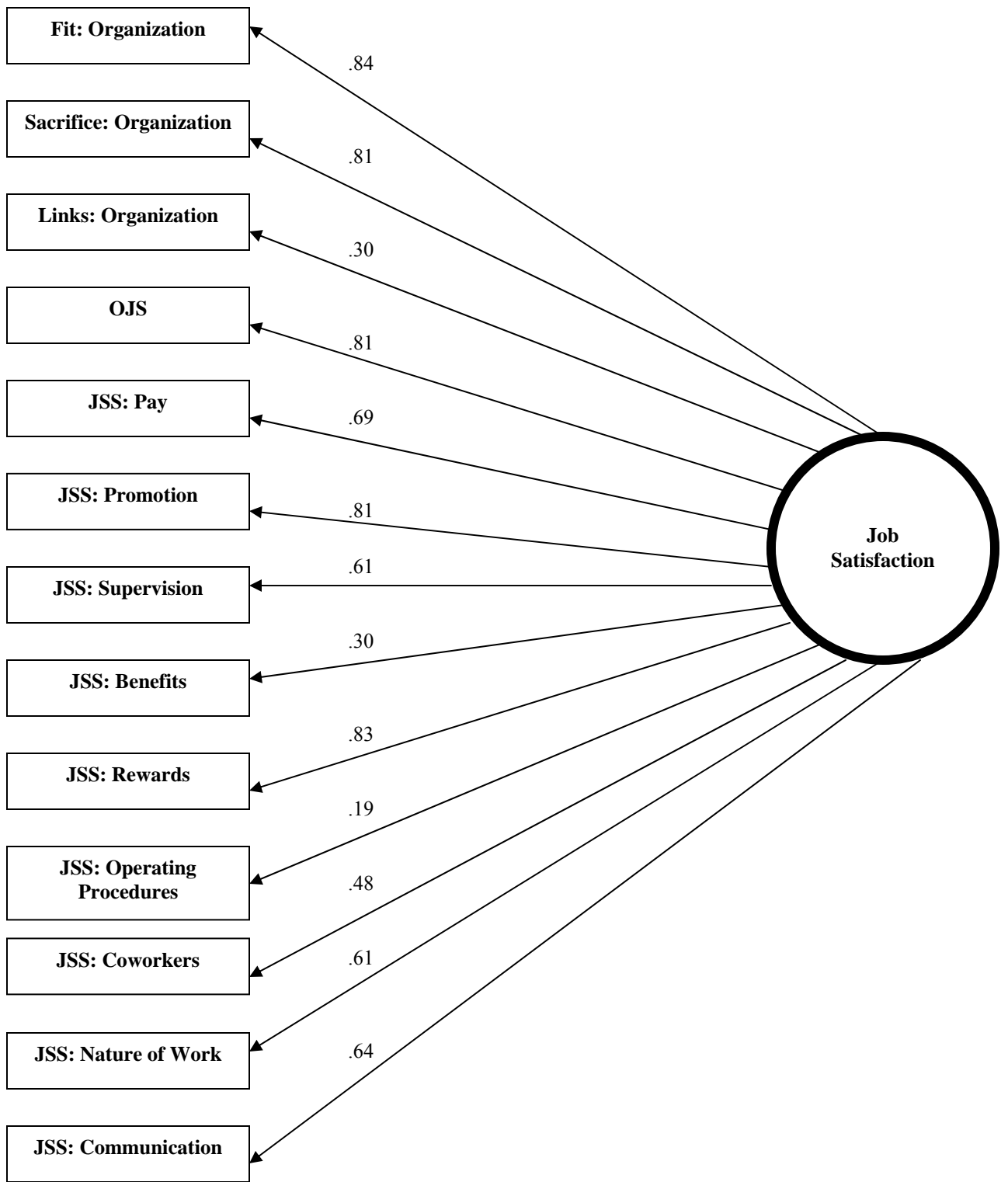


Table 26

Measurement Properties for the Single Factor Model – Classified Staff Sample

Indicator	Standardized Loading	Average Variance Extracted^a	z-value	Composite Reliability^c
		.42		.89
		Error Variance^b		Indicator Reliability^d
Fit: Organization	.84	.29	11.30	.71
Sacrifice: Organization	.81	.35	10.60	.66
Links: Organization	.30	.91	3.22	.09
OJS	.81	.35	10.61	.66
JSS: Pay	.69	.52	8.46	.48
JSS: Promotion	.81	.34	10.65	.46
JSS: Supervision	.61	.63	7.25	.37
JSS: Benefits	.30	.91	3.29	.09
JSS: Rewards	.83	.31	11.05	.69
JSS: Operating Procedures	.19	.96	2.03	.04
JSS: Coworkers	.48	.77	5.46	.23
JSS: Nature of Work	.61	.63	7.23	.37
JSS: Communication	.64	.59	7.67	.41

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the degree of measurement error associated with each indicator. ^c Composite reliability is the amount of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

For the undergraduate sample, Table 27 displays the results of the confirmatory factor analysis that examined whether or not community embeddedness and job satisfaction were two distinct constructs. The first model consists of community embeddedness and job satisfaction loading onto a single latent factor. In contrast, the second model is a two-factor model that consists of two correlated, latent factors with a correlation of .36. Results showed that the two-factor model was the best fitting model as evidenced by the fit indices ($\chi_{(64)}^2 = 355.40$, $\chi^2 / df = 5.55$, RMSEA= .14, SRMR= .09, NFI= .87; CFI= .90, NNFI= .87) although there are weaknesses with the RMSEA of .14 and χ^2 / df of 5.55. In addition, this model was a better fit than the single factor model ($\chi_{(65)}^2 = 437.40$, $\Delta\chi^2 = 82.00$, 1 df) or the null model (Null Model A: $\chi_{(78)}^2 = 2402.57$, $\Delta\chi^2 = 2047.17$, 14 df). Furthermore, the chi-square difference test exceeded the critical value of 1.96 to reject the null model in favor of the two-factor model. Thus, the final measurement model that consisted of two correlated factors is shown in Figure 7.

The measurement properties of the two-factor model of community embeddedness and job satisfaction are presented in Table 28. These measurement properties include the standardized loadings, average variance extracted and error variance, z-values, and composite and indicator reliabilities. All of the factor loadings were significant ($z \geq +1.96$) with the exception of community links ($z = 1.68$). Furthermore, operating procedures ($z = 2.48$) was less significant as compared to the other factor loadings. For the community embeddedness factor, the average variance extracted of .43 was less than the .50 threshold (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). The reason for this low value was that the error variance for community links was extremely large (.99). However, the composite reliability for this factor was .94 which exceeded the recommended threshold of .60 (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). For the community embeddedness factor, indicator reliabilities ranged

from .09 to .71. For the job satisfaction factor, the average variance extracted of .47 was slightly below the .50 level (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). Next, the composite reliability of .89 exceeded the critical value of .60 (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). Furthermore, indicator reliabilities ranged from .03 to .71. Thus, the two-factor model was decidedly the most adequate measurement model, but some weaknesses were found with the manifest variables for both community embeddedness and job satisfaction.

As previously noted, there were some problems with the manifest variables for community embeddedness and job satisfaction. For example, a detailed analysis of the modification indices revealed that several residuals could be allowed to freely correlate and result in significant improvements in model fit²³. As with the previous measurement models, these residuals were only estimated if they made theoretical sense (Jöreskog & Sörbom, 1993; MacCallum, Roznowski, & Necowitz, 1992; MacCallum, 1986; Sörbom, 1989). In addition, these residual correlations were freed one at a time and reevaluated after each freed estimate. As further confirmation that these correlations did not occur by chance alone, they were cross-validated with the classified staff sample MacCallum, 1986; MacCallum et al., 1992; Sörbom, 1989). Thus, three residual correlations were found with values no greater than .26. These were the same correlated residuals that were found with the previous measurement models. For example, the modification indices suggested that a significant improvement in model fit would occur if the residuals of JSS- nature of work and OJS were allowed to correlate (M.I. = 86.37). Next, it was also found that a significant improvement in model fit would occur if the residuals of JSS- promotion and JSS- pay were allowed to correlate (M.I. = 29.58). Upon further inspection of these measures, it was determined that if the residuals between JSS- coworkers and JSS- supervision were allowed to correlate, a moderate improvement in model fit would occur

(M.I = 21.52). Table 27 provides the fit statistics for the measurement model after the model was modified by allow residual correlation between JSS- nature of work and OJS, JSS- promotion and JSS- pay, and JSS- coworkers and JSS- supervision. Results suggest that this model was an excellent fit ($\chi_{(61)}^2 = 184.92$, SRMR= .07, NFI = .93, CGI= .95, NNFI = .94) with the exception of $\chi^2 / df = 3.03$ and RMSEA= .10. Furthermore, significant improvement in model fit was seen in this model as compared to the null model after modification ($\chi_{(78)}^2 = 2402.57$, $\Delta\chi^2 = 2217.65$, $\Delta df = 17$). Since the measurement properties of the two-factor model were similar after modification, this information is shown in Appendix U. In conclusion, the two-factor model of community embeddedness and job satisfaction was the best fitting model for the undergraduate sample.

Table 27

Goodness of Fit Statistics for Community Embeddedness and Job Satisfaction Measurement
Model – Undergraduate Sample

Model	χ^2	df	χ^2/df	RMSEA	SRMR	NFI	CFI	NNFI
Null Model	2402.57	78	30.80					
Model 1 Single factor model	437.40	65	7.29	.16	.08	.83	.85	.82
Model 2 Two-factor model	355.40	64	5.55	.14	.08	.87	.90	.87
Null vs. Model 1	1965.17	13						
Null vs. Model 2	2047.17	14						
Model 1 vs. Model 2	8.00	1						
Model 3 Two-factor model after modification	184.92	61	3.03	.10	.07	.93	.95	.94
Null Model vs. Model 3	2217.65	17						

Note: χ^2 = chi-square; df = degrees of freedom; RMSEA= root mean square error of approximation; SRMR = standardized root mean square residual; NFI = normed fit index; CFI = comparative fit index; NNFI = non-normed fit index

Figure 7

Measurement Model for the Two-Factor Model - Undergraduate Sample

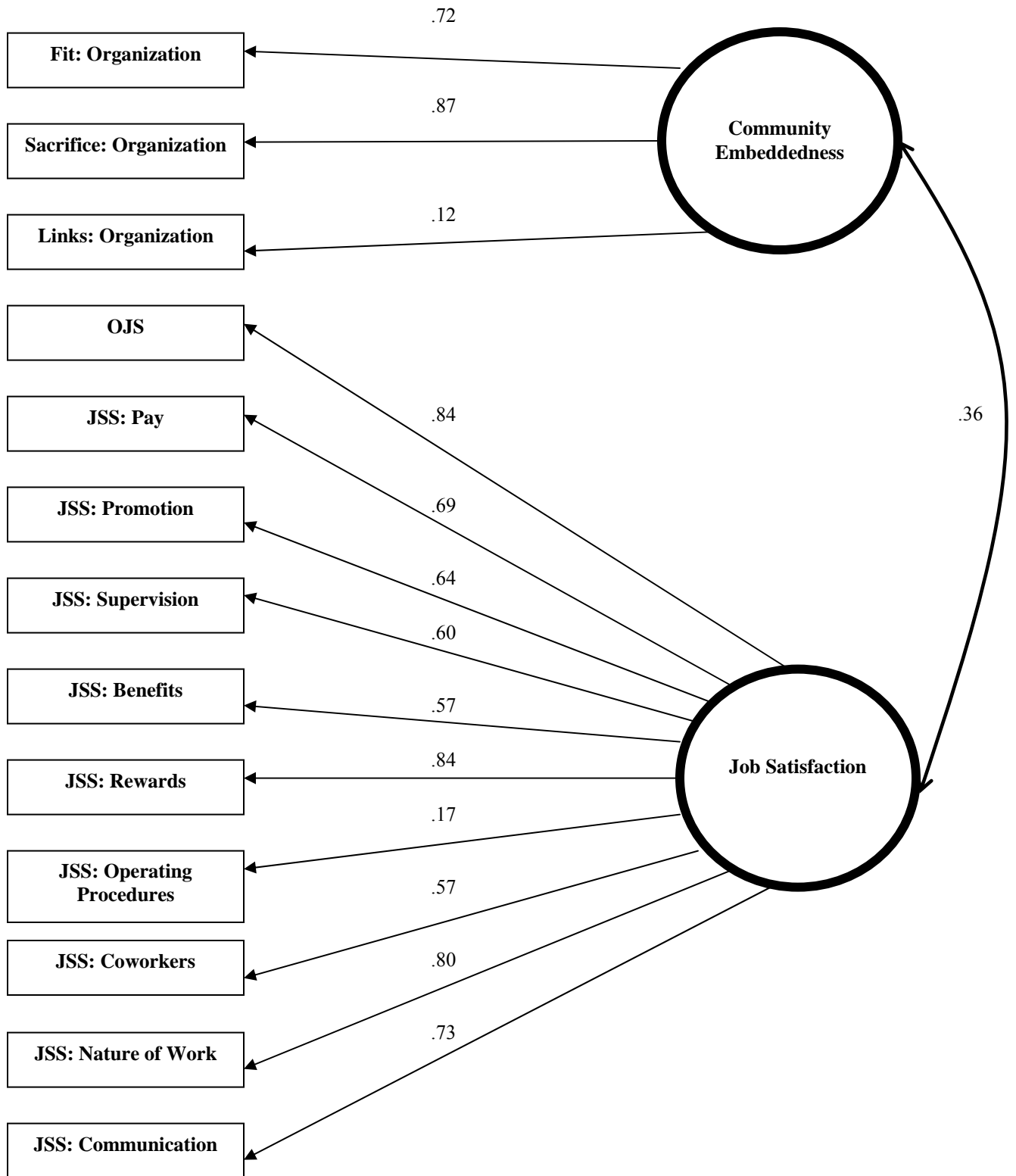


Table 28

Measurement Properties for the Two-Factor Model – Undergraduate Sample

Indicator	Standardized Loading	Average Variance Extracted^a	z-value	Composite Reliability^c
Community Embeddedness		.43		.94
		Error Variance^b		Indicator Reliability^d
Fit: Community	.72	.49	7.81	.51
Sacrifice: Community	.87	.24	8.59	.76
Links: Community	.12	.99	1.68	.01
		Average Variance Extracted^a		Composite Reliability^c
Job Satisfaction		.47		.89
		Error Variance^b		Indicator Reliability^d
OJS	.84	.29	15.25	.71
JSS: Pay	.69	.53	11.37	.47
JSS: Promotion	.64	.60	10.28	.40
JSS: Supervision	.60	.64	9.63	.36
JSS: Benefits	.57	.67	9.05	.33
JSS: Rewards	.84	.29	15.23	.71
JSS: Operating Procedures	.17	.97	2.48	.03
JSS: Coworkers	.57	.67	9.03	.33
JSS: Nature of Work	.80	.35	14.21	.65
JSS: Communication	.73	.47	12.36	.53

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the degree of measurement error associated with each indicator. ^c Composite reliability is the amount of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

For the classified staff sample, Table 29 displays the results of the confirmatory factor analysis that examined whether or not community embeddedness and job satisfaction were two distinct constructs. The first model consists of community embeddedness and job satisfaction dimensions loading onto a single latent factor. Then, the second model is a two-factor model that consists of two correlated, latent factors with a correlation of .56. The results indicate that the two-factor model ($\chi_{(64)}^2 = 216.44$) is a much better fit to the data as compared to the null model (Null Model A: $\chi_{(78)}^2 = 1187.32$, $\Delta\chi^2 = 970.88$, 14 df) and single factor model ($\chi_{(65)}^2 = 248.76$, $\Delta\chi^2 = 32.32$, 1 df). Furthermore, the chi-square difference test exceeded the critical value of 1.96 to reject the null model in favor of the two-factor model. However, this model is only a mediocre fit to the data with a RMSEA of .14, χ^2 / df of 3.38, SRMR of .09, NFI of .82, CFI of .86, and NNFI of .83. Thus, the two-factor measurement model was the best fit to the data which is represented in Figure 8.

Measurement evaluation of the two-factor model was conducted to determine the extent to which the manifest variables reflect their underlying construct. Table 30 includes the standardized loadings, average variance extracted and error variance, z-values, and composite and indicator reliabilities. All of the standardized factor loadings were significant ($z \geq +1.96$) with the exception of community links ($z = 1.88$). Also, operating procedures ($z = 2.23$) was less significant as compared to the other factor loadings. For the community embeddedness factor, the average variance extracted of .42 was less than the general convention of .50 (Diamantopoulos & Siguaaw, 2000; Fornell & Larcker, 1981). The reason for this low value was that the error variance accounted for by community fit and community links was high (.69 and .97). The composite reliability of .62 barely exceeded the critical value of .60 (Diamantopoulos & Siguaaw, 2000; Fornell & Larcker, 1981). Furthermore, indicator reliabilities ranged from .03

to .91 for community embeddedness. For job satisfaction, the average variance extracted of .40 was also lower than the threshold of .50 (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). The low value was directly attributable to large error variances of .90 for benefits and .96 for operating procedures. However, the composite reliability of .86 was much higher than the recommended .60 level (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). In conclusion, the two-factor model was the best fitting measurement model, but there were several weaknesses with the manifest variables and with overall model fit.

As with the undergraduate sample, there were similar problems with the manifest variables for community embeddedness and job satisfaction for the classified staff sample. In the same process described earlier, residual correlations were freed one at a time and reevaluated after each freed estimate to improve model parsimony²⁴. As with the undergraduate sample, three residual correlations were found with values no greater than .41. These were the same and provided evidence that these residual correlations did not occur by chance alone. Thus, Table 29 provides the fit statistics for the measurement model after the model was modified by allowing residual correlation between JSS- nature of work and OJS (M.I. = 53.69), JSS- promotion and JSS- pay (M.I.= 18.98), and JSS- coworkers and JSS- supervision (M.I. = 15.35). Results suggest that this model was a good fit ($\chi_{(61)}^2 = 119.41$, $\chi^2 / df = 1.99$, RMSEA= .09, SRMR= .07, NFI = .89, CFI = .94, NNFI= .92). Furthermore, significant improvement in model fit was seen in this model as compared to the null model (Null Model: $\chi_{(78)}^2 = 1187.32$, $\Delta\chi^2 = 1067.91$, 17 df). Since the measurement properties of the two-factor model were similar after modification, this information is shown in Appendix V. In conclusion, the two-factor model of community embeddedness and job satisfaction was the best fitting model for the classified staff sample.

Table 29

Goodness of Fit Statistics for Community Embeddedness and Job Satisfaction Measurement
Model – Classified Staff Sample

Model	χ^2	df	χ^2/df	RMSEA	SRMR	NFI	CFI	NNFI
Null Model	1187.32	78	15.22					
Model 1 Single factor model	248.76	65	3.83	.15	.09	.79	.83	.80
Model 2 Two-factor model	216.44	64	3.38	.14	.09	.82	.86	.83
Null vs. Model 1	938.56	13						
Null vs. Model 2	970.88	14						
Model 1 vs. Model 2	32.32	1						
Model 3 Two-factor model after modification	119.41	61	1.99	.09	.07	.89	.94	.92
Null Model B vs. Model 3	1067.91	17						

Note: χ^2 = chi-square; df = degrees of freedom; RMSEA= root mean square error of approximation; SRMR = standardized root mean square residual; NFI = normed fit index; CFI = comparative fit index; NNFI = non-normed fit index

Figure 8

Measurement Model for the Two-Factor Model: Classified Staff Sample

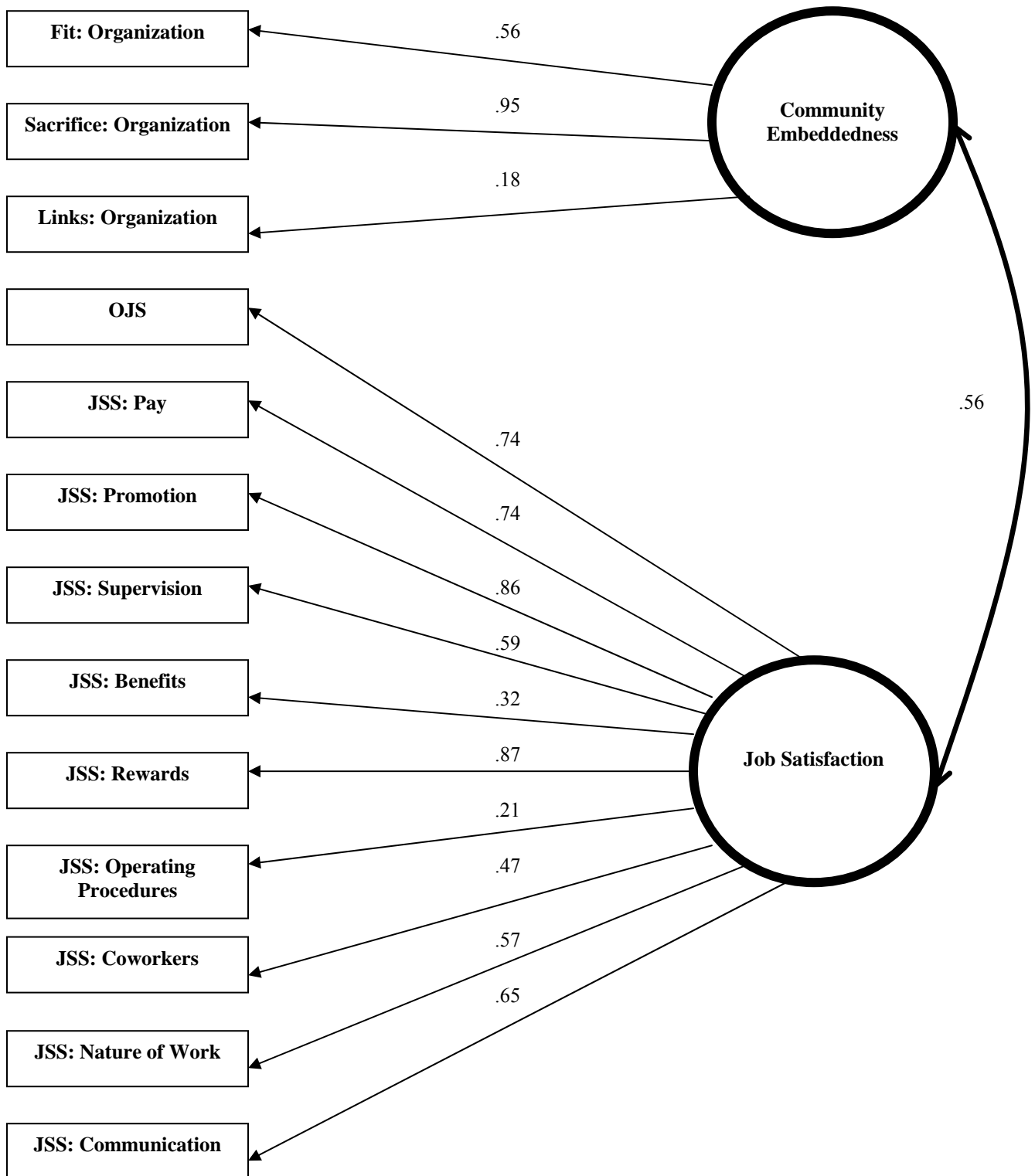


Table 30

Measurement Properties for the Two-Factor Model of Community Embeddedness and Job Satisfaction – Classified Staff Sample

Indicator	Standardized Loading	Average Variance Extracted^a	z-value	Composite Reliability^c
Community Embeddedness		.52		.62
		Error Variance^b		Indicator Reliability^d
Fit: Community	.56	.69	5.45	.31
Sacrifice: Community	.95	.09	7.94	.91
Links: Community	.18	.97	1.86	.03
		Average Variance Extracted^a		Composite Reliability^c
Job Satisfaction		.40		.86
		Error Variance^b		Indicator Reliability^d
OJS	.74	.45	9.29	.55
JSS: Pay	.74	.45	9.23	.55
JSS: Promotion	.86	.26	11.50	.74
JSS: Supervision	.59	.66	6.80	.34
JSS: Benefits	.32	.90	3.42	.10
JSS: Rewards	.87	.25	11.69	.75
JSS: Operating Procedures	.21	.96	2.23	.04
JSS: Coworkers	.47	.78	5.21	.22
JSS: Nature of Work	.57	.67	6.64	.33
JSS: Communication	.65	.58	7.70	.42

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the degree of measurement error associated with each indicator. ^c Composite reliability is the amount of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

For both samples, a post hoc analysis, known as a specification search, was conducted with the single factor measurement model that consisted of organizational embeddedness and job satisfaction manifest variables. Consistent support was found for the residual correlations between JSS- nature of work and OJS, JSS- promotion and JSS- pay, and JSS- coworkers and JSS- supervision. However, the residual correlations between benefits and organizational sacrifice and promotion and organizational sacrifice could not be verified with the classified staff sample. On the other hand, the residual correlation between OJS and organizational fit also could not be replicated with the undergraduate sample. Thus, there is some doubt to the validity of these relationships because of the instability between samples. These results were confirmed by a double-cross validation analysis (c.f. Bagozzi & Yi, 1988; Cudeck & Browne, 1983) as shown in Table 31. Although both modified models had lower CVI values as compared to the original model, the lowest CVI was found with the classified staff as the calibration sample. Thus, the modified measurement model from the classified staff sample has the greatest predictive validity but researchers should interpret the residual correlations between benefits and organizational sacrifice, promotion and organizational sacrifice, and OJS and organizational fit with caution. In conclusion, the most consistent support was found for the residual correlations between JSS- nature of work and OJS, JSS- promotion and JSS- pay, and JSS- coworkers and JSS- supervision.

Table 31

Double Cross-Validation Results for Organizational Embeddedness and Job Satisfaction

		Original Model	Modified Model
Sample Combinations	S_U, Σ_C	CVI = 2.26	CVI = 1.84
	S_C, Σ_U	CVI = 2.79	CVI = 2.07

Note: S = covariance matrix of validation sample, Σ = implied covariance matrix calibration sample, u = undergraduate, c = classified staff

Again for both samples, a specification search was used to further examine the two-factor measurement model that consisted of community embeddedness and job satisfaction. Results showed support for the residual correlations between JSS- nature of work and OJS, JSS- promotion and JSS- pay, and JSS- coworkers and JSS- supervision. No additional residual correlations were found for either sample. As further evidence for the validity of these changes to the model, a double cross-validation analysis was conducted (c.f. Bagozzi & Yi, 1988; Cudeck & Browne, 1983). The results of these analyses are shown in Table 32. It can be seen that the modified models have lower CVI values thereby confirming our previous results that the modified measurement model has the greatest predictive validity. To reiterate, consistent support has been found for the residual correlations between JSS- nature of work and OJS, JSS- promotion and JSS- pay, and JSS- coworkers and JSS- supervision.

Table 32

Double Cross-Validation Results for Community Embeddedness and Job Satisfaction

		Original Model	Modified Model
Sample Combinations	S_U, Σ_C	CVI = 2.14	CVI = 1.46
	S_C, Σ_U	CVI = 2.53	CVI = 1.74

Note: S = covariance matrix of validation sample, Σ = implied covariance matrix calibration sample, u = undergraduate, c = classified staff

As described earlier, organizational embeddedness and job satisfaction are not distinct constructs. Thus, the hypothesis that organizational embeddedness mediates the relationship between core self-evaluations and job satisfaction could not be examined. Furthermore, the hypothesis that examines multiple mediating effects of organizational and community embeddedness could not be evaluated. In conclusion, Hypotheses 4a and 4c were not supported.

In contrast, there is empirical support that community embeddedness and job satisfaction are distinct constructs. Thus, an overall measurement model that included core self-evaluations, community embeddedness, and job satisfaction was estimated. As a preliminary evaluation step, the modification indices were examined for both samples because core self-evaluations was added to the measurement model. For both samples, no additional modifications were necessary. Table 33 provides the fit statistics for the full measurement model that consists of core self-evaluations, community embeddedness, and job satisfaction for both samples.

Table 33

Fit Statistics for Full Measurement Model

Statistic	Undergraduate Sample Value	Classified Staff Sample Value
χ^2	259.77	197.18
<i>df</i>	98	98
χ^2/df	2.65	2.01
RMSEA	.09	.09
SRMR	.07	.08
NFI	.92	.89
CFI	.95	.94
NNFI	.94	.93

Note: χ^2 = chi-square; *df* = degrees of freedom; RMSEA= root mean square error of approximation; SRMR = standardized root mean square residual; NFI = normed fit index; CFI = comparative fit index; NNFI = non-normed fit index

Table 34 provides detailed information from the undergraduate sample on the measurement properties for the full measurement model that includes core self-evaluations, community embeddedness, and job satisfaction. All of the factor loadings were significant ($z \geq +1.96$) with the exception of community links ($z = 1.85$). The reason for this finding is due to the low reliability of the measure and open-ended format of items used. Operating procedures ($z = 2.42$) was less significant as compared to the other factor loadings. Again, this is not surprising given the poor reliability of this measure. Each of the composite reliabilities exceeded the .60 level (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981). Although the average variance extracted for core self-evaluations (.86) and community embeddedness (.60) were higher than the .50 threshold (Diamantopoulos & Siguaw, 2000; Fornell & Larcker, 1981), it was much lower for job satisfaction (.44). The reason for this lower value is that several of the indicators had large residual values. Additional information on the impact of each manifest variable in relation to its latent construct can be found by looking at the standardized loadings presented in Table 34. In the undergraduate model, both CSELC (.98) and CSEWLC (.99) were stronger indicators of core self-evaluations as compared to CSES (.80). For community embeddedness, community sacrifice (.83) was the strongest indicator followed by community fit (.75) and then community links (.14). With job satisfaction, overall job satisfaction (.78) and JSS- rewards (.88) were the strongest indicators. In conclusion, the full measurement model for the undergraduate sample was an excellent fit to the data as evidenced by the fit statistics ($\chi^2_{(98)} = 259.77$, $\chi^2 / df = 2.65$, RMSEA = .09, SRMR = .07, NFI = .92, CFI = .95, NNFI = .94). Furthermore, the measurement properties for this model were good but there were notable weaknesses with some of the indicators for community embeddedness and job satisfaction.

Table 34

Measurement Properties for the Core Self-Evaluations, Community Embeddedness, and Job Satisfaction Measurement Model – Undergraduate Sample

Indicator	Standardized Loading	Average Variance Extracted ^a	z-value	Composite Reliability ^c
Core Self-Evaluations		.86		.95
		Error Variance^b		Indicator Reliability^d
CSELC	.98	.04	20.25	.96
CSEWLC	.99	.02	20.59	.98
CSES	.80	.36	14.52	.64
		Average Variance Extracted^a		Composite Reliability^c
Community Embeddedness		.60		.63
		Error Variance^b		Indicator Reliability^d
Fit	.75	.43	8.67	.57
Sacrifice	.83	.31	9.15	.69
Links	.14	.98	1.85	.02
		Average Variance Extracted^a		Composite Reliability^c
Job Satisfaction		.44		.88
		Error Variance^b		Indicator Reliability^d
OJS	.78	.40	13.34	.60
Pay	.70	.51	11.56	.49
Promotion	.64	.49	10.30	.41
Supervision	.61	.63	9.58	.37
Benefits	.60	.63	9.56	.37
Rewards	.88	.22	16.12	.78
Operating Procedures	.17	.97	2.42	.03
Coworkers	.55	.70	8.55	.30
Nature of Work	.72	.48	11.99	.52
Communication	.72	.48	11.95	.52
Error Covariances				
Nature of Work – OJS		.26	6.30	
Promotion – Pay		.20	4.51	
Coworkers – Supervision		.21	4.27	

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the degree of measurement error associated with each indicator. ^c Composite reliability is the amount of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

For the classified staff sample, Table 35 lays out the measurement properties for the full measurement model that includes core self-evaluations, community embeddedness, and job satisfaction. All of the factor loadings were significant ($z \geq +1.96$). However, community links ($z = 2.14$) and operating procedures ($z = 2.48$) were less significant as compared to the other factor loadings. As with the undergraduate sample, the low loading for community links is due to the low reliability of the measure and the open-ended format of the items used. Also, operating procedures had a low loading because of its low reliability and large amount of error variance. The composite reliabilities for core self-evaluations (.93), community embeddedness (.61), and job satisfaction (.85) exceeded the .60 level Diamantopoulos & Siguaaw, 2000; Fornell & Larcker, 1981). Furthermore, the average variance extracted for community embeddedness (.39) and job satisfaction (.38) were lower than the .50 threshold (Diamantopoulos & Siguaaw, 2000; Fornell & Larcker, 1981) but was higher for core self-evaluations (.82). The reason for the low value of community embeddedness was that the error variance accounted for by community fit and community links was high (.63 and .95). In contrast, the weakness with job satisfaction was attributable to the high error variances of benefits (.90) and operating procedures (.95). Additional information on the impact of each manifest variable in relation to its latent construct can be found by looking at the standardized loadings presented in Table 35. In the classified staff model, CSELC (.99) and CSEWLC (.99) were the strongest indicators for core self-evaluations as compared to CSES (.72). For community embeddedness, community sacrifice (.87) was the strongest indicator followed by community fit (.61) and then community links (.21). With job satisfaction, JSS- rewards (.90) and JSS- promotion (.82) were the strongest indicators. In conclusion, the full measurement model for the classified staff sample was a good fit to the data as evidenced by the fit statistics ($\chi_{(98)}^2 = 197.18$, $\chi^2 / df = 2.01$, RMSEA= .09, SRMR= .08, NFI

= .89, CFI = .94, NNFI= .93). Furthermore, the measurement properties for this model were moderate to good but there were notable weaknesses with some of the indicators for each of the latent constructs.

Table 35

Measurement Properties for the Core Self-Evaluations, Community Embeddedness, and Job Satisfaction Measurement Model – Classified Staff Sample

Indicator	Standardized Loading	Average Variance Extracted ^a	z-value	Composite Reliability ^c
Core Self-Evaluations		.82		.93
		Error Variance^b		Indicator Reliability^d
CSELC	.99	.03	15.01	.97
CSEWLC	.99	.03	15.00	.97
CSES	.72	.48	9.14	.52
		Average Variance Extracted^a		Composite Reliability^c
Community Embeddedness		.39		.61
		Error Variance^b		Indicator Reliability^d
Fit	.61	.63	6.42	.37
Sacrifice	.87	.24	8.97	.76
Links	.21	.95	2.14	.05
		Average Variance Extracted^a		Composite Reliability^c
Job Satisfaction		.38		.85
		Error Variance^b		Indicator Reliability^d
OJS	.71	.49	8.72	.51
Pay	.71	.49	8.64	.51
Promotion	.82	.32	10.68	.68
Supervision	.60	.65	6.91	.36
Benefits	.31	.90	3.34	.10
Rewards	.90	.19	12.22	.81
Operating Procedures	.23	.95	2.48	.06
Coworkers	.44	.80	4.89	.20
Nature of Work	.50	.75	5.61	.25
Communication	.65	.57	7.77	.43
Error Covariances				
Nature of Work – OJS		.40	5.56	
Promotion – Pay		.15	2.97	
Coworkers – Supervision		.26	3.56	

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the degree of measurement error associated with each indicator. ^c Composite reliability is the amount of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

Structural Models

Since Hypotheses 4a and 4c were rejected because organizational embeddedness and job satisfaction are best represented by one latent construct, only Hypothesis 4b was examined. For both samples, the hypothesized structural model contained paths from core self-evaluations to job satisfaction, core self-evaluations to community embeddedness, and community embeddedness to job satisfaction. As discussed earlier, only the residuals between JSS-nature of work and OJS, JSS- pay and JSS- promotion, and JSS- coworkers and JSS- supervision were allowed to correlate because there was a theoretical rationale. Although individual differences in demographics are often seen in the job satisfaction literature (Spector, 1997), the magnitude of these correlates is often insignificant. Some notable exceptions are age and organizational tenure (Brush et al. 1987; Clark et al., 1996). Although these demographic variables are important, past dispositional research has found nonsignificant effects for these variables in predicting job satisfaction (Judge & Locke, 1993). Thus, demographic control variables were not included in the structural models. Table 36 contains all the fit statistics for this model and the other structural models which are discussed below.

For the undergraduate sample, the model relating core self-evaluations to community embeddedness and job satisfaction and community embeddedness to job satisfaction was an excellent fit to the data. The strongest fit statistics were the χ^2/df of 2.65, NFI of .92, CFI of .95, and NNFI of .94 with weaker fit statistics for the RMSEA of .09 and SRMR of .07. Moreover, the signs of all parameters for the paths between the latent variables are consistent with the hypothesized relationships. Specifically, the direct effect of core self-evaluations on job satisfaction was not significant ($\beta = .10, z = 1.48, ns$) coupled with a significant indirect effect ($\beta = .08, z = 2.43, p < .05$). Thus, the pattern of these relationships provides strong support for

partial mediation which will be discussed in greater detail below. Next, the effect of core self-evaluations on community embeddedness ($\beta = .24, z = 3.08, p < .01$) and community embeddedness on job satisfaction ($\beta = .32, z = 3.87, p < .01$) were strong and significant. As with the measurement model, all standardized loadings were significant ($z \geq +1.96$) with the exception of community links ($z = 1.85$). The squared multiple correlations were somewhat low with the R^2 of .06 for community embeddedness and the R^2 of .13 for job satisfaction. Table 37 shows the direct, indirect, and total effects of the model that contains community embeddedness as a partial mediator between core self-evaluations and job satisfaction. As discussed earlier, the direct effect of core self-evaluations on job satisfaction was not significant after including the indirect effect. This is quite different from previous core self-evaluations research that suggests it has a direct and significant effect on job satisfaction (Judge et al., 1998; Judge et al., 2000). As noted earlier, the indirect effect was significant ($\beta = .08, z = 2.43, p < .05$). Furthermore, 44% of the total effect was mediated by community embeddedness. In sum, the relationship between core self-evaluations and job satisfaction was partially mediated by community embeddedness. Thus, Hypothesis 4b was supported with the undergraduate sample. Figure 9 provides a representation of the hypothesized structural model that includes core self-evaluations, community embeddedness, and job satisfaction.

As noted in the last paragraph, community embeddedness partially mediated the relationship between core self-evaluations and job satisfaction as indicated by the nonsignificant direct effect and the significant indirect effect. Moreover, job satisfaction had multiple manifest variables or indicators. So, it was interesting to look at the impact of core self-evaluations and community embeddedness on these variables (See Appendix W). First, it is noteworthy that core self-evaluations indirectly and significantly impact the indicators of job satisfaction measures

with the exception of operating procedures. Moreover, community embeddedness had significant and indirect effects on all indicators of job satisfaction. With these differential relationships in mind, not only is this information critical to future research but it also confirms previous empirical findings in core self-evaluations literature (c.f. Judge et al., 1998; Judge et al., 2000) and refutes untested propositions in the job embeddedness literature (c.f. Mitchell et al., 2001; Lee et al., 2004).

With the classified staff sample, the model relating core self-evaluations to community embeddedness and job satisfaction and community embeddedness to job satisfaction was examined. The model was a good fit as shown by the χ^2/df of 2.01, RMSEA of .09, SRMR of .08, CFI of .94, and NNFI of .93 with the notable exception of .89 for the NFI. Further, all of the standardized loadings were significant ($z \geq + 1.96$). As with the undergraduate sample, the signs of all parameters for the paths between the latent variables are consistent with the hypothesized relationships. For example, core self-evaluations had a positive and significant on effect community embeddedness ($\beta = .57, z = 4.81, p < .01$), and community embeddedness had a positive and significant effect on job satisfaction ($\beta = .51, z = 3.55, p < .01$). However, the relationship between core self-evaluations and job satisfaction became nonsignificant when the indirect effect was calculated ($\beta = .14, z = 1.18, ns$). As compared to the undergraduate sample, the squared multiple correlations were somewhat higher with the R^2 of .32 for community embeddedness and the R^2 of .35 for job satisfaction. Table 37 shows the direct, indirect, and total effects of the model that contains community embeddedness as a partial mediator between core self-evaluations and job satisfaction. As discussed earlier, the direct effect of core self-evaluations on job satisfaction was not significant. These results are similar to the results from the undergraduate sample, but they are not congruent with previous research that suggests core

self-evaluations have a direct and significant effect on job satisfaction (Judge et al., 1998; Judge et al., 2000). As a primary determinant of mediation, the indirect effect was highly significant ($\beta = .29, z = 2.76, p < .01$). Furthermore, approximately 67% of the relationship between core self-evaluations and job satisfaction was mediated by community embeddedness. In comparison to the undergraduate sample, the mediated proportion was much greater with the classified staff sample. Thus, Hypothesis 4b was fully supported with the classified staff sample because the results provided support for partial mediation. Figure 10 provides a representation of the hypothesized structural model that includes core self-evaluations, community embeddedness, and job satisfaction.

As with the undergraduate sample, core self-evaluations indirectly and significantly impact the indicators of job satisfaction measures; and community embeddedness had significant and indirect effects on all indicators of job satisfaction (See Appendix W). The only difference between the undergraduate and classified staff samples was the significant effect of core self-evaluations on satisfaction with operating procedures. Since these results are similar to the undergraduate sample, these results are critical to future research as this study provides additional support for the direct impact of core self-evaluations on job satisfaction (c.f. Judge et al., 1998; Judge et al., 2000) and expands the job embeddedness literature (c.f. Mitchell et al., 2001; Lee et al., 2004).

Table 36

Fit Statistics of Structural Models

Model	χ^2	df	χ^2/df	RMSEA	SRMR	NFI	CFI	NNFI
<u>Structural</u>								
Undergraduate	259.77	98	2.65	.09	.07	.92	.95	.94
Classified Staff	197.18	98	2.01	.09	.08	.89	.94	.93

Note: χ^2 = chi-square; df = degrees of freedom; RMSEA= root mean square error of approximation; SRMR = standardized root mean square residual; NFI = normed fit index; CFI = comparative fit index; NNFI = non-normed fit index

Table 37
 Direct, Indirect, and Total Effects for Core Self-Evaluations and Job Satisfaction in the
 Single Mediator Model with Community Embeddedness

Relationship	Undergraduate	Classified Staff
Direct	.10	.14
Indirect	.08*	.29**
Total	.18*	.43**
Proportion of Relationship Mediated	.44	.67

Note: The percentage mediated was determined by using the absolute value of the indirect effect in the numerator and the sum of the absolute value of the direct and indirect effect in the denominator.

* $p < .05$ and ** $p < .01$.

Figure 9

Structural Model
Undergraduate Sample

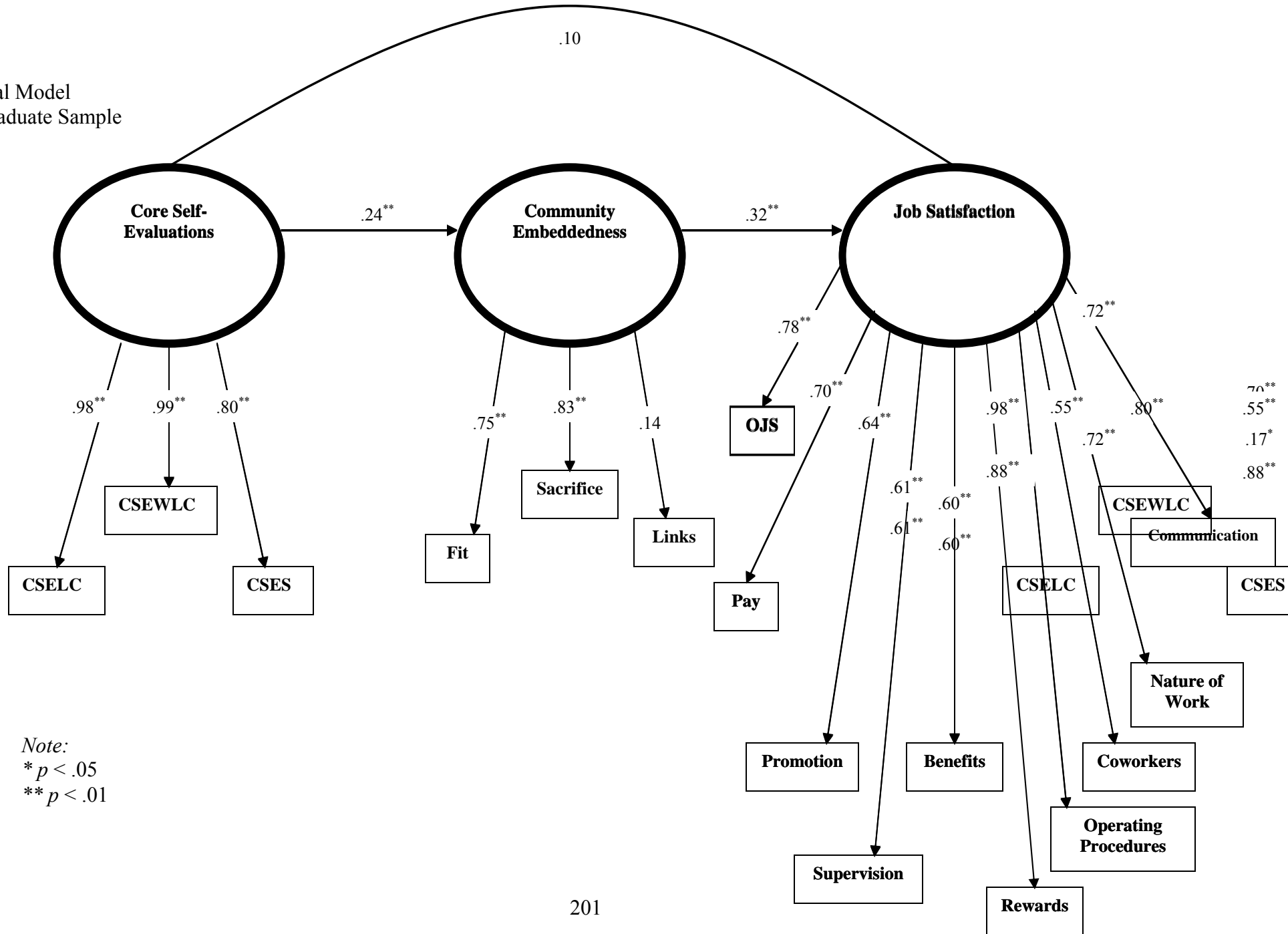
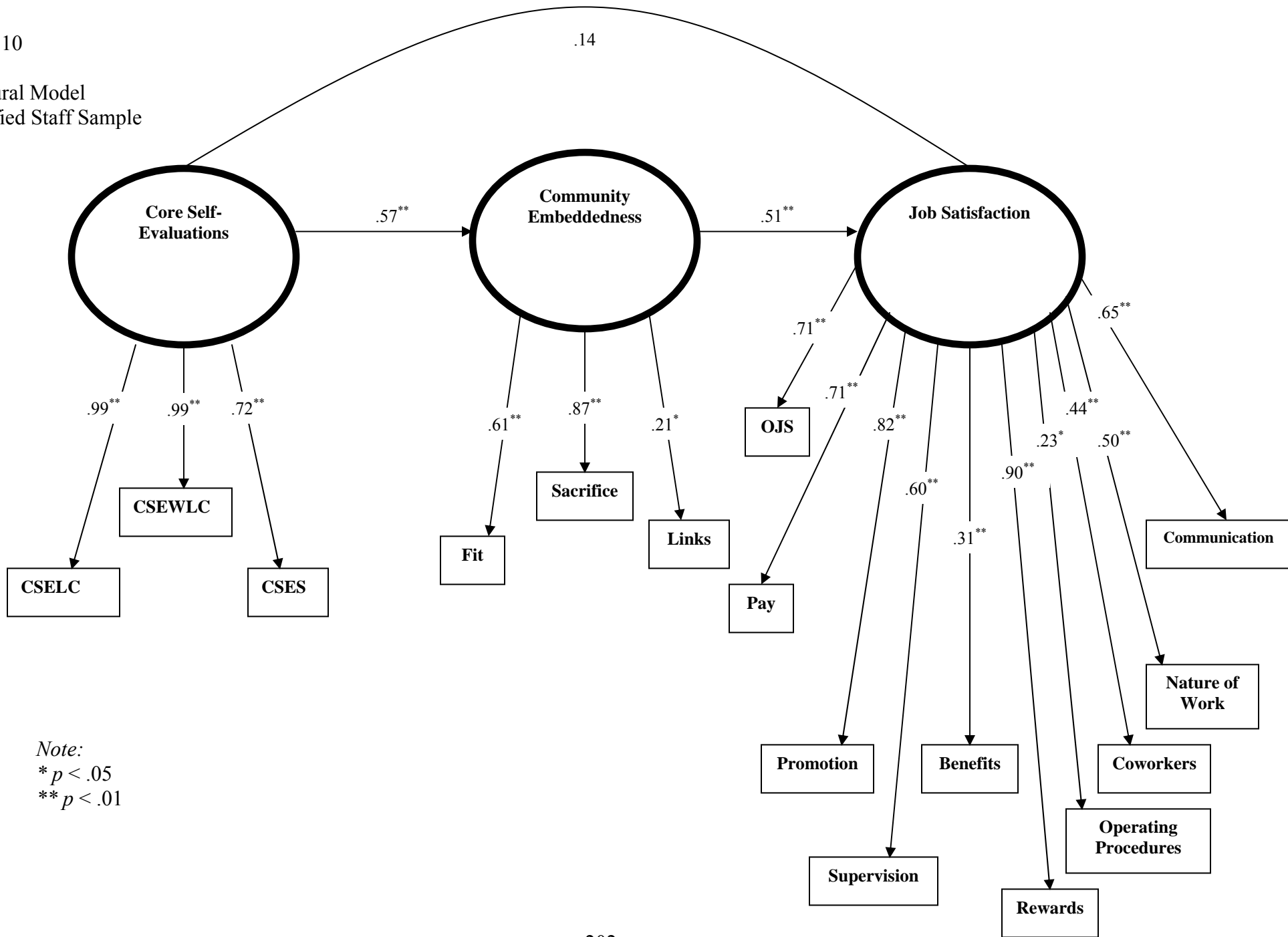


Figure 10

Structural Model
Classified Staff Sample



Note:
* $p < .05$
** $p < .01$

Summary

The purpose of the chapter was to analyze the measurement and structural models presented in Figures 1, 2, and 3. The results from these analyses were partially supportive of these models. Specifically, the findings of this study suggest that core self-evaluations influences job satisfaction. Results also support the assertion that community embeddedness impacts job satisfaction. In addition, significant support was found for the assumption that community embeddedness was a partial mediator of the relationships between core self-evaluations and community embeddedness. Contrary to the notion that organizational embeddedness impacts job satisfaction, this study found that these two constructs were indistinguishable. Thus, two of the three structural models, the single mediating model that included organizational embeddedness and the multiple mediating model that included both organizational and community embeddedness, were not supported.

CHAPTER VII

DISCUSSION

In this study, three models of job satisfaction were presented in order to investigate several specific hypotheses and to gain new understanding of person and situation processes leading to job satisfaction. More recently, researchers investigating the importance of job embeddedness have focused on the predictive validity of this construct while giving less attention to its convergent relationship with job satisfaction (Lee et al., 2004; Mitchell & Lee, 2001; Mitchell et al., 2001). Thus, the models used in this study examine the extent of these relationships in greater detail. This study also argues that dispositions have direct and mediated effects on job satisfaction via various situational factors in the organizational and community environment. Thus, the significant findings and implications of the results are discussed in this chapter. Finally, the limitations of the present study are discussed followed by directions for future research.

The purpose of this study was to explore how core self-evaluations influenced job satisfaction through the mechanisms of organizational and community embeddedness. As predicted, core self-evaluations directly influenced job satisfaction and indirectly with the inclusion of community embeddedness as a mediator. These results indicate that individuals with more positive core self-evaluations will not only be more satisfied with their job but also they will become more embedded in their communities and in turn this embeddedness will influence their level of job satisfaction. Moreover, this study found that core self-evaluations also impacted community fit such that one's perceived compatibility towards the community in which one resides was influenced by one's perceived self-worth. In turn, community fit influenced one's overall level of job satisfaction and satisfaction with various aspects of the job. Along these same

lines, core self-evaluations influenced perceptions of community related sacrifice such that those individuals with more positive self-worth also viewed the importance of community benefits and external stakeholder respect as integral components of overall job satisfaction and satisfaction with various facets at work. Finally, the results showed that community links acted as a partial mediator of the relationship between core self-evaluations and job satisfaction for the classified staff only. In essence, those individuals with more positive core self-evaluations actually developed more normative connections in the community which in turn led to higher levels of job satisfaction.

It is noteworthy that core self-evaluations were related to organizational embeddedness such that individuals with more positive self-worth would also become more embedded in their organizations. However, additional analyses suggest that organizational embeddedness and job satisfaction are not distinguishable constructs. Because the relationship between core self-evaluations and organizational embeddedness was spurious, organizational embeddedness did not act as a mediator in the relationship between core self-evaluations and job satisfaction. Further, organizational embeddedness did not act as a multiple mediator with community embeddedness.

Theoretical Implications

The field of organizational behavior is replete with studies that investigate the importance of job satisfaction. In part, this is no surprise because determining the antecedents and consequences of job satisfaction has become a holy grail amongst many organizational behavior researchers. Although the majority of job satisfaction studies and spin-offs of traditional job satisfaction theory follow the old adage that history repeats itself, this study extends job

satisfaction research towards less-traveled paths that include the importance of community factors.

I tout the clout of these newer paths in job satisfaction research because they extend past research in a number of ways. First, extending job embeddedness theory, this study found that organizational embeddedness and job satisfaction were indistinguishable constructs. Second, extending job satisfaction theory, this study indicates that job satisfaction is impacted by three community embeddedness factors that include community fit, community related sacrifice, and community links. In addition, this study found that core self-evaluations were a predictor of community embeddedness thus validating the proposition that dispositions are important determinants of situational factors. Third, this study replicated previous research that supports the idea that core self-evaluations have direct effects on job satisfaction.

These results contribute to existing knowledge about job embeddedness theory. In addition to providing evidence for the importance of community embeddedness, these results provide support for the claim that organizational embeddedness and job satisfaction are comprised of a single latent construct. Research has shown that organizational embeddedness significantly predicts various behavioral outcomes such as voluntary turnover, job performance, and organizational citizenship behavior after the effects of job satisfaction has been controlled (Lee et al., 2004; Mitchell et al., 2001). However, the results from this dissertation are not consistent with those of Mitchell and Lee. In fact, these results suggest that organizational embeddedness and job satisfaction are best comprised of a single latent construct. An explanation for these results is based on the content validity of organizational embeddedness. Since organizational embeddedness represents a different construct in Mitchell and colleagues' job embeddedness theory, it was assumed that the items representing organizational

embeddedness were construct-referenced (c.f. Messick, 1975; Messick, 1980). However, based on my results and the theoretical implications from Little, Lindenberger, & Nesselroade's (1999) study and Nunnally's (1978) perspective on domain sampling, the indicators of organizational embeddedness and job satisfaction appear to be representing a common construct in the same multivariate space. Thus, my results coupled with Mitchell and Lee's results imply that job satisfaction is a much broader construct than previously hypothesized in organizational behavior research. In fact, this position on job satisfaction has been popularized by a handful of researchers (e.g. Brief, 1998; Brief & Weiss, 2002; Organ & Near, 1985) and argues for the importance of treating existing measures of job satisfaction as consisting of both affective and cognitive dimensions.

Perhaps one of the most important contributions of this dissertation is that the results show that core self-evaluations indirectly influence job satisfaction through community embeddedness and its indicators. Foremost, core self-evaluations directly impact job satisfaction. This is a process akin to emotional generalization where those individuals with more positive self-worth are also more satisfied with their jobs. At the same time, core self-evaluations also influence job satisfaction through a more indirect route. Individuals with more positive core self-evaluations become more embedded in their communities and as a result experience higher levels of job satisfaction. It is important to note that no studies to date have addressed the impact of affective disposition on community embeddedness, and very few studies have looked at the influence of personality on nonwork factors (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2003). Further, only a handful of studies have examined the influence of community factors and nonwork activities on job satisfaction. These studies were limited to correlational designs that looked at the relationship between the type of community environment, a proxy for alienation

from work ethic, and job satisfaction (Blood & Hulin, 1967; Hulin, 1966; Katzell, Barrett, & Parker, 1961) or between nonwork activities and job satisfaction (Kirchmeyer, 1992; Near & Sorcinelli, 1986). This is quite interesting given that historical approaches to job satisfaction have emphasized the importance of nonwork factors (March & Simon, 1958; Near, Rice, & Hunt, 1980), but the majority of nonwork domain research has focused on work-family conflict (Eby et al., 2003; Ford, Heinen, & Langkamer, 2007; Kossek & Ozeki, 1998).

Another important contribution of this study was that multiple sources of community embeddedness were examined. As was expected, the relationship between core self-evaluations and job satisfaction was mediated by community fit for both the undergraduate and the classified staff sample. Core self-evaluations influenced perceptions of community fit and in turn community fit impacted job satisfaction. To the author's knowledge, no studies to date have examined these relationships nor have they examined the degree of fit between affective disposition and the community in which one resides. These results are even more intriguing given the plethora of research on other fit-outcome relationships (Kristof-Brown et al., 2005). Community-related sacrifice was also a significant mediator in the relationship between core self-evaluations and job satisfaction for both samples. Those individuals who have more positive core self-evaluations view community benefits as important perks of living within their communities and in turn these benefits result in higher levels of job satisfaction. Again, no studies to date have examined these relationships. Finally, community links acted as a mediator in the relationship between core self-evaluations and job satisfaction for the classified staff sample. Individuals with more positive core self-evaluations actually form more normative connections to the community and in turn these connections result in higher levels of job satisfaction. No studies to date have looked at these relationships. These results lend support to

the similarity-attraction paradigm (Byrne, 1971) and the interactionist perspective. With the similarity-attraction paradigm (Byrne, 1971), individuals chose their communities based on their dispositional tendencies and in turn the community is reinforcing to their disposition. At the same time, an important outcome of this process is job satisfaction. For the interactionist perspective, research has shown that one's attitudes and behaviors are a function of both person and the environment (Lewin, 1951; Pervin, 1968, 1989).

Using core self-evaluations theory, I replicated the common finding that core self-evaluations positively impact job satisfaction. Unlike most tests of core self-evaluations, I directly measured core self-evaluations with three different scales and each provided strong support for this relationship. Furthermore, these results were replicated in two diverse samples that included part-time undergraduate students and full-time classified staff employees. The important implication of this finding is that *across* people and *across* jobs affective disposition was found to significantly impact job satisfaction. Further, in congruence with the similarity-attraction paradigm (Byrne, 1971), individuals select organizations that reinforce their dispositional tendencies.

Additional Findings

It should be mentioned that the results suggest a common core exists for core self-evaluations. This study found that the correlations were strong between the four measures of core traits and with the inclusion of the work locus of control. However, the correlations were slightly weaker with locus of control and work locus of control. These results are congruent with Judge et al. (2002) that reported similar patterns of relationships between the core traits.

Although no predictions were made in regards to sample differences in the hypothesized structural models, these results show that all of the relationships were similar but attenuated in

the undergraduate sample which has important impact on the interpretation of these models. Recall that in the undergraduate sample, the majority of the participants were employed part-time (67.2%), the average tenure was 1.60 years, and the average age was 22.76 years. In contrast, the entire classified staff sample was employed full-time, the average tenure was 8.46 years, and the average age was 45.68 years. Based on inference, these results correspond to those of previous studies that have examined demographic differences in job satisfaction in part-time and full-time workers (Jackofsky & Peters, 1987; Miller & Terborg, 1979). In general, after controlling for age and organizational tenure, there are differences in job satisfaction for part-time versus full-time workers. Thus, the results of this dissertation which illustrate attenuated relationships with job satisfaction make sense given previous empirical results in the research on comparing differences in job satisfaction in part-time and full-time workers.

Comments on Data Collection Procedures

The data collection procedure utilized undergraduate students in addition to full-time employees. One general concern associated with using undergraduates for organizational research is that the results are not generalizable to organizational settings (Gordon, Slade, & Schmitt, 1986). Some of the most widely cited studies present mixed evidence about the external validity of using students for real-world phenomenon. For example, Gordon et al. (1986) argue that experimental results differ between student and nonstudent samples and the use of student samples should be carefully scrutinized. At the same time, they stress the importance of empirical justification when and if students are used. In response to their claims, Greenberg (1987) suggests that the majority of organizational studies use narrowly defined, homogenous organizational samples which may be just as limiting as student samples. Moreover, he insists that generalizability is not found with just one study but accumulates with results across studies,

settings, and variables. In congruence with Lynch (1982), Greenberg also noted that the use of both students and real world samples offers a true test of the qualifying conditions of the theory. Thus, differences between student and nonstudent samples are not a necessary evil as stressed in Gordon et al.'s (1986) commentary. Locke's (1986) position on the use of student samples further predicates Greenberg's view, as he argues that the similarities between students and real world samples are much greater than the differences. Moreover, the use of coordinated strategies of research that utilize both students and nonstudent samples assist in developing a more comprehensive theory of the psychological processes occurring in the organizational context (Dipboye & Flanigan, 1979; Locke, 1986).

Limitations

There are several important limitations to this dissertation. First, all of the measures used in this study were measured with the same survey at the same point in time. Thus, common method variance may influence the relationships among the constructs in this study. More specifically, the relationships between each of the constructs may become artificially inflated because the items were assessed with the same survey. In response to this issue, the undergraduate survey was delivered and assessed in-person, while the classified staff survey was sent via mail and completed at the participant's leisure. According to Doty and Glick (1988), different data collection procedures constitute a different measurement technique. In this dissertation, the relationships were attenuated for the undergraduate sample thereby reducing the likelihood that the responses are due to common method variance. At the same time, the mixed response format for organizational and community embeddedness lessens the effects of common method variance. Finally, the use of facet parcels eliminates the method component in the parcel and partitions the specific and random error variance in the error term. In congruence with

Spector's (2006) piece on common method variance, future studies may benefit from using longitudinal designs and multiple sources to eliminate potential biases associated with the constructs in monomethod studies.

By design, this study did not include a measure of social desirability. It has often been argued that social desirability is a tendency for individuals to present themselves in a positive light (Marlowe & Crown, 1960, 1964). Further, this tendency may result in inflated correlations or spurious relationships in organizational behavior research (Golembiewski & Munzenrider, 1975; Thomas & Kilmann, 1975). Some organizational researchers may point to the importance of this personality trait, especially when self-reports are used with sensitive subjects such as affective disposition. However, two meta-analyses have found negligible effects of social desirability even after it was partialled out from zero-order correlations (Moorman & Podsakoff, 1992; Ones, Viswesvaran, & Reiss, 1996). Taken together, there is little evidence to support social desirability as a source of common method variance (Spector, 1987; Spector, 2006).

A third potential limitation of this study relates to the use of undergraduate students and classified staff from a university. Specifically, this sample consisted of senior, undergraduate business students who were in their final semester of school before graduation. The results of this sample may not extend to full-time employees. However, the majority of this sample held part-time jobs while attending school on a full-time basis. So, this sample provides an important test of the job embeddedness construct, as it examines concepts underlying this construct with a sample of workers for whom the construct was not originally intended to apply. Furthermore, these part-time workers held employment in a variety of occupations and organizations, so the results should generalize to part-time workers who are students, organizationally-hired, and working voluntarily on a temporary basis. As a side note, it is pertinent to make these

distinctions in order to build knowledge to develop a more comprehensive theory of part-time workers (c.f. Feldman, 1990). The second sample was based on a cross-occupational sample of classified employees from a large southern university. This sample is more likely to generalize to all professions but not all organizations. The members of this sample work in a university setting in state-funded jobs, so the stability of their jobs is rarely in flux. This stands in stark contrast to other organizations in the private sector which are prone to cyclical periods of stability followed by rapid rates of change associated with mass layoffs. So, individuals working in publicly funded universities have more job stability, but lower salaries, as compared to the private sector counterparts.

A final limitation of this study is related to the design of the study. This study was a cross-sectional study which included concurrent measurement of variables. Any relationships found in this study are not causal in nature. In order to address causal relationships, longitudinal modeling must be used to determine how the relationships specified in the model unfold over time (MacCallum & Austin, 2000). In addition, due to the cross-sectional design, several equivalent models could explain the results found in this study. Two alternative models can be immediately ruled out, as they would consist of core self-evaluations as a mediator or outcome variable. One should recall that the dispositional approach assumes that individuals possess unobservable traits that are stable over time and determine one's attitudes and behaviors (Weiss & Adler, 1984). The third alternative model would consist of job satisfaction as a mediating variable rather than the outcome variable. Unfortunately, this model cannot be ruled out because evidence from cross-domain research has supported a bidirectional relationship between work and nonwork domains (c.f. Ford et al., 2007). However, extensive research and theory on person situation interactions provides a strong case for the model proposed in this study.

Future Research

There are several important directions for researchers to explore in regards to job embeddedness and job satisfaction theory. Additional work needs to be done on the operationalization of organizational and community embeddedness. Moreover, longitudinal research should be conducted to address the dynamic nature of job embeddedness. Also, it is pertinent to conduct additional empirical studies that deal with the influence of nonwork domains on organizational attitudes and behaviors. This dissertation has begun preliminary work on some of the previously mentioned issues, but a wealth of research opportunities exist. The purpose of the following section is to address directions for future research.

Future research should attempt to develop more reliable and valid measures of organizational and community embeddedness. Specifically, our results indicated reliability and validity issues with several of the constructs that act as indicators of organizational and community embeddedness. In particular, both organizational and community links and organizational sacrifice were not psychometrically sound instruments. One suggestion is to operationalize organizational and community embeddedness as single-order factor models consisting of unidimensional, multi-item scales. Based on the study results, fit and sacrifice exhibit significant correlations with each other but not with links. So, the one-factor model may consist of the same items or similar items from these scales as indicators of organizational or community embeddedness. On the other hand, links, as currently operationalized, had very weak relationships with fit and sacrifice. So, it may be more appropriate to operationalize links as a completely different construct from embeddedness. Pending the appropriate theory-development process is used, both measurement and specification error should be reduced.

Another important avenue for future research is to design longitudinal models that emphasize the dynamic processes between the person, the environment, and their attitudes and behaviors. Many years ago, Pervin (1989) emphasized the importance of fluid attitudinal and behavioral processes. Although this dissertation sheds some light on the relationships between core self-evaluations, community embeddedness, and job satisfaction, it does not show how these relationships unfold over time. Specifically, very little is known about the stability of core self-evaluations. To date, only one study has directly examined the test-retest stability of core self-evaluations, and this study was based on an undergraduate sample (c.f. Judge et al., 2003). If core self-evaluations demonstrate stability over time, then this provides some evidence that it is a trait. Furthermore, the role of community embeddedness in organizational research is extant (Lee et al., 2003; Mitchell et al., 2001). Only two cross-sectional studies have examined the influence of community embeddedness on employee behaviors. In this study, field theory (Lewin, 1951) was applied to job embeddedness to study its influence with on job satisfaction. One of the main propositions of field theory is that the individual becomes embedded in the environment over time. Thus, future studies should evaluate how community embeddedness evolves over time, as these future contributions are critical to advancing job embeddedness theory and to providing practical suggestions aimed at organizational interventions. In sum, more attention should be directed to these issues.

A final avenue for future research should focus on understanding the influence of nonwork domains on organizational attitudes and behaviors. Organizational research has typically focused on work-family conflict with little attention directed towards theoretical processes behind demographic characteristics, community characteristics, and nonwork activities. Although the preliminary work on community embeddedness is quite impressive given

that it identifies multiple sources of embeddedness, there is still much work to be done in nonwork domains. Even more intriguing is the question proposed Near and colleagues in 1980 that asked, to what extent are cross-domain associations smaller or larger than associations within domains? Unfortunately, very little is known outside the realm of work-family conflict research.

Practical Implications

This study has important implications for managers in that it presents an alternative direction for motivating employees. Traditionally, organizational researchers have stressed the importance of interventions aimed inwardly in the organization. These interventions have run the gamut from theory-based practices in organizational behavior that consist of job enlargement and rotation to more applied practices in human resources that include demands-abilities and needs-supplies fit. Yet, there still seems to be a large disconnect between what is valid in the real world and what is found in theory-laden studies. However, this study appears to have both practical and theoretical implications; and the practical implications appear to be in line with current motivational practices used in organizations. In essence, employee participation in nonwork domains promotes emotional attachments to one's community and results in increased levels of job satisfaction. Many organizations already have in place fringe benefits that support childcare services, promote health and wellness, and provide employee assistance with housing and relocation. Thus, these organizations should continue with these programs.

An overarching implication is that managers should begin or continue current practices aimed at increasing employee embeddedness in their communities. Typically, organizations have encouraged certain fringe benefit programs to reduce the dissonance between nonwork and work activities. These programs are an initial start to encouraging employee participation in their

communities, but employers should also realize that community embeddedness and corresponding participation in nonwork domains does not drain organizational resources (Kirchmeyer, 1992). In fact, the more individuals that participate in their community and become involved in community events, the more likely these individuals are to be satisfied with their jobs. Also, community embeddedness has been shown to actively reduce voluntary employee turnover and to decrease volitional absences (Lee et al., 2004; Mitchell et al., 2001).

Still yet another outcome of encouraging community embeddedness through involvement is the idea of community fit. In essence, managers could encourage community fit by offering tickets to local sporting events, musicals, or concerts. Also, organizations could support leisure activities by sponsoring sporting events, company recreation teams, or employees' children's events. The major goal of fostering these activities is to increase emotional attachments between the community and the employee with an end result of maintaining and increasing employee satisfaction. At the same time, encouraging elements of fit will also enhance community-related sacrifice if an employee needs to relocate. In essence, all of the perceived perks associated with living in the community will be lost if the employee leaves the community. Thus, employers should continue with their current fringe benefits programs but also expand these programs to include support for additional nonwork domains.

Conclusion

In sum, the results of this study provide initial evidence for the importance of core self-evaluations' influence on job satisfaction through community embeddedness. Not only are individuals with more positive core self-evaluations more satisfied with their job, but also their dispositions influence their ability to become embedded in their communities and become satisfied with their job. Contrary to previous empirical results, this study found that

organizational embeddedness and job satisfaction were best represented by a single latent variable. The fact that the samples used in this study consisted of undergraduate students and classified university staff limits the generalizability of this study. Research should extend the current study by using additional occupational groups outside the public sector. In addition, organizational scholars should use this research to develop a comprehensive theory of how nonwork domains, outside of work-family research, influence employee attitudes and behaviors. Finally, it is the hope of this researcher that future empirical studies begin to examine the contribution of personality to nonwork domains, as it is clear that personality plays an integral role in influencing nonwork activities and in particular community embeddedness.

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APPENDICES

Appendix A Institutional Review Board Virginia Polytechnic Institute and State University



Office of Research Compliance
Institutional Review Board
1880 Pratt Drive (0407)
Blacksburg, Virginia 24061
540/231-4991 Fax: 540/231-0959
E-mail: mscand@vt.edu
www.irb.vt.edu
IRB#00000572 expires 7/2007
IRB # is IRB00000572

DATE: February 13, 2007

MEMORANDUM

TO: Thirwall W. Bonham
Jennifer Oyler

FROM: David M. Moore 

Approval date: 2/8/2007
Continuing Review Due Date: 1/24/2008
Expiration Date: 2/7/2008

SUBJECT: IRB Expedited Approval: "Core Self-Evaluations and Job Satisfaction: The Role of Job Embeddedness", IRB # 07-020

This memo is regarding the above-mentioned protocol. The proposed research is eligible for expedited review according to the specifications authorized by 45 CFR 46.110 and 21 CFR 56.110. As Chair of the Virginia Tech Institutional Review Board, I have granted approval to the study for a period of 12 months, effective February 8, 2007.

As an Investigator of human subjects, your responsibilities include the following:

1. Report promptly proposed changes in previously approved human subject research activities to the IRB, including changes to your study forms, procedures and investigators, regardless of how minor. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.
2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.
3. Report promptly to the IRB of the study's closing (i.e., data collecting and data analysis complete at Virginia Tech). If the study is to continue past the expiration date (listed above), investigators must submit a request for continuing review prior to the continuing review due date (listed above). It is the researcher's responsibility to obtain re-approval from the IRB before the study's expiration date.
4. If re-approval is not obtained (unless the study has been reported to the IRB as closed) prior to the expiration date, all activities involving human subjects and data analysis must cease immediately, except where necessary to eliminate apparent immediate hazards to the subjects.

Important:

If you are conducting federally funded non-exempt research, this approval letter must state that the IRB has compared the OSP grant application and IRB application and found the documents to be consistent. Otherwise, this approval letter is invalid for OSP to release funds. Visit our website at <http://www.irb.vt.edu/pages/newstudy.htm#OSP> for further information.

cc: File

Invest the Future

VIRGINIA POLYTECHNIC INSTITUTE UNIVERSITY AND STATE UNIVERSITY

An equal opportunity, affirmative action institution

Appendix B Institutional Review Board The University of Central Arkansas

Sponsored Programs



THE UNIVERSITY OF
CENTRAL ARKANSAS

201 Donaghey Avenue
Conway, Arkansas 72035-0001
Telephone: (501) 450-3451
Fax: (501) 450-3339

Memorandum

To: Jennifer D. Oyler

From: Betty Hamilton, Grants and Compliance Coordinator

Date: January 23, 2007

Subject: Expedited Review of IRB 07-005
Title: Core Self-Evaluations and Job Satisfaction: The Role of Job Embeddedness

Your request to conduct the above titled research with human subjects was reviewed by a member of the Institutional Review Board (IRB). The research, as presented in your application, meets the requirements of expedited research and is in compliance with the federal regulations for protecting the rights and welfare of human subjects and the policies and procedures of the University of Central Arkansas.

You have approval to conduct the research as described in your application for twelve months. ***Any changes to the original proposal must be submitted for approval prior to implementation.*** Promptly inform the Research Compliance Office of any adverse or unexpected reactions or harm incurred by subjects as a result of participating in this research.

Approval to conduct this research expires on: January 23, 2008.

It is the investigator's responsibility to obtain IRB approval to continue the research beyond 12 months by completing and submitting a *Continuing Review* form prior to the approval expiration date. If the research is completed before the 12 months ends, please send a completed Final Report form to the Research Compliance Office. (Forms are available from the Human Subjects Homepage, <http://spo.edu.uca/compliance/review.html>.)

c: Applicant's Chair

Appendix C Undergraduate Letter

Dear Participant:

My name is Jennifer Oyler, and I am an Assistant Professor of Management at The University of Central Arkansas. At the same time, I am doctoral candidate at Virginia Tech, and I am collecting data on employee attitudes for my dissertation. Your school has agreed to let us ask you about your attitudes toward your community, job, and life in general.

On the following pages, you will see several different types of questions about yourself, your job, and your community. Please read each question carefully. At the same time, you should move quickly through the questions. The survey does not take as long as it might appear. The questions are designed to obtain your views and reactions. There are no trick questions. Please be sure to complete all questions located on both sides of the questionnaire.

Remember, **YOUR ANSWERS ARE COMPLETELY CONFIDENTIAL**. No individual other than the research team will see any answers except in aggregated form—so it is not possible that you will be identified from your answers. Once you have completed the survey, please give it to the survey administrator.

Your cooperation is very important to the success of this study. Your help is very much appreciated.

Thank you,

Jennifer D. Oyler
Ph.D. candidate in Management
Virginia Tech
Assistant Professor of Management
The University of Central Arkansas
Phone (540)-818-6829

T.W. Bonham
Professor of Management
Virginia Tech

Appendix D Undergraduate Informed Consent

University of Central Arkansas

Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: Core Self-Evaluations and Job Satisfaction: The Role of Job Embeddedness

Investigator: Jennifer D. Oyler

I. Purpose of the Research

The primary purpose of this research study is to identify dispositional, organizational, and community factors that strengthen employees' job satisfaction.

II. Procedures

Participants for the research study will be recruited for voluntary participation from various undergraduate management courses. The total number of participants desired for the study is 150. There are no specific requirements for participant characteristics (i.e., gender, age, race) for participation. Participants will be asked to complete a questionnaire regarding work-related attitudes and dispositional characteristics, on a voluntary basis, which should require 30 minutes of their time.

III. Risks

There are no more than minimal risks involved.

IV. Extent of Anonymity and Confidentiality

All answers are confidential and only the research team will have access to the individual survey information. Individual participant names will not be associated with the answers provided. Only aggregate findings will be reported, thus no individually identifiable data will be reported. **All data is strictly confidential.**

VI. Freedom to Withdraw

Participation in the project is completely voluntary. Participants are free to withdraw from this study at any time without penalty. Participants may exercise their right not to answer any question that they choose without penalty. The researcher reserves the right to determine that volunteers should not continue as a participant in the project.

VII. Subject's Permission

I have read the Consent Form and conditions of the project. I acknowledge that by completing the survey and submitting it to the primary researcher that my voluntary consent was implied.

My name is (please print): _____.

Appendix E Classified Staff Letter Round I

Dear UCA Employee:

My name is Jennifer Oyler, and I am an Assistant Professor of Management at The University of Central Arkansas. At the same time, I am doctoral candidate at Virginia Tech, and I am collecting data on employee attitudes for my dissertation. UCA has agreed to let us ask you about your attitudes toward your community, job, and life in general.

On the following pages, you will see several different types of questions about yourself, your job, and your community. Please read each question carefully. At the same time, you should move quickly through the questions. The survey does not take as long as it might appear. The questions are designed to obtain your views and reactions. There are no trick questions. Please be sure to complete all questions located on both sides of the questionnaire.

Remember, **YOUR ANSWERS ARE COMPLETELY CONFIDENTIAL**. Your cooperation is very important to the success of this study. Your help is very much appreciated. Once you have completed the survey, please return the survey by refolding and dropping it in campus mail before February 20, 2007 at 4:00p. As an incentive for completing and returning this survey by February 20, 2007, you will be entered in a drawing to win one of 20 prizes of \$10 gift certificates.

Thank you,

Jennifer D. Oyler
Ph.D. candidate in Management
Virginia Tech
Assistant Professor
The University of Central Arkansas
Phone (501)-450-3149

T.W. Bonham
Professor of Management
Virginia Tech

540)-231-9620

Appendix F Classified Staff Informed Consent Round I

INFORMED CONSENT

1. The primary purpose of this research study is to identify attitudes toward your community, job, and life in general.
2. I understand that I will be asked to complete a questionnaire regarding work-related attitudes and dispositional characteristics, on a voluntary basis, which should require 20 minutes of my time.
3. There are no perceivable risks involved with this research study.
4. I understand that my participation in this research study is completely voluntary and that I am free to withdraw my consent and to discontinue participation at any time.
5. We would like to combine your responses to this survey with turnover data from your organization. With your permission, we will collect this data 6 months from the date of you completing this survey. Therefore, we need the last 4 digits of your UCA identification number. If you do not remember your UCA ID Number, please print your name on the bottom line. Your number or name is also needed to enter you in a lottery to win one of 20 prizes of \$10. **All data is strictly confidential.** No one at UCA will ever see your individual responses. All data will be coded to remove any information that could identify you. Remember, confidentiality is assured!
6. Any questions may be directed to Jennifer Oyler.

I understand that by providing my UCA ID number or name below that I understand the above explanations and give my consent to voluntary participation in this research project. **Please remember that you must provide your name or ID to be entered in the drawing for the \$10 gift certificates.**

The last 4 digits of my UCA ID number are:

____ - ____ - ____ - ____

OR

My name is (please print):

_____.

Appendix G Classified Staff Letter Round II

Dear UCA Employee:

I initially contacted you several weeks ago requesting your participation in an employee survey for the University of Central Arkansas and for my dissertation research at Virginia Tech. If you did not return your first survey, I encourage you to complete and return the attached survey. The purpose is to gain valuable feedback about your attitudes towards your community, job, and life in general.

The survey will only take 15 minutes of your time to complete. In addition, upon full completion and return of the survey, you will become eligible to win a second-chance drawing for one of 10 prizes for a \$5 gift card.

Remember, **YOUR ANSWERS ARE COMPLETELY CONFIDENTIAL**. Your help is very much appreciated. Once you have completed the survey, please return the survey in the enclosed envelope by dropping it in campus mail to BBA 210 before March 14, 2007 at 4:00p.

Thank you,

Jennifer D. Oyler
Ph.D. candidate in Management
Virginia Tech
Assistant Professor
The University of Central Arkansas
Phone (540)-818-6829

Appendix H Classified Staff Informed Consent Round II

INFORMED CONSENT

1. The primary purpose of this research study is to identify attitudes toward your community, job, and life in general.
2. I understand that I will be asked to complete a questionnaire regarding work-related attitudes and dispositional characteristics, on a voluntary basis, which should require 15 minutes of my time.
3. There are no perceivable risks involved with this research study.
4. I understand that my participation in this research study is completely voluntary and that I am free to withdraw my consent and to discontinue participation at any time.
5. I would like to combine your responses to this survey with turnover data from your organization. With your permission, we will collect this data 6 months from the date of you completing this survey. Therefore, we need the last 4 digits of your UCA identification number. Your number or name is also needed to enter you in a second-chance lottery to win one of 10 prizes of \$5. If you do not remember your UCA ID Number, please print your name on the bottom line. **All data is strictly confidential.** No one at UCA will ever see your individual responses. All data will be coded to remove any information that could identify you. Remember, confidentiality is assured!
6. Any questions may be directed to Jennifer Oyler.

I understand that by providing my UCA ID number or name below that I understand the above explanations and give my consent to voluntary participation in this research project. **Please remember that you must provide your name or ID to be entered in the drawing for the second-chance to win one of 10 prizes for \$5.**

The last 4 digits of my UCA ID number are:

____ - ____ - ____ - ____

OR

My name is (please print):

_____.

Appendix I Self-Esteem (Rosenberg, 1989)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I feel that I am a person of worth, at least on an equal basis with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure. (r)
4. I am able to do things as well as most other people.
5. I feel that I do not have much to be proud of. (r)
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself. (r)
9. I certainly feel useless at times. (r)
10. At times, I think I am no good at all. (r)

Appendix J Generalized Self-Efficacy (Judge, Locke, Durham, & Kluger, 1998)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I am strong enough to overcome life's struggles.
2. At root, I am a weak person. (r)
3. I can handle the situations that life brings.
4. I usually feel that I am an unsuccessful person. (r)
5. I often feel that there is nothing that I can do well. (r)
6. I feel competent to deal effectively with the real world.
7. I often feel like a failure. (r)
8. I usually feel I can handle the typical problems that come up in life.

Appendix K Locus of Control (Levenson, 1981)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. Whether or not I get to be a leader depends mostly on my ability.
2. When I make plans, I am almost certain to make them work.
3. When I get what I want, it's usually because I'm lucky. (r)
4. I have often found that what is going to happen will happen. (r)
5. I can pretty much determine what will happen in my life.
6. I am usually able to protect my personal interests.
7. When I get what I want, it's usually because I worked hard for it.
8. My life is determined by my own actions.

Appendix L Neuroticism (Eysenck & Eysenck, 1968)

For a copy of these items, please contact the author.

Appendix M Work Locus of Control (Spector, 1988)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. A job is what you make of it.
2. On most jobs, people can pretty much accomplish whatever they set out to accomplish.
3. If you know what you want out of a job, you can find a job that gives it to you.
4. If employees are unhappy with a decision made by their boss, they should do something about it.
5. Getting the job you want is mostly a matter of luck.
6. Making money is primarily a matter of good fortune.
7. Most people are capable of doing their jobs well if they make the effort.
8. In order to get a really good job, you need to have family members or friends in high places.
9. Promotions are usually a matter of good fortune.
10. When it comes to landing a really good job, who you know is more important than what you know.
11. Promotions are given to employees who perform well on the job.
12. To make a lot of money you have to know the right people.
13. It takes a lot of luck to be an outstanding employee on most jobs.
14. People who perform their jobs well generally get rewarded.
15. Most employees have more influence on their supervisors than they think they do.
16. The main difference between people who make a lot of money and people who make a little money is luck.

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Appendix N Core Self-Evaluations Scale (Judge, Erez, Bono, & Thoresen, 2003)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I am confident I get the success I deserve in life.
2. Sometimes I feel depressed.(r)
3. When I try, I generally succeed.
4. Sometimes when I fail, I feel worthless.(r)
5. I complete tasks successfully.
6. Sometimes, I do not feel in control of my work.(r)
7. Overall, I am satisfied with myself.
8. I am filled with doubts about my competence.(r)
9. I determine what will happen in my life.
10. I do not feel in control of my success in my career.(r)
11. I am capable of coping with most of my problems.
12. There are times when things look pretty bleak and hopeless to me.(r)

Appendix O Job Embeddedness (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Fit, community

1. I really love the place where I live.
2. I like the family-oriented environment of my community.
3. The community I live in is a good match for me.
4. I think of the community where I live as home.
5. The area where I live offers the leisure activities that I like (e.g. sports, outdoors, cultural, arts).

Fit, organization

1. My job utilizes my skills and talents well.
2. I feel like I am a good match for this organization.
3. I feel personally valued by (name of the organization).
4. I like my work schedule (e.g. flextime, shift).
5. I fit with my organization's culture.
6. I like the authority and responsibility I have at this company.

Appendix O Job Embeddedness (Mitchell et al., 2001), continued

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Sacrifice, community

1. Leaving this community would be very hard.
2. People respect me a lot in my community.
3. My neighborhood is safe.

Sacrifice, organization

1. I have a lot of freedom on this job to decide how to pursue my goals.
2. The perks on this job are outstanding.
3. I feel that people at work respect me a great deal.
4. I would incur very few costs if I left this organization. (reverse)
5. I would sacrifice a lot if I left this job.
6. My promotional opportunities are excellent here.
7. I am well compensated for my level of performance.
8. The benefits are good on this job.
9. I believe the prospects for continuing employment with this company are excellent.

Appendix O Job Embeddedness (Mitchell et al., 2001), continued

Directions: For each question below, please read the question and respond by filling in the blank.

Links, community

1. Are you currently married?
2. If you are married, does your spouse or significant other work outside the home?
3. Do you own the home you live in?
4. Are your family roots in the community where you live?
5. How many children *under the age of eighteen years* of age live either with you or with you and your husband or wife? (revised)
6. How many *of your relatives* (Mother, father, brother, sisters, adult sons, and adult daughters) live within 50 miles from where you live? (Exclude the children included in Item 5) (revised)

Links, organization

1. How long have you been in your current position at your current organization?
_____ months _____ years (revised)
2. Is your present position full-time, part-time, or contracted? _____ (revised)
2. How long have you worked for your current organization? _____ months _____ years
3. How many total years of experience do you have in your present occupation, including current and past jobs? (revised)
_____ year(s)
4. How many coworkers do you interact with regularly? _____
5. How many coworkers are highly dependent on you? _____
6. How many work teams are you on? _____
7. How many work committees are you on? _____

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Appendix P Overall Job Satisfaction Survey (Brayfield & Rothe, 1951)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I am often bored with my job. (r)
2. I feel fairly well satisfied with my present job.
3. I am satisfied with my job for the time being.
4. Most days I am enthusiastic about my work.
5. I like my job better than the average worker does.
6. I find real enjoyment in my work.

Appendix Q Job Satisfaction Survey (Spector, 1997)

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Pay

1. I feel I am being paid a fair amount for the work I do.
2. Raises are too far and few between. (r)
3. I am unappreciated by the organization when I think about what they pay me. (r)
4. I feel satisfied with my chance for salary increases.

Promotion

1. There is really too little chance for promotion on my job. (r)
2. Those that do well on the job stand a fair chance of being promoted.
3. People get ahead as fast here as they do in other places.
4. I am satisfied with my chances for promotion.

Supervision

1. My supervisor is quite competent in doing his/her job.
2. My supervisor is unfair to me. (r)
3. My supervisor shows too little interest in the feelings of subordinates. (r)
4. I like my supervisor.

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Appendix Q Job Satisfaction Survey (Spector, 1997), continued

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Benefits

1. I am not satisfied with the benefits I receive. (r)
2. The benefits we receive are as good as most other organizations offer.
3. The benefit package we have is equitable. (r)
4. There are benefits we do not have which we should have (r)

Rewards

1. When I do a good job, I receive the recognition for it that I should receive.
2. I do not feel that the work I do is appreciated. (r)
3. There are few rewards for this who work here. (r)
4. I don't feel my efforts are rewarded the way they should be. (r)

Operating procedures

1. Many of our rules and procedures make doing a good job difficult. (r)
2. My efforts to do a good job are seldom blocked by red tape.
3. I have too much to do at work. (r)
4. I have too much paperwork. (r)

Appendix Q Job Satisfaction Survey (Spector, 1997), continued

Directions: Below are several statements with which you may agree or disagree. Using the 1-5 scale below, please indicate your level of agreement with each item by circling the appropriate number to the right of the question.

Scale of Agreement				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Coworkers

1. I like the people I work with.
2. I find I have to work harder to my job than I should because of the incompetence of people I work with. (r)
3. I enjoy my coworkers.
4. There is too much bickering and fighting at work. (r)

Work itself

1. I sometimes feel my job is meaningless. (r)
2. I like doing the things I do at work.
3. I feel a sense of pride in doing my job.
4. My job is enjoyable.

Communication

1. Communications seem good within this organization.
2. The goals of this organization are not clear to me. (r)
3. I often feel that I do not know what is going on with the organization. (r)
4. Work assignments are often not fully explained. (r)

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Appendix R Demographic Variables

Directions: The following questions will ask you about your background. To reiterate, all of your responses are completely confidential. Individual responses will not be seen or made known to anyone. UCA will NOT see your individual responses.

1. How old were you on your last birthday? _____ years
2. What is the highest level of education you have achieved? (circle one)
 1. Completed less than 9th grade
 2. Some high school.
 3. High school graduate or received GED.
 4. Some college work or associate's degree.
 5. Bachelor's degree.
 6. Some graduate work completed.
 7. Master's degree.
 8. Completed some coursework past Master's degree.
 9. Doctoral degree.
3. Please circle your ethnicity.
 1. African American
 2. American Indian
 3. Caucasian
 4. Latino
 5. Other
4. Please circle your gender. 1. Male 2. Female
5. What is your present wage rate? \$_____ per hour OR \$_____ per year
6. How many hours per week do you USUALLY work at this job? _____ hours

Appendix S

Measurement Properties for the Single Factor Model after Modification– Undergraduate Sample

Indicator	Standardized Loading	Average Variance Extracted ^a	z-value	Composite Reliability ^c
		.43		.90
		Error Variance ^b		Indicator Reliability ^d
Fit: Organization	.80	.36	14.11	.64
Sacrifice: Organization	.75	.44	12.80	.56
Links: Organization	.14	.98	2.08	.02
OJS	.84	.30	15.03	.70
JSS: Pay	.69	.53	11.41	.47
JSS: Promotion	.64	.59	10.35	.41
JSS: Supervision	.58	.67	9.15	.33
JSS: Benefits	.57	.66	9.04	.34
JSS: Rewards	.84	.29	15.21	.71
JSS: Operating Procedures	.15	.97	2.44	.03
JSS: Coworkers	.52	.73	8.12	.27
JSS: Nature of Work	.78	.39	13.50	.61
JSS: Communication	.73	.47	12.26	.53
Error Variances				
Nature of Work – OJS		.17	5.21	
Coworkers – Supervisor		.25	4.75	
Promotion – Sacrifice		.15	4.42	
Promotion – Pay		.19	4.61	
Benefits – Sacrifice		.15	3.94	

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Sigauw, 2000). ^b Error variance is the amount of measurement error associated with each indicator. ^c Composite reliability is the degree of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

Appendix T

Measurement Properties for the Single Factor Model after Modification– Classified Staff Sample

Indicator	Standardized Loading	Average Variance Extracted^a	z-value	Composite Reliability^c
		.41		.89
		Error Variance^b		Indicator Reliability^d
Fit: Organization	.81	.34	10.62	.66
Sacrifice: Organization	.82	.33	10.74	.67
Links: Organization	.29	.92	3.11	.08
OJS	.77	.41	9.71	.59
JSS: Pay	.69	.52	8.40	.48
JSS: Promotion	.81	.34	10.60	.66
JSS: Supervision	.61	.62	7.23	.38
JSS: Benefits	.32	.90	3.45	.10
JSS: Rewards	.85	.27	11.44	.73
JSS: Operating Procedures	.20	.96	2.12	.04
JSS: Coworkers	.46	.79	5.09	.21
JSS: Nature of Work	.55	.70	6.25	.30
JSS: Communication	.65	.58	7.75	.42
Error Variances				
Nature of Work – OJS		.31	5.46	
Promotion - Pay		.17	3.51	
OJS – Organizational Fit		.13	3.67	
Coworkers - Supervisor		.25	3.45	

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the amount of measurement error associated with each indicator. ^c Composite reliability is the degree of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

Appendix U

Measurement Properties for the Two-Factor Model after Modification – Undergraduate Sample

Indicator	Standardized Loading	Average Variance Extracted^a	z-value	Composite Reliability^c
Community Embeddedness		.43		.63
		Error Variance^b		Indicator Reliability^d
Fit: Community	.72	.48	7.69	.52
Sacrifice: Community	.87	.25	8.40	.75
Links: Community	.13	.98	1.70	.02
		Average Variance Extracted^a		Composite Reliability^c
Job Satisfaction		.44		.88
		Error Variance^b		Indicator Reliability^d
OJS	.78	.40	13.35	.60
JSS: Pay	.70	.50	11.57	.50
JSS: Promotion	.65	.58	10.35	.42
JSS: Supervision	.60	.64	9.53	.36
JSS: Benefits	.61	.63	9.61	.37
JSS: Rewards	.88	.23	16.10	.77
JSS: Operating Procedures	.17	.97	2.37	.03
JSS: Coworkers	.55	.70	8.51	.30
JSS: Nature of Work	.72	.48	11.99	.52
JSS: Communication	.72	.49	11.93	.51
Error Variances				
Nature of Work – OJS		.26	6.30	
Promotion - Pay		.20	4.47	
Coworkers - Supervisor		.22	4.31	

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the degree of measurement error associated with each indicator. ^c Composite reliability is the amount of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

Appendix V

Measurement Properties for the Two-Factor Model after Modification – Classified Staff Sample

Indicator	Standardized Loading	Average Variance Extracted^a	z-value	Composite Reliability^c
Community Embeddedness		.44		.63
		Error Variance^b		Indicator Reliability^d
Fit: Community	.57	.68	5.56	.32
Sacrifice: Community	.93	.13	7.87	.87
Links: Community	.19	.96	1.95	.04
		Average Variance Extracted^a		Composite Reliability^c
		.39		.85
Job Satisfaction		Error Variance^b		Indicator Reliability^d
OJS	.71	.50	8.60	.50
JSS: Pay	.72	.48	8.81	.52
JSS: Promotion	.83	.31	10.77	.69
JSS: Supervision	.59	.65	6.85	.35
JSS: Benefits	.31	.90	3.35	.10
JSS: Rewards	.90	.19	12.27	.81
JSS: Operating Procedures	.23	.95	2.45	.05
JSS: Coworkers	.43	.81	4.76	.19
JSS: Nature of Work	.49	.77	5.52	.23
JSS: Communication	.65	.58	7.73	.42
Error Variances				
Nature of Work – OJS		.41	5.61	
Promotion - Pay		.14	2.78	
Coworkers - Supervisor		.27	3.64	

Note: ^a Average variance extracted is the amount of variance captured by the latent variable in relation to the amount of measurement error (Diamantopoulos & Siguaw, 2000). ^b Error variance is the degree of measurement error associated with each indicator. ^c Composite reliability is the amount of internal consistency associated with the construct. ^d Indicator reliability is the amount of variance that the indicator shares with the latent variable.

Appendix W

Indirect Effects of Core Self-Evaluations and Community Embeddedness on Job Satisfaction Parameters

	Undergraduate Sample		Classified Staff Sample	
	Core Self-Evaluations	Community Embeddedness	Core Self-Evaluations	Community Embeddedness
OJS	.14 2.55	.25 3.97	.30 4.23	.30 3.81
JSS-Pay	.13 2.53	.22 3.92	.30 4.23	.30 3.80
JSS- Promotion	.12 2.52	.20 3.86	.35 4.41	.34 3.93
JSS- Supervision	.11 2.51	.19 3.82	.25 3.96	.25 3.61
JSS- Benefits	.11 2.51	.19 3.82	.13 2.75	.13 2.62
JSS- Rewards	.16 2.56	.28 4.03	.38 4.51	.38 4.00
JSS- Operating Procedures	.03 1.77	.05 2.09	.10 2.21	.10 2.14
JSS- Coworkers	.10 2.48	.17 3.74	.19 3.44	.19 3.20
JSS- Nature of Work	.13 2.54	.23 2.93	.21 3.66	.21 3.38
JSS- Communication	.13 2.54	.23 2.93	.28 4.11	.27 3.71

note: $z \geq 1.96 = .05$ and $z \geq 2.58 = .01$

Notes

¹ From this point forward, affective disposition is defined as the tendency of individuals to be "... predisposed to respond to the job and other environmental characteristics in an affect based manner" (Judge & Hulin, 1993, p. 390). Dispositions are defined as unobservable traits that are stable over time and result in consistent attitudes and behavior (Weiss & Adler, 1984).

² Emotional generalization is also the result of emotions from one domain spilling over into the job domain (c.f. Judge & Illies, 2004). This line of research is congruent with the top-down approach in subjective well-being research where general happiness in life spills over to the work domain (e.g. Judge & Hulin, 1993; Judge & Locke, 1993; Judge & Watanbe, 1993; Judge et al. 1997; Heller, Watson, & Illies, 2004).

³ The behavioral outcomes of absenteeism and turnover were not included in Hackman and Oldham's (1980) model. See Hackman & Oldham (1980, p.93-p.94) for further explanation.

⁴ Staw et al. (1986) were able to control for SES in the Adult 2 wave and job complexity in the Adult 3 wave. Job complexity was based on the complexity scales in the *Dictionary of Occupational Titles*.

⁵ External evaluations did not explain additional variance beyond that of core self-evaluations in the prediction of job and life satisfaction (c.f. Judge et al. 1998).

⁶ Research on the Big Five indicates a correlation of .58 over a similar time period (Costa & McCrae, 1994).

⁷ Neuroticism and emotional stability are used as interchangeable labels for opposite ends of the same construct (Mount & Barrick, 1995).

⁸ At times in their literature review and in their conclusions, Mitchell et al (2001) refer to job satisfaction as a theoretically distinguishable construct from job embeddedness. However, in their results section they used the principle of convergent validity to explain the strong relationship between job embeddedness and job satisfaction. Inconsistencies between their theoretical, derived, and empirical concepts are readily apparent based on this example and previous examples in my literature review.

⁹ Both organization links and community links were standardized in a procedure similar to that used by Blegen, Muller, and Price (1988) to create the kinship responsibility index. Since one's level of links to the community increases as that person is married or owns a home, it makes sense that the construct should reflect these increasing levels of embeddedness. Therefore, this additive index combines marriage, spousal work arrangements, home ownership, family roots, children, and respondent's and spouse's relatives, which are cumulatively added:
$$\text{COMMUNITY LINKS} = \Sigma (\text{MARRIAGE} + \text{SPOUSAL WORK} + \text{HOME OWNERSHIP} + \text{FAMILY ROOTS}) / 4.$$
Therefore, marital status is 2 if married and 1 if not married; 2 if the spouse works outside the home and 1 if the spouse does not work or the individual has no spouse; 2 for home ownership, and 1 for no home ownership; and 2 for family roots in the community. A similar index was also used for organization links, but this index included position tenure, organizational tenure, occupational experience, coworker interactions, coworker dependence, number of work teams, and number of work committees. In addition, the theory behind organizational links argues that links to the organization increase as tenure increases, coworker interactions increase, and organizational participation in the form of work groups and committees increase. Furthermore, each item was standardized by using the square root of the individual's response:
$$\text{ORGANIZATIONAL LINKS} = \Sigma (\text{POSITION TENURE}^{\wedge 1/2} + \text{ORGANIZATIONAL TENURE}^{\wedge 1/2} + \text{OCCUPATIONAL EXPERIENCE}^{\wedge 1/2} + \text{COWORKER INTERACTON}^{\wedge 1/2} + \text{COWORKER DEPENDENCE}^{\wedge 1/2} + \text{WORK TEAMS}^{\wedge 1/2} + \text{WORK COMMITTEES}^{\wedge 1/2}) / 7.$$

¹⁰ Throughout the remainder of the paper, these mean summated scales may be referred to as composites of organizational and community embeddedness.

¹¹ It is important to note that this measure was only used for Hypotheses 1, 2a, 2b, 3a, and 3b. It was not used to examine Hypotheses 4a, 4b, or 4c because it resulted in parameter estimates greater than 1.

¹² Bias refers to the degree to which items or parcels reflect the true construct centroid. Efficiency examines the variability of the items or parcels around the construct centroid (c.f. Little et al., 2002).

¹³ Parcel, measure, and manifest variable will be used interchangeably in this dissertation.

¹⁴ This stands in direct contrast to domain representative sampling where specific and random error are assumed to be uncorrelated and residuals are smaller (c.f. Little et al., 2002).

¹⁵ A supplemental analysis in PRELIS revealed substantial deviation in both skewness and kurtosis p -values for those measures with both skewness and kurtosis $\geq \pm 1.00$ (c.f. Hopkins & Weeks, 1990; Shapiro, Wilk, & Chen, 1968).

¹⁶ Although organizational links and operating procedures were the worst indicators of job satisfaction, this was the first study to examine the factorial validity of these measures in relation to organizational embeddedness and job satisfaction. Thus, it remains questionable if these variables should be pruned from the model. As a post hoc analysis, these variables were pruned. Both variables were found to have a large amount of measurement error, corresponding low reliability, and in turn explained far less variance in the latent construct. A strong theoretical argument could be made for the removal of organizational links, as it deals with importance of constituency commitment (Reichers, 1985; Becker, 1992; Hunt & Morgan, 1994) and is not highly correlated with organization fit or sacrifice. One may question the removal of operating procedures given its history in the JSS, but Spector (1997) has noted measurement inconsistencies associated with this measure (i.e. $\alpha = .62$, $n = 2870$). In sum, the corresponding fit of the model was excellent ($\chi^2_{(39)} = 173.56$, SRMR = .06, NFI = .95, CFI = .96, NNFI = .95) with the exception of the χ^2/df of 4.45 and the RMSEA of .12.

¹⁷ In addition, these modifications will be examined through cross-validation with the classified staff sample. Cross-validation of the model with an independent sample is necessary to examine consistency between samples and to provide some evidence that the model is generalizable to the population (c.f. MacCallum, 1986; MacCallum et al., 1992; Sörbom, 1989).

¹⁸ As will be discussed in the next section, support was not found for this residual correlation. Thus, it may be due to chance alone (c.f. Cliff, 1983; MacCallum et al., 1992).

¹⁹ As will be discussed in the next, this correlated residual was not supported with the classified staff sample. So, it may be due to chance alone (c.f. Cliff, 1983; MacCallum et al., 1992).

²⁰ Since organizational links and operating procedures were the worst indicators of job satisfaction, these variables were pruned in a second post hoc analysis. As with the undergraduate sample, both variables were found to have a large amount of measurement error, corresponding low reliability, and in turn explained far less variance in the latent construct. In sum, the corresponding fit of the model was excellent ($\chi^2_{(40)} = 93.40$, $\chi^2/df = 2.34$, SRMR = .06, NFI = .94, CFI = .96, NNFI = .94) with the exception of the RMSEA of .11.

²¹ Since these results were not found with the undergraduate sample, the correlated residuals may be due to chance alone (c.f. Cliff, 1983; MacCallum et al., 1992).

²² The results from the undergraduate sample specified residual correlations between JSS- promotion and organizational sacrifice and JSS- benefits and organizational sacrifice. However, these results were not replicated with the classified staff sample and may be due to chance alone.

²³ Although community links and operating procedures were the worst indicators of job satisfaction; as noted earlier, this was the first study to examine the factorial validity of these measures in relation to community embeddedness and job satisfaction. Therefore, preliminary evidence suggests that these variables be pruned from the model. In a post hoc analysis, these manifest variables were pruned from the model as both had a large amount of measurement error, corresponding low reliability, and in turn explained far less variance in the latent construct. The removal of community links from the model makes sense because it has different theoretical underpinnings

(kinship responsibilities- Price & Mueller, 1981; Turban, Campion, & Eyring, 1992 and normative influences- Ajzen & Fishbein, 1977; Hom & Hulin, 1981) and is not highly correlated with community fit or sacrifice. As discussed previously, the removal of operating procedures is theoretically justifiable because Spector (1997) has noted the weaknesses with this measure. In conclusion, the corresponding fit of the model was excellent ($\chi^2_{(40)} = 118.90$, $\chi^2 / df = 2.97$, RMSEA = .09, SRMR = .06, NFI = .95, CFI = .96, NNFI = .95).

²⁴ Since community links and operating procedures were the worst indicators of community links and job satisfaction respectively, these variables were pruned in a second post hoc analysis. As with the undergraduate sample, both variables were found to have a large amount of measurement error, corresponding low reliability, and in turn explained far less variance in the latent construct. In sum, the corresponding fit of the model was excellent ($\chi^2_{(40)} = 81.91$, $\chi^2 / df = 2.05$, SRMR = .07, NFI = .92, CFI = .95, NNFI = .94) with the exception of the RMSEA of .09.

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EDUCATION

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PROFESSIONAL EXPERIENCE

- August 2004 - present: *Assistant Professor*, Department of Management and Marketing, College of Business, University of Central Arkansas
- August 2001- July 2004: *Instructor, Teaching Assistant, Graduate Assistant*, Pamplin College of Business, Virginia Tech

REFERRED JOURNAL ARTICLES

Connerley, M.L., Carlson, K.C., & **Oyler, J.D.** (Revise and Resubmit). Perceived Fairness of Background Checks: Influence of Job-Relatedness and Invasiveness. *Journal of Business and Psychology*.

McKinney, A.P. & **Oyler, J.D.** (Revise and Resubmit). How to Get Value out of Diversity Texts: A Critical Review. *Academy of Management Learning and Education*.

PAPER PRESENTATIONS AND CONFERENCE ACTIVITIES

Oyler, J.D. (2003). "Examining the Construct Validity of Job Embeddedness." Presented at the Pamplin College of Business Research Series, Blacksburg, VA, April 2003.

Connerley, M.L., Carlson, K.C., & **Oyler, J.D.** (2003). "Perceived Fairness of Background Checks: Influence of Job-Relatedness and Invasiveness." Presented at Society of Industrial and Organizational Psychology Conference, Orlando, FL, March 2003.

Oyler, J.D. (2001). "Arkansas Health Disparities Associated with Tobacco Use in the Delta Region." Presented at Mississippi County Community College, Blytheville, AR, January 2001.

Oyler, J.D. (2000). "Clean Indoor Air Ordinances." Presented at the Robert Wood Johnson Foundation Conference, Chicago, IL, November 2000.

COMPETITIVE RESEARCH GRANTS

March 2007	\$1,900 University of Central Arkansas Faculty Enhancement Grant
April 2006	\$1,300 University of Central Arkansas Faculty Development Grant
April 2006	\$5,200 University of Central Arkansas Instructional Development Grant
August 2005	\$5,200 University of Central Arkansas Instructional Development Grant
April 2001	\$2.3 million Special Opportunity Grant from Robert Wood Johnson for Healthcare and Tobacco Education, Executive Coordinator, Coalition for Tobacco Free Arkansas, American Lung Association.
March 2001	\$ 5,000 mini-grant from Arkansas Department of Health for Arkansas Travelers Tobacco Education, Executive Coordinator, Coalition for Tobacco Free Arkansas, American Lung Association.
November 2000	\$60,000 grant from Arkansas Department of Health and Centers for Disease Control for Tobacco Education, Executive Coordinator, Coalition for Tobacco Free Arkansas, American Lung Association.

RESEARCH INTERESTS

1. Job Attitudes
2. Personality
3. Work Design

CONSULTING EXPERIENCE

2007: University of Central Arkansas, Conway, AR. Conducting organizational survey for classified staff to examine dispositional and situational predictors of job attitudes.

2007: University of Arkansas for Medical Sciences, Little Rock, AR. Analysis of organizational survey for over 8,000 employees that addresses organizational attachment and family-work issues.

2003-2004: National Bank of Blacksburg, Blacksburg, VA. Conducted employee attitude and turnover intention survey and prepared assessment of employee morale. Performed analysis with SPSS and LISREL 8.52

2003-2004: Virginia Tech, Blacksburg, VA. Conducted assessments of blue-collar employee embeddedness, job satisfaction, organizational commitment, and functional turnover. Performed statistical analysis with LISREL 8.52 and SPSS.

MANUSCRIPTS IN PREPARATION

Oyler, J.D. Evaluation of the construct validity of job embeddedness. Submitted to SIOP 2008 Conference.

Oyler, J.D. Assessing the construct validity of job embeddedness. Targeted at *Educational and Psychological Measurement*. Final write-up stage.

Oyler, J.D. Factors underlying organizational attachment. Targeted at *Journal of Applied Psychology*. Data collected.

Oyler, J.D. Core self-evaluations and job satisfaction. The mediating influence of organizational and community embeddedness. Targeted at *Journal of Management*. Data collected.

Oyler, J.D. Formative versus reflective indicators: The case of job satisfaction. Targeted at *Psychological Methods*. Data collected.

TEACHING EXPERIENCE:**University of Central Arkansas**

Course	Semester	Course Level	Average Ratings
MGMT 4397 Managing Business Policy and Strategy	Fall 2004 to present	Senior Capstone	4.42/5.00
MGMT 4397 Managing Business Policy and Strategy Online Course	Fall 2005 to present	Senior Capstone	4.40/5.00
MGMT 3351 Managing Diversity in the Workplace	May 2006- 2007	Junior Standing	4.90/5.00
MGMT 3340 Managing People and Work	Fall 2004	Junior Standing	4.20/5.00
Undergraduate Independent Study Organizational Research Methods Monique Landa	Fall 2006		

Virginia Polytechnic Institute and State University

Course	Semester	Course Level	Average Ratings
MGT 3324 Organizational Behavior	Fall 2002 - Summer 2004	Junior Standing	4.69/5.00
MGT 3304 Management Theory and Leadership Practices	Spring 2002 – Summer 2003	Junior Standing	4.45/5.00

ACADEMIC PROFESSIONAL ACTIVITIES

Ad Hoc Reviewer, *Journal of Psychology*, 2006-present

Reviewer, Organizational Behavior Division of the Academy of Management, 2007

Reviewer, Organizational Behavior Division of the Academy of Management, 2006

Reviewer, *Content Connections*, 2005-2006

Reviewer, Schimmerhorn *Principles of Management*, 2005

Reviewer, Hitt, Black, & Porter *Management* First Edition, 2004

PROFESSIONAL AFFILIATIONS

Member, Academy of Management (Divisions – OB, HR), 2001-2007

Member, Society of Industrial and Organizational Psychology, 2002-2007

Member, Society for Human Resource Management, 2001-2004

SERVICE AND PROFESSIONAL DEVELOPMENT

Departmental

Member, Search Committee for Marketing Faculty Member, Fall 2007

Member, Search Committee for Marketing Faculty Member, Dr. Dan Fisher (University of Arkansas), Fall 2006

Member, Search Committee for Marketing Faculty Member, Dr. Douglas Voss (Michigan State), Fall 2006

Member, Search Committee for Management Faculty Member, Dr. Michael Hargis (Wayne State), Spring 2006

Chair, Virginia Tech Department of Management Doctoral Student Committee, 2003-2004

College

Member, CBA Committee for Assessment, 2006-present

Member, CBA Committee for Curriculum, 2006-present

Member, CBA Committee for Faculty Research and Publication Bonuses, 2006-present

Member, CBA FIPSE Team to Nova Scotia and New Brunswick, Fall 2005

Member, Pamplin College of Business Representative, Virginia Tech Graduate Budget Committee, 2003-2004

University

Member, University Committee for Creativity and Scholarly Activity, 2006-present

Member, University Research Council, 2006-present

Reviewer, Honors College Thesis Committee for Laci Rogers, Spring 2006

Reviewer, Honors College Thesis Committee for Elsie Tetteh, Spring 2005

NON-ACADEMIC PROFESSIONAL EXPERIENCE

**American Lung
Association**
2000-2001

Executive Coordinator, Coalition for Tobacco Free Arkansas

- Awarded \$2.3 million grant from the Robert Wood Johnson Foundation in order to assist the process of creating statewide tobacco control programs
- Responsible for planning, development and implementation of statewide tobacco education programs
- Coordinated statewide efforts with the Coalition for a Healthier Arkansas Today to develop an implementation plan for national tobacco settlement funds
- Improved the health of Arkansans by waging a grassroots campaign to increase public awareness of negative effects of tobacco products

State Farm Insurance
1998 – 2000

Senior Catastrophe Fire Claims Adjustor

- Handled over 2000 claims in United States and Canada with emphasis on hail, wind, flood, sewer backup, and ice dams
- Communicated effectively with all parties involved in a claim by investigating coverage questions and claims
- Negotiated settlements with policyholder, claimant, and other involved representatives

ACADEMIC HONORS AND RECOGNITION

May 2007

Phi Delta Phi National Honor Society
Invited Membership, Virginia Tech

May 2007

Phi Sigma Theta National Honor Society
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February 2004

Litschert Award for Outstanding Academic Achievement
Pamplin College of Business, Virginia Tech

1994-Present

Alpha Sigma Alpha National Sorority
Member, University of Central Arkansas

1993-1997

NCAA Volleyball Athletic Scholarship Recipient
All-Tournament Honors
All-Conference Honors