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Keywords

job satisfaction, research, university, employee, self-deception, source, satisfaction, relationship, well-being, job

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Working Paper 94 – 14



Dispositional Source of Job Satisfaction: The Role of Self-Deception

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Running Head: SELF-DECEPTION

This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research, conferences, and projects available to others interested in human resource management in preliminary form to encourage discussion and suggestions.

Abstract

Despite providing strong indication that there is a dispositional source of job satisfaction, past research has not fully addressed the cardinal questions of how--or what--dispositions influence job satisfaction. This study suggests that self-deception may serve as an important psychological variable that partly explicates the dispositional source of job satisfaction. Using three sources of data obtained from a sample of university employees, our results indicated that employees who tend to engage in self-deception indeed experienced more satisfaction in their lives and with their jobs. Results also suggested that the relationship between subjective wellbeing and job satisfaction is reciprocal. All these findings were observed in a model including a significant link from affective disposition to subjective well-being. The results suggest that dispositional variables such as self-deception are important explanations of the dispositional source of job satisfaction.

Dispositional Source of Job Satisfaction: The Role of Self-Deception

Imagine that two "black boxes" were designed to calculate job satisfaction. One box was designed as a "positively disposed" data processor and the other as a "negatively disposed" one. These data processors receive information on pay, promotion opportunities, intrinsic factors, and other job characteristics, and produce job satisfaction output. Now imagine that the same information is input into these two machines; would the same results be obtained? According to the existing literature on the dispositional sources of job satisfaction, the answer is no -- the machines will produce different results. However, this literature does not explain the source of this difference and does not completely answer the important questions of how, and what, dispositions influence job satisfaction. Consequently, it can be argued that this literature operates like a "black box" in that it predicts the results but does not explicate the process.

In a recent review, Judge (1992) argued that the atheoretical nature of this literature was the single most important area for development in dispositional research and claimed that this deficiency can be redeemed by applying social cognition theories to explain dispositional sources of job satisfaction. Judge was not the only author who felt that simply adding affective disposition to the list of job satisfaction causes was insufficient. Adler and Weiss (1988) also emphasized the importance of understanding the psychological influences of dispositions on job satisfaction and, in particular, Locke (1976) and Judge and Hulin (1993) suggested that thinking processes may be one of the missing links. Judge and Locke (1993) went even further and offered some guidance for future theoretical development in this area. Based on the cognitive theory of depression, they claimed that dysfunctional thought processes may have a detrimental effect on subjective well-being and job satisfaction. Thus, dispositional tendencies may act through dysfunctional cognitions to influence job satisfaction, and there may be other dispositional influences on job satisfaction besides affective disposition.

The Judge and Locke article (1993) is very much in line with the traditional psychological doctrine that explains "happiness" by "normality." The assumption of this optimistic approach is that the normal-neutral situation is a state of subjective well-being. According to this school of thought, in order to understand the unnatural state of unhappiness, one must account for thought processes that cause unhappiness. In the past 15 years, however, different trends have developed in psychology that attempt to explore sources of happiness rather than sources of unhappiness. One of these attempts is research on the adaptive role of self-deception. Well-adjusted individuals are believed to regularly engage in

self-deception by holding positively biased views of themselves, ignoring minor criticisms, discounting failures, avoiding negative thoughts, and expecting a high level of success in new efforts (Zerbe & Paulhus, 1987). Recent research has found that self-deception, although irrational by definition, has a strong positive influence on happiness (Paulhus, 1986; Roth & Ingram, 1985; Sackeim, 1983; Sackeim & Gur, 1979). The influence of self-deception on happiness, however, may be manifested in different domains of life; for example, in the job situation. Consequently, self-deception may influence judgments of job satisfaction in addition to its general effect on subjective well-being. Since research suggests that self-deception is a dispositional construct (Sackeim, 1983; Zerbe & Paulhus, 1987), it may provide another explanatory variable in terms of the dispositional sources of job satisfaction. Thus, the purpose of the present study is to investigate the role of self-deception in influencing subjective well-being and job satisfaction. On the basis of prior theory and research, a model is proposed that tests the relationships among self-deception, subjective well-being, and job satisfaction. The results from testing this model should provide a further understanding of the psychological basis underlying the dispositional source of job satisfaction.

Relevant Theory and Past Research

Affective Disposition and Job Satisfaction

A comprehensive theory of the dispositional source of job satisfaction has yet to be developed. However, if theory creation can be compared to construction work, the major building blocks of this project are already in place. Two major groups of studies constitute these building blocks. The first group consists of studies investigating the temporal and situational stability of job attitudes. Pulakos and Schmitt (1983) and Staw and Ross (1985) discovered that job attitude stability exists across time and situations and attributed this stability to affective dispositions. However, because these studies did not measure dispositions directly, the soundness of the conclusion that dispositional characteristics are the source of job satisfaction stability is open to question. For example, Gerhart (1987) found that job attitude stability declined once several methodological considerations were taken into account and Gutek and Winter's (1992) results suggested that when response-shift bias was controlled, job attitude stability disappeared. Davis-Black and Pfeffer (1989), on the other hand, claimed that even if stability does exist it is not necessarily explained by dispositional forces (other explanations could be demographics, socioeconomic status, etc.).

The second group of building blocks consists of studies which go a step further by measuring dispositions directly and relating them to job satisfaction (Judge & Hulin, 1993;

Levin & Stokes, 1989; Staw, Bell, & Clausen, 1986; Weitz, 1952). Arvey, Bouchard, Seagal, and Abraham's (1989) study took a somewhat unique approach in finding significant similarity in the job satisfaction levels of monozygotic twins reared apart. These studies, however, lack a strong theoretical basis linking disposition to job satisfaction in that they do not explain the process by which dispositions influence job satisfaction. As a result, both groups of studies in a sense, are "black boxes." Another limitation of these studies is that they only considered affective disposition as a source of job satisfaction and did not explore other potential dispositional sources of job satisfaction. Despite these limitations, the contributions of these studies must be acknowledged because they were the first to establish an empirical link between disposition and job affect, and thus created the groundwork for building an explicit dispositional theory of job satisfaction.

In a recent article, Judge and Locke (1993) went beyond these building blocks and developed and tested a theoretical model which partly explains the psychology behind the dispositional effect. These authors claimed that dispositional tendencies may be "thwarted or enhanced by numerous factors in the environment and in the person" (p. 476). According to this logic, in order to understand the influence of dispositions on job satisfaction, one must account for the mental processes that may enhance or reduce these dispositional tendencies. Relying on the cognitive theory of depression, which posits that irrational thought processes such as overgeneralization and perfectionism are primary causes of unhappiness, the authors suggested that individuals' tendencies to engage in dysfunctional thought processes affect satisfaction in all domains of life. Their results supported the claim that dysfunctional thought processes are self-defeating mental processes that induce negative affect with respect to the job and life domains.

Although the Judge and Locke (1993) study represented a contribution to the literature, the study only serves as an example for a future theory and not as a complete theory of the disposition job affect link. A principal weakness of the study is that it only accounted for dysfunctional thought processes, and these do not cover the full range of thought processes that might influence job satisfaction. Specifically, while Judge and Locke investigated ego-deflating thought processes, it is very likely that ego-enhancing mental processes also influence happiness and job satisfaction. Self-deception, as one of the most influential ego-enhancing thought processes, should therefore be investigated as a potential source of job-satisfaction. Another limitation of the Judge and Locke (1993) study is that the authors were not clear about the dispositional status of dysfunctional thought processes, which makes

the distinction between these thought processes and affective disposition unclear. The present study, on the other hand, offers self-deception as a distinct dispositional variable which, separately from affective disposition, influences job satisfaction. Thus, this study adds self-deception as another possible dimension to the dispositional sources of job satisfaction.

Self-Deception

In a purely logical sense, self-deception is an "impossible concept" because it is based on an internal contradiction of believing in a proposition as well as its negation (P & not-P). In the deception of others, the one who lies and the one to whom the lie is told are not the same person. Thus, in deceiving others a person communicates a message (P) that he/she knows not to be true (not-P) to a person who does not know if the message (P) is true or not. For example, John may tell his boss that he was late for work because of a traffic jam (P) while knowing there was no traffic jam (not-P). In relying on the fact that his boss does not know whether or not there was a traffic jam, John is consciously deceiving his boss. Therefore, in order to deceive, one must know the truth and know that one is being deceptive. On the other hand, in order to be deceived one must not know the truth. But in self-deception the one who lies and the one to whom the lie is told are one and the same person (Sartre, 1943), so how can one consciously and directly deceive oneself by making oneself believe in something one knows not to be true?

The most comprehensive solution to this paradox was provided by Sackeim and Gur (1978). Summarizing other researchers' arguments, they developed four criteria necessary and sufficient for ascribing self-deception. The first condition states the paradox: the individual holds two contradictory beliefs (P and not-P). The second condition states that the two contradictory beliefs must be held simultaneously. The term self-deception is therefore defined as a mental mechanism that allows people to hold simultaneous contradictions among their sets of beliefs, thoughts, feelings, and behaviors. The following examples are manifestations of self-deception:

- 1) John is an African-American man who believes that his boss will promote him although he knows that his boss is a racist who never promoted a minority person. Whenever new information comes to John's attention that his boss dislikes minorities, John ignores it and continues to believe that he will be promoted.
- 2) Sam believes that a coin cannot save a person's life and yet always takes his lucky coin to his police work. Although Sam has strong evidence to support his belief that

coins cannot save lives, Sam engages in self-deception by allowing his belief to contradict his behavior.

The essential point of these examples is that they represent common contradictions in sets of beliefs. Thus, self-deception, although irrational by nature, is exercised by irrational as well as rational people. But how is it possible for a rational person to hold contradictory beliefs?

The classic resolution for this condition of self-deception is that at least two autonomous agencies exist within the individual. Each agency holds separate and contradictory beliefs to the other, and one agency is unaware of the beliefs of the other agency. Consequently, P and not-P can co-exist in the same individual. Thus, the third condition for self-deception is that the individual is not aware of holding one of the beliefs. However, this nontransparent nature of consciousness does not necessarily require a Freudian split of the mind to consciousness and unconsciousness. This form of solution only requires that the self-deceiver will be aware of a belief and also be aware of a contradictory belief without noticing the contradictory belief (Demos, 1960). For example, what difference does it make that I hold the general belief that commercial flights are safe if I am anxious whenever I have to fly? In this case, only the short occurring thought that I am afraid to fly, which constitutes my "perceptual belief," is noticed. For a brief moment I do not hold the belief that flights are safe, while I do not give up my general belief (Bach, 1981).

Self-deception is an active mental process. For example, when we say that John cannot admit that his boss does not like him, we do not literally mean that he "cannot admit" but rather that he "will not admit." However, "will not admit" does not refer to an ad hoc irrational decision, but rather to a general policy of reducing negative feelings (Fingarette, 1969). Thus, the fourth condition for self-deception, according to Sackeim and Gur (1978), is that the act that determines which belief is and which is not subject to awareness is a motivated act. In summary, these four conditions describe the self-deception paradox (condition I and II), the paradox solution (condition III), and the motivation factor (condition IV) that is necessary for self-deception. This description therefore gives a comprehensive explanation of the phenomenon. In a series of carefully designed experiments, Sackeim and Gur (1978) demonstrated the validity of the self-deception construct, and presented strong evidence that self-deception comprised the four conditions they defined. In a series of experiments, subjects were asked to identify their own recorded voice among other subjects' voices recorded on tape. Although some of the subjects did not recognize their own voice, psychophysiological measures taken during the experiments indicated that those subjects who

denied recognizing their voice were actually aware of it. This simultaneous awareness without recognition was interpreted as corresponding to the definition and conditions of self-deception.

In addition to the experiments, Sackeim and Gur (1979) developed the Self-Deception Questionnaire (SDQ) to measure individual differences in the tendency to engage in self-deception. The SDQ consists of 20 questions, all of which are meant to be psychologically threatening but with presumably universally true characteristics (e.g., "Do you ever feel guilty?", "Have you ever doubted your sexual adequacy?"). Subjects who denied many of the threatening but universally true characteristics were considered self-deceivers. Sackeim and Gur (1979) found that subjects' responses to the SDQ were significantly correlated with the experiments' results. These results may indicate that self-deception is not only a mental process but also a dispositional tendency in itself. Individuals may have different tendencies toward engaging in self-deceptive thought processes, a tendency that may influence their perceptions and judgements in all domains of life.

In a later study, Sackeim and Gur (1979) found substantial negative correlations between self-deception and psychopathology (e.g., depression, neuroticism). Especially significant was the negative correlation between self-deception and depression. This relationship was interpreted as evidence that non-depressed individuals exercise more reality distortion. The same negative correlation was replicated by Roth and Ingram (1985). In addition to the fact that low scorers on the SDQ are more subject to depression and anxiety (Sackeim & Gur, 1979), it also has been found that high scorers tend to show high self-esteem, high need for achievement, and an internal locus of control (Paulhus, 1986). This strengthens the suggestion that self-deception has an adaptive role.

The above series of studies may give rise to the speculation that self-deception does not differ from simple pathological denial. However, Paulhus and Reid (1991) demonstrated that although denial was one component of self-deception, self-deception contained a very strong ego-enhancement component. Presenting evidence that enhancement was more negatively correlated with depression than was denial, these authors concluded that self-deception has an active role in enhancing happiness. Thus, self-deceivers not only block threatening information, but actively search for information to enhance the self. Accordingly, these two mechanisms of the self-deception process may be responsible for the enhancement of subjective well-being and job satisfaction. Thus, on the basis of this past research, a model suggesting self-deception as a source of subjective well-being and job satisfaction is developed below.

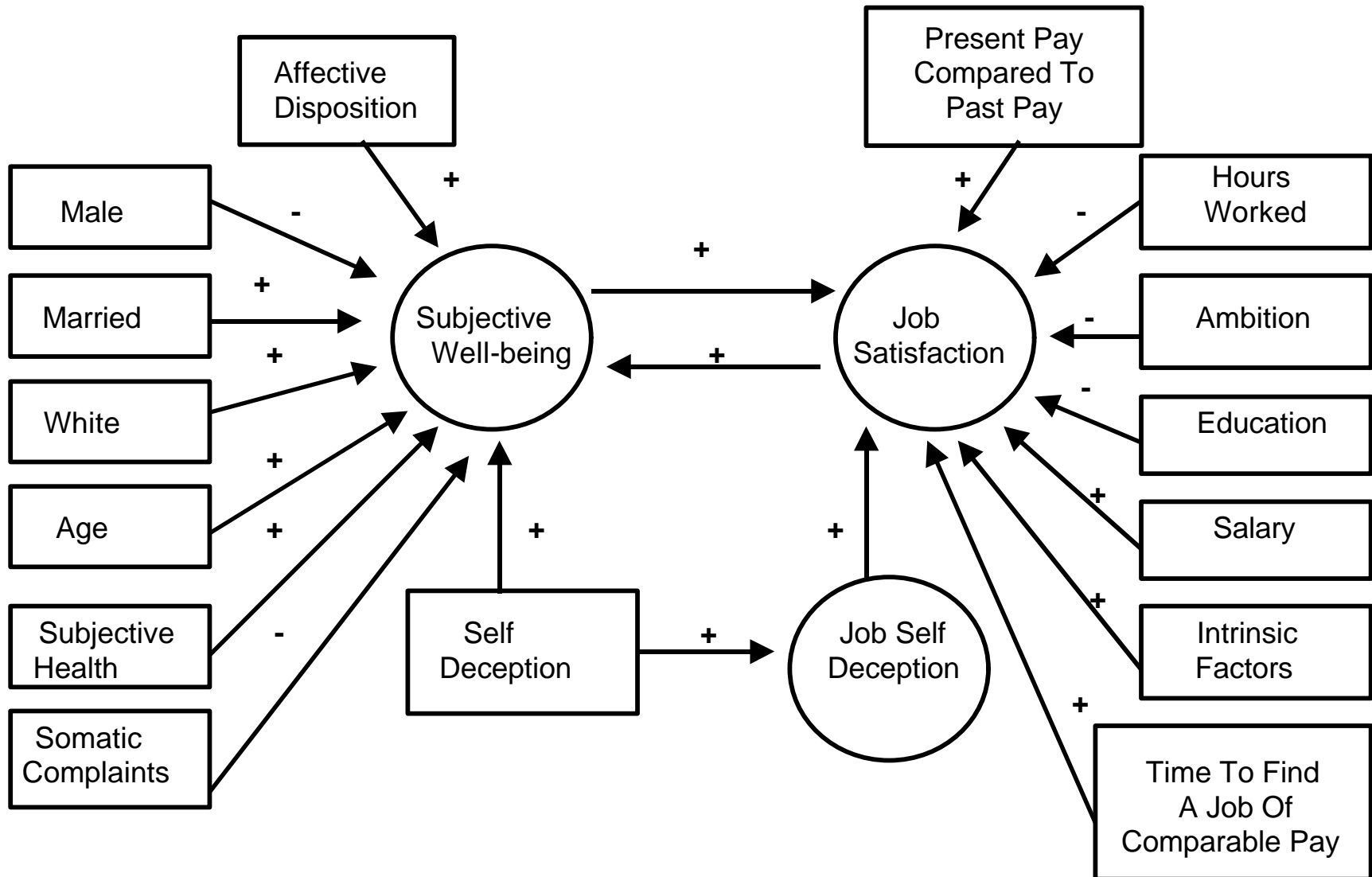
Causal Model

A causal model was hypothesized that includes relationships between self-deception, subjective well-being, and job satisfaction. Other relevant variables were added to the model to avoid omitted variable bias (James, Mulaik, & Brett, 1982). Figure 1 depicts the links contained in the hypothesized structural model. Exogenous or independent variables are represented by rectangles, while endogenous or dependent variables are represented by circles. The links in this model are discussed below. The more critical links, the ones that were the focus of this study, are discussed first.

Self-Deception to Subjective Well-Being

The substantial negative correlation found between self-deception and depression (Paulhus & Reid, 1991; Roth & Ingram, 1985; Sackeim & Gur, 1979) indicates that depressed subjects do not deny undesirable characteristics as much as do non-depressed subjects. This implies that self-deceivers may actively block depressive states. Furthermore, Paulhus and Reid (1991) provided evidence that enhancement is more influential in blocking depression than denial. This suggests that self-deceivers not only block threatening information when encountered but are actively searching for information to enhance the self. Moreover, the negative correlations between the SDQ and general measures of psychopathology (e.g., neuroticism) in the Sackeim and Gur study (1979) demonstrated that well-adjusted individuals were more likely to engage in self-deception. The above evidence provides a strong indication that self-deception is an important influence on subjective well-being, and therefore this link is included in the model represented in Figure 1.

FIGURE 1: Hypothesized Structural Model



Subjective Well-Being to Job Satisfaction

Past empirical research has demonstrated that the effect of subjective well-being on job satisfaction is significant (Judge & Hulin, 1993; Judge & Locke, 1993). The causal link from subjective well-being to job satisfaction also is supported from a theoretical standpoint. Isen and Simmonds (1978) found that happier individuals tended to engage in activities that enhanced their positive affect and were less likely to engage in activities that decreased their positive affect. Accordingly, while on the job, happier individuals may be more likely to engage in activities they consider pleasant, and less likely to engage in activities they consider unpleasant. These activities in turn are likely to preserve a positive level of satisfaction on the job.

Another theoretical reason for the causal link from subjective well-being to job satisfaction derives from cognitive psychology. Subjective well-being may influence how individuals collect and recall information about their job. Isen, Shalke, Clark, and Karp (1978) demonstrated that positive material is encoded more frequently in memory and more accessible for recall to people in positive affective states. Bower (1981) demonstrated this process with respect to life events. Thus, happy individuals may tend to store, evaluate, or recall job information differently from unhappy individuals (Judge & Locke, 1993). Direct empirical support for this explanation of the link between subjective well-being and job satisfaction has yet to be given, although causal research clearly demonstrates that such a link exists (Judge & Hulin, 1993; Judge & Locke, 1993; Judge & Watanabe, 1993).

Job Satisfaction to Subjective Well-Being

Following the logic of Locke's (1976) value-discrepancy theory, subjective well-being should be a function of the satisfaction derived from various facets of life and the importance of those facets. Empirical evidence, and the simple fact that most individuals spend the majority of their waking hours at work, suggests that work is one of most central of all life facets (Near, Rice, & Hunt, 1978). Thus, job satisfaction is likely to influence subjective well-being because the job is a central part of life. Empirical evidence demonstrating the moderating effect of job importance on the relationship between job and life satisfaction (Rice, McFarlin, Hunt, & Near, 1985) supports this conclusion. Accordingly, researchers have found a significant causal effect from job satisfaction to life satisfaction or subjective wellbeing (Judge & Hulin, 1993; Judge & Locke, 1993; Judge & Watanabe, 1993). A reciprocal link from job satisfaction to subjective well-being is therefore included in Figure 1.

Job Self-Deception to Job Satisfaction

Like any other attitude, job satisfaction is combination of affects and cognitions (Locke, 1976). Thus, the more positive beliefs and feelings employees have about their jobs, the more likely it is that they will be satisfied in their jobs. Moreover, the "consistency principle" of attitude formation (Festinger, 1957) suggests that a high correlation is expected between assessments of the job and feelings toward it. Accordingly, a thought process that creates a positive assessment of the job should be followed by increased job satisfaction. Since self-deception is suggested to be a mental mechanism that increases positive assessments of situations (ignoring minor criticisms, discounting failures, and expecting success), self-deception in job situations is suggested as a direct influence on job satisfaction.

But how does self-deception influence the assessment of situations? Paulhus and Reid (1991) suggested that the self-deceiver continually distorts daily events to build positive esteem. When sufficiently strong, this esteem may act as a buffer to soften the impact of negative information. Taylor (1989) expanded upon this idea even further by suggesting that when threatening or "harmful-to-the-self" information is presented to ego enhancers, they turn to their assets and emphasize them to neutralize the threat. For example, if individuals are afraid of being laid-off, they can, when the thought occurs, direct their thoughts toward "I am a good performer and good performers are not being laid-off," and thus overcome the fear and accompanying dissatisfaction. In the job situation, self-deception is therefore likely to be followed by job satisfaction. A link between self-deception in job situations (hereafter referred to as job self-deception) and job satisfaction is represented in Figure 1.

The general tendency to engage in self-deception, however, should be separated from its manifestation in the job situation. The fact that some individuals have a general tendency to deceive themselves does not necessarily mean that these people will engage in self-deception in every facet of their life. A distinction between self-deception as a general tendency and job self-deception is therefore necessary. Notwithstanding, the tendency to engage in self-deception is hypothesized to influence job self-deception, as represented in Figure 1.

Other Causal Links with Subjective Well-Being

Recently, some researchers have argued that predispositional affective tendencies must be distinguished from experienced happiness (Diener, 1990; Judge, 1992; Judge & Hulin, 1993; Judge & Locke, 1993). While affective disposition is an individual's tendency to respond to the environment in a predetermined, affect-based manner (Judge & Hulin, 1993), subjective well-being represents an ongoing state of psychological wellness (Diener, 1984).

Accordingly, positive affective disposition is not necessarily the same as being happy (Judge & Hulin, 1993; Judge & Locke, 1993). Dispositional tendencies may be averted or improved by any number of environmental or person factors. However, research has demonstrated that while affective disposition is distinct from subjective well-being, it significantly influences subjective well-being (Judge & Hulin, 1993; Judge & Locke, 1993). It is therefore hypothesized that affective disposition influences the current level of happiness in individuals. This hypothesis is represented in Figure 1.

Diener's (1984) review of the sources of subjective well-being was used to select age, race, marital status, and gender as the major demographic influences on subjective well-being. In line with the majority of evidence from research (Diener, 1984), it is hypothesized that the following relationship would occur: subjective well-being would tend to increase with age; minorities generally would have lower subjective well-being than Whites; relationships between marital status and subjective well-being would be positive; although the effect of gender on subjective well-being has yielded inconsistent results, most of the recent research has found males to be somewhat less happy than females. The above hypotheses are represented in Figure 1.

Finally, since many writers have suggested that health significantly influences life satisfaction (Diener, 1984; Near, Rice, & Hunt, 1978), two measures of health are included in the model and hypothesized to influence subjective well-being. Diener (1984) distinguished between objective and subjective health. A subjective report of health, although important in itself, is a relativistic measure because it may depend on comparison with one's own past and with other individuals one knows (Judge & Watanabe, 1993). Therefore, in addition to including subjective health in the models, a more objective measure of health also has been added. This measure refers to the number of physical symptoms or health problems an individual might experience. These two forms of health reports may actually reflect somewhat different dimensions of one's health and therefore were assessed separately. Both are expected to influence subjective well-being, as shown in Figure 1.

Other Causal Links with Job Satisfaction

Relevant influences on job satisfaction were selected from Hulin, Roznowski, and Hachiya's (1985) model of job satisfaction. This model suggests that job satisfaction is a function of the difference between work role inputs and work role outcomes. All else being equal, as what is received increases relative to what is contributed to the work role, job satisfaction is hypothesized to increase. Education level and hours worked are selected in the

present study to represent work role inputs. Therefore, controlling for work-role outcomes, it is hypothesized that the more education the respondent has achieved and the more hours worked per week, the less job satisfaction he/she is likely to report (Judge & Locke, 1993). Work role outcomes are manifested by wage rates and intrinsic job characteristics and are expected to influence job satisfaction positively (Judge & Hulin, 1993). These relationships are represented in Figure 1.

In addition, Hulin et al. (1985) argued that individuals' frame of reference affects their perception of current outcomes received. For example, if individuals believe that they received fewer or less valued outcomes in the past, they are likely to be more satisfied with their current level of outcomes. As Figure 1 shows, and in line with Judge and Hulin (1993), it is hypothesized that present wages compared to the past wages will positively influence job satisfaction. Finally, Judge and Locke (1993) found that high ambition is associated with low satisfaction. They claimed that ambitious people are those who hold high standards of aspirations and thus are dissatisfied with where they are now in the organizational hierarchy. Thus, ambition is hypothesized to negatively influence job satisfaction.

Method

Setting and Subjects

The setting for this research was a large Midwestern University. Subjects (n=216) were members of the service staff, and were employed in a variety of non-academic jobs including secretaries, janitors, maintenance workers, and support staff. Education of the respondents was as follows: high school diploma=36%, some college work =43 %, bachelor's degree =9%, graduate degree =12%. University records were matched to surveys and indicated that respondents' average annual salary was \$21,214 (SD=\$9,146), their average age was 45.5 years (SD =10.8 years), 86 % of the respondents were White, and 68 % were female.

Measures

Where feasible, core constructs were measured by multiple scales in order to generate more reliable and valid estimates. Due to the psychological nature of the core constructs, self-report data were considered an essential source of information. However, in an attempt to minimize self-report bias, a significant other was asked to complete an evaluation of the focal employee's subjective well-being. Additionally, archival data on salary, age, race, and gender of focal employees were obtained from university personnel records. These multiple sources of data should yield fairly complete and reliable estimates of the core constructs.

Self-deception. Self-deception was measured by the Balance Inventory of Desirable Responding (BIDR; Paulhus, 1984). This 40-item measure consists of 20 items measuring self-deception (e.g., "I never regret my decisions," "I am a completely rational person") and 20 items measuring impression management (e.g., "I sometime tell lies if I have to," "I sometime drive faster than the speed limit"). For the purpose of this study we used only the self-deception part of the BIDR. The BIDR has some advantages over the Self Deception Questionnaire (SDQ) developed by Sackeim and Gur (1978). First, a few of the original items of the SDQ were extremely sensitive and could not be used in an organizational setting (e.g., "have you ever doubted your sexual adequacy?") (Paulhus, 1984). On the other hand, the BIDR contains statements more appropriate to organizational settings (e.g., "I don't care to know what other people really think of me") Second, in contrast to the SDQ which emphasizes denial of psychological threats, the BIDR emphasizes exaggerated claims of positive cognitive attributes. Thus, the focus of the BIDR shifts from ego defense to ego enhancement. Theoretically, this focus on enhancement is more relevant to the study of subjective well-being and job satisfaction. Finally, past research has demonstrated that the impression management items of the BIDR are distinct from the self-deception items (see Paulhus, 1984). Thus, by using the BIDR, we were able to conclude that self-deception and not impression management influenced other constructs of interest in our study. The coefficient alpha (α) reliability estimate for the self-deception part of the BIDR was .69.

Job self-deception. Job self-deception was measured by a version of the SDQ modified in order to fit a job context, hereafter referred to as the Job Self-Deception Questionnaire (JSDQ). The JSDQ holds the same assumption as the SDQ that individuals with an inclination for self-deception tend to deny psychologically threatening or unpleasant feelings. The JSDQ consisted of 22 items describing unpleasant feelings or events that are common in job situations (e.g., "Have you ever made a fool of yourself on the job?", "Have you ever hated one of your supervisors?"). Responses were anchored as 1=I would never feel this way to 7=It is very likely I would feel this way. Scoring low on this scale across all items was considered as an indication of engagement in self-deception in job situations. The coefficient alpha for the JSDQ was .86.

Subjective well-being. Six instruments were used to measure subjective well-being. All of the scales were completed by both focal employees and significant others. Respondents were asked to complete the Positive and Negative Affect Schedules (PANAS; Watson, Clark, & Tellegen, 1988), by indicating how often they generally experience ten positive and ten

negative emotions (e.g., excited, alert, distressed, upset). Although the PANAS scale is often considered a measure of affective disposition, Diener (1990) has argued that positive and negative affect, as measured by the PANAS, are not completely independent or totally stable. He therefore maintained that measures of positive and negative affect like the PANAS can be thought of as measures of subjective well-being. This argument was empirically supported by Judge and Locke (1993), who demonstrated that the PANAS scales loaded on the same factor as other measures of subjective well-being, and by Judge and Bretz (1993) who found that the PANAS was less stable over time than an alternative measure of affective disposition (see below). The α of the PA sub-scale for focal employees was .86; α of the PA sub-scale using significant other reports was .88. The α of the NA sub-scale for focal employees was .85; α of the NA sub-scale using significant other reports was .85. Respondents also completed a modified version of the Affect Balance Scale (see Diener, 1984), a list of 22 adjectives describing hedonic states (e.g., sad, happy, pleased, hopeless) (α , self-report=.91; α , significant other report=.92); the "percent time happy" item (Fordyce, 1977), which Diener (1984) concluded to have high validity as a single-item measure; a modified version of Underwood and Froming's (1980) mood survey containing 9 items with which the respondent is asked to indicate their agreement (e. g., "I am usually quite cheerful;" α , self-report=.88; α , significant other report =.91); and the Satisfaction with Life Scale (Diener, Emmons, Larsen & Griffin, 1985), a five-item measure of life satisfaction consisting of such statements as, "In most ways my life is close to ideal" (α , self-report=.86; α , significant other report =.87). Using all six measures of subjective well-being assessed from two sources should yield a valid measure of the construct.

Job satisfaction. Job satisfaction was measured using two instruments. First, the Brayfield and Rothe (1951) 18-item measure of overall job satisfaction was used. The reliability and validity of this scale has been demonstrated in previous studies (e.g., Brooke, Russell, & Price, 1988). Respondents indicated their degree of overall job satisfaction by reacting to statements about their job using a 7-point Likert type scale (1= strongly disagree to 7=strongly agree). The α for this scale was .90. Second, the short form Minnesota Satisfaction Questionnaire (MSQ: Weiss, Dawis, England, & Lofquist, 1967) was used. Respondents indicated their degree of satisfaction with different aspects of the job (e.g., pay, co-workers, the work itself) by reacting to 20 statements (1=very dissatisfied with this aspect of my job to 5=very satisfied with this aspect of my job). The α of this scale was .88.

Affective disposition. The Neutral Objects Satisfaction Questionnaire (NOSQ), based on Weitz's (1952) survey, was used to measure affective disposition. Affective disposition was measured by assessing how satisfied the respondent was with a list of neutral objects common to everyday life (e.g., 8 1/2" x 11" paper, television programs, restaurant food). Judge and Hulin (1993) found that individuals may tend to see things, including themselves, more favorably if they are highly satisfied with these neutral objects as a whole. Judge and Bretz (1993) reported the results of a comprehensive analysis of the NOSQ. They found that it had very favorable psychometric properties and was more stable over time than the PANAS. In the present study, the α of the scale was .74.

Work role inputs and outcomes. Education, hours worked, time to find a job of comparable pay (anchored as 1 = a day or two to 4 = more than a year), and present wage compared to past wages (anchored as 1 = present wage is much lower to 5 = present wage is much higher) were assessed with specific questions in the focal employee survey. Pay was taken from archival data, and intrinsic job characteristics were obtained by a five-item version of the Job Diagnostic Survey (Hackman & Oldham, 1980). The α of this scale was .73.

Ambition. Individuals who desire to move up many levels are assumed to have more ambition than those who are content where they are at (Judge & Locke, 1993). Thus, consistent with Judge and Locke, ambition was assessed by a question on the survey asking individuals how many levels they wished to move up from their present job. The mode response was a desire to advance 2 levels from their present position.

Subjective health. Subjective health was measured by the health ladder (Judge & Watanabe, 1993; Suchman, Phillips, & Strieb, 1985). The items consisted of a picture of a ladder; the top of the 7-step ladder represented perfect health and the bottom of the ladder represented total and permanent disability. Focal employees indicated which step was most descriptive of their present overall health. The mean of this item was 5.7.

Physical symptoms. Respondent were asked to indicate if they had experienced a number of physical conditions in the past year (e.g., difficulty breathing, excessive fatigue, insomnia, heart palpitations). The frequency of occurrence of each symptom was rated on a 1 = never to 4 = often scale. The reliability of this scale was .85.

Demographic information. Age, gender, and race were taken from archival data. Marital status was assessed by an individual question on the focal employee survey.

Procedure

A random sample of 700 university employees was drawn from the larger population of non-academic employees. The sample was stratified by department to insure that significant breadth in survey responses was obtained. Surveys were mailed to employees through campus mail and subjects were asked to sign an informed consent form. Subjects were informed in the cover letter that individual responses were completely confidential, and were promised a \$15 honorarium in return for their participation. Two hundred and sixteen subjects returned usable surveys, representing a response rate of 31%. Using data from the university's records, respondents did not significantly differ from nonrespondents with respect to any variable in the data base (e.g., age, gender, race, salary).

In an attempt to avoid single source bias often associated with self reports, the focal employees' subjective well-being was also evaluated from the perspective of a "significant other." Focal employees were informed that their honorarium would be paid only upon return of both self-report and significant other surveys. Two hundred and eleven significant other surveys were returned, indicating that for 98 % of the individuals who returned the focal employee survey, a significant other survey also was returned. No significant difference in respondent characteristics was found between those who had a significant other survey returned and those who had not. Given the administration of the study (self-report and significant other surveys were mailed to the focal employees), it is possible that the focal subjects answered the significant other survey themselves. This obviously would undermine any advantage of the significant other reports. In order to examine this possibility, an independent reviewer compared the handwriting of the focal employee and significant other surveys. Cases where the handwriting could not be clearly distinguished ($n=14$) were removed from the analysis. This left 197 usable significant other surveys available for further analysis. In addition to self-reports and significant other reports, archival data were obtained from the university personnel records. This triangulation in data sources should reduce halo and response set tendencies, and increase the relevant heterogeneity of the measures (Roznowski & Hanisch, 1990).

Covariance Structure Model

Covariance structure modeling was used to estimate the structural relationships among the variables (Joreskog & Sorbom, 1989). Covariance structure modeling offered several advantages for this study. First, such models allow the joint specification and estimation of the measurement model (e.g., the loadings of the measures on their hypothesized constructs) and

structural model (e.g., the relationships among the constructs) hypothesized to account for the observed data. Second, covariance structure models correct the estimates for unreliability, providing more accurate estimates of the "true" relations among the variables. Third, covariance structure models estimate indirect effects which provide important information on the total effects of variables within the model (Hayduk, 1987). Finally, covariance structure models provide a wide range of fit statistics that aid in diagnosing the acceptability of a particular model. These fit statistics include chi-square (χ^2) with corresponding degrees of freedom (df), the ratio of χ^2 relative to the degrees of freedom, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), and coefficient of determination (R^2). However, the above fit statistics are limited by their dependence on the sample size (Bender, 1990; Bollen, 1989). Consequently, two other fit statistics were employed: Bender's comparative fit index (CFI; 1990), and Bollen's incremental fit index (IFI; 1989).

Three models were tested in this study. The first model was based on self-report (and archival) data. The six self-reports of subjective well-being were allowed to load on a subjective well-being construct, the two self-reported measures of job satisfaction were allowed to load on a job satisfaction factor, and the measures of self-deception, job selfdeception, and the exogenous variables loaded on their respective constructs. Consistent with Hayduk's (1987) recommendation, where multiple-item scales were used to measure directly observed variables (self-deception, job self-deception, and affective disposition), the error variances were computed as $1-\alpha$.

The second model, hereafter referred to as the mixed data model, was based on a combination of both self-report and significant other responses. In contrast to the self-report model, in this model the six measures allowed to load on the subjective well-being construct were those reported by the significant others. All other measures of the core constructs in the mixed data model were self-report measures and were allowed to load on their corresponding constructs as in the self-report model. The third model, hereafter referred to as the full data model, was based on "full data." The six self and the six significant other reports of subjective well-being were allowed to load on the subjective well-being construct. The other measures of the core constructs were self-report measures and were allowed to load on their corresponding constructs as in the self-report model. Each of the three models had its own advantages and disadvantages. Both the self-report and the mixed data models have the advantage that there are fewer parameters estimated relative to the sample size. This is an important advantage since the number of estimated parameters relative to the sample size is an important

determinant of model fit and standard errors in covariance structural models (Hayduk, 1987). The advantage of the mixed data model is that it reduces the possibility that common method variance inflated the observed relationships among the core constructs (subjective well-being, self-deception, and job-satisfaction). The full data model was used because it combines the attributes of the first two models by allowing inferences about causal relations between the attitudes while utilizing all available data.

Results

A covariance matrix served as input for the LISREL model. Table 1 contains the means, standard deviations, and intercorrelations of the main variables of this study. Since the results of the mixed data measurement and structural models were very similar to the results of the full data model, we did not report them. These results are available upon request from the authors.

TABLE 1: Means (M), Standard Deviations (SD), and Intercorrelations of Core Variables

Variables	<u>M</u>	<u>SD</u>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Affect Balance Scale	78.04	9.48	(91)																
2. Fordyce Percent Happy Item	75.63	15.88	.69	--															
3. Underwood & Froming scale	48.39	8.23	.75	.64	(88)														
4. Satisfaction With Life Scale	23.60	6.15	.51	.42	.47	(86)													
5. Positive Affectivity Schedule	36.95	6.00	.62	.51	.49	.36	(86)												
6. Negative Affectivity Schedule	17.19	5.34	-.65	-.51	-.50	-.31	-.28	(85)											
7. Brayfield & Rothe scale	92.08	16.53	.42	.29	.35	.33	.40	-.27	(90)										
8. Minnesota Satisfaction Questionnaire	73.98	11.18	.37	.34	.29	.39	.33	-.30	.65	(88)									
9. Neutral Objects Satisfaction Questionnaire	59.76	5.76	.34	.32	.39	.34	.33	-.27	.29	.34	(74)								
10. Balanced Inventory of Desirable Responding	86.00	12.04	.43	.33	.29	.31	.49	-.40	.26	.24	.26	(69)							
11. Job Self-Deception Questionnaire	65.32	15.59	.19	.17	.14	.20	.23	-.21	.13	.13	.08	.42	(86)						
12. Affect Balance Scale, SOR	73.56	9.81	.48	.39	.46	.26	.30	-.32	.23	.25	.24	.24	.01	(92)					
13. Fordyce Percent Happy Item, SOR	73.82	19.87	.47	.50	.46	.30	.30	-.33	.25	.25	.30	.23	.05	.67	--				
14. Underwood & Forming scale, SOR	47.78	9.99	.46	.48	.52	.26	.31	-.26	.20	.23	.26	.20	.01	.74	.76	(91)			
15. Satisfaction With Life Scale, SOR	23.93	6.15	.35	.40	.3	.47	.21	-.30	.27	.33	.24	.16	.05	.56	.60	.60	(87)		
16. Positive Affectivity Schedule, SOR	38.61	5.90	.46	.44	.44	.30	.49	-.30	.26	.30	.23	.32	.01	.61	.50	.62	.42	(88)	
17. Negative Affectivity Schedule, SOR	22.62	5.13	.28	-.22	-.23	-.15	-.22	.33	-.21	-.21	-.14	-.20	-.08	-.68	-.49	-.49	-.46	-.39	(85)

Notes: Decimals are omitted from correlations: SOR=significant other report; correlations greater than .09 are significant at the .05 level (two-tailed tests).

Discriminant Validity Analysis

Before analyzing structural relationships among constructs, it is essential to determine if they are distinct (Schwab, 1980). In fact, with respect to the constructs of the present study, the discriminant validity of self-deception and job self-deception, and that of subjective well-being and affective disposition, might be questioned. Therefore, we conducted a discriminant validity analysis using two distinct tests. First, the discriminant validity of the constructs was assessed using confirmatory factor analysis. Second, the discriminant validity of the constructs was assessed using a procedure recommended by Fornell and Larcker (1981). These authors argued that to possess discriminant validity, the shared variance among two constructs (i.e., the square of their intercorrelation) should always be less than the average variance explained in the items by the constructs (i.e., the $\rho_{vc}(\eta)$ for each of the constructs). Practically, $\rho_{vc}(\eta)$ is computed by dividing the sum of squares of the indicators coefficients ($\sum \lambda^2$) by the sum of squares of the indicators coefficients ($\sum \lambda^2$) plus the sum of the error terms ($\sum \epsilon$).

The discriminant validity of self-deception and job self-deception was therefore investigated using these two procedures. First, using confirmatory factor analysis, the fit of the hypothesized two factors model was compared to the fit of a model with one general factor consisting of self-deception and job self-deception. The single factor model provided a significantly worse fit to the data than did the two-factor model (difference in $\chi^2=154.29$ with 2 df, $p < .01$). Second, the indicators' coefficients of the two-factor model were used to calculate the $\rho_{vc}(\eta)$ of the self-deception and job self-deception constructs (.39 and .38, respectively). These, in turn, were larger in magnitude than the variance shared by the constructs (.17). Thus, these two procedures suggest that the constructs are distinct.

The discriminant validity of subjective well-being and affective disposition was investigated using the same two procedures. First, using confirmatory factor analysis, the fit of the hypothesized two factors model within the framework of the measurement model was compared to the fit of a model with one general factor consisting of subjective well-being and affective disposition. The six measures of subjective well-being and the measure of affective disposition were loaded on a one-factor and a two-factor measurement model, while all the other indicators (two job satisfaction, one self-deception, and one job self-deception indicators) were loaded on their respective constructs. The single factor model provided a significantly worse fit to the data than did the two-factor model (difference in $\chi^2=10.56$ with 3 df, $p < .05$). Second, the indicators' coefficients of the two-factor model were used to calculate the $\rho_{vc}(\eta)$ of the subjective well-being (.62) and the $\rho_{vc}(\eta)$ of the affective disposition scale (.73). These in

turn were found to be larger in magnitude than the variance shared by the constructs (.10). Thus, these two procedures suggest that the constructs also are distinct.

Measurement Models

Examination of the fit statistics suggests that the overall self-report and full data measurement models fit the data acceptably. The fit statistics from the self-report model were as follows: $\chi^2=40.20$ ($df=31$, $N=216$); $\chi^2/df=1.29$; GFI=.97; AGFI=.93; CFI=.99; IFI=.99. The fit statistics from the full data model were as follows: $\chi^2=176.52$ ($df=82$, $N=197$); $\chi^2/df=2.14$; GFI=.91; AGFI=.83; CFI=.95; IFI=.95. Table 2 presents the measurement model parameter estimates for the self-report and the full data models. The results indicate the measures adequately represent their underlying constructs.

TABLE 2: Measurement Model Parameter Estimates

Construct & Measure	Self-report model	Full data model
Subjective well-being		
Affect Balance Scale (ABS)	1.00	1.00
Underwood & Forming scale (UF)	.80	.87
Fordyce percent time happy (FOR)	.81	.90
Satisfaction With Life Scale (SWLS)	.79	.84
Positive Affect Scale (PAS)	.90	.97
Negative Affect Scale (NAS)	-.96	-.80
ABS, significant-other report	----	.57
UF, significant-other report	----	.56
FOR, significant other report	----	.60
SWLS, significant other report	----	.58
PAS, significant other report	----	.70
NAS, significant other report	----	-.40
Job satisfaction		
Brayfield & Rothe Scale	.96	.89
Minnesota Satisfaction Questionnaire	1.00	1.00

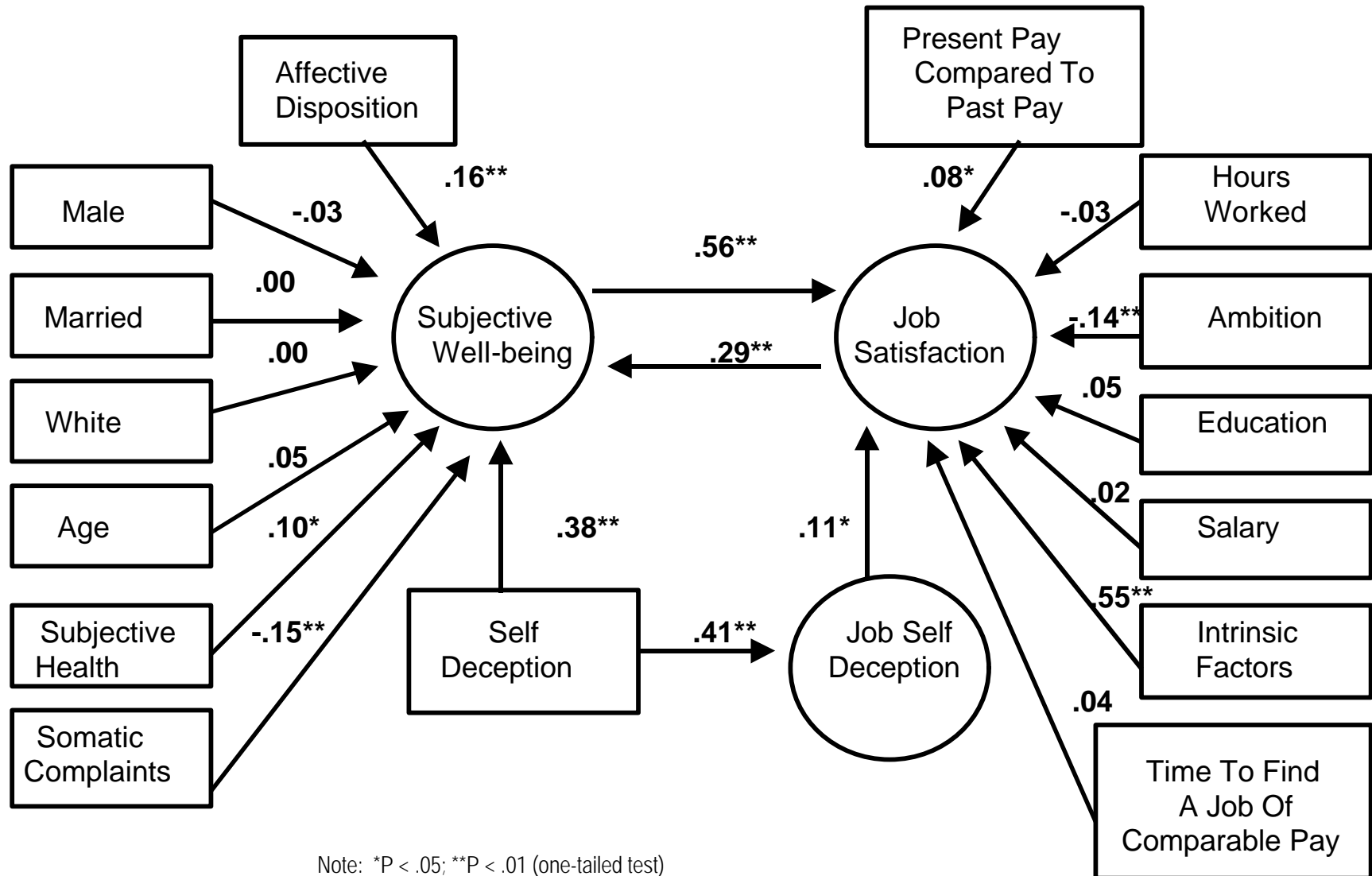
Note: All loadings are significant at the .01 level. The loadings of the self-deception, job self-deception, and affective disposition were fixed in both models to the square root of the scales reliabilities. Thus, the BIDR was fixed to .83, the JSDQ was fixed to .93 and the NOSQ was fixed to .86.

Self-Report Structural Model

Examination of the fit statistics suggests that the overall self-report structural model fit the data adequately. The fit statistics from the self-report model were as follows: $\chi^2=351.09$ ($df=170$, $N=216$); $\chi^2/df=2.06$; $GFI=.90$; $AGFI=.80$; $R^2=.76$ $CFI=.88$; $IFI=.89$. Figure 2 provides the parameter estimates of the structural model with self-report data. Self-deception significantly influenced subjective well-being. The coefficient estimate indicates that those who tend to deceive themselves were more likely to be happy. The reciprocal causal relationship between subjective well-being and job satisfaction also was supported by the data. Happy individuals were more likely to be satisfied with their jobs, and in turn those satisfied with their jobs were more likely to be happy with their lives. Figure 2 also indicated that job self-deception significantly influenced job satisfaction. Those individuals who tended to deceive themselves in job situations were more likely to be satisfied with their jobs.

Figure 2 also provides results from the remaining links in the causal model. As expected, self-deception significantly influenced job self-deception. Individuals who tended to deceive themselves in general were more likely to engage in self-deception in job situations. Also as hypothesized, affective disposition significantly influenced subjective well-being. Individuals who reported high subjective health were more likely to be happy and those who reported more objective health problems were more likely to be unhappy. The paths from gender, race, age, and marital status were not significant. Intrinsic factors strongly influenced job satisfaction. As expected, ambition negatively influenced job satisfaction. Present wage compared to past wage exerted a positive effect on job satisfaction. Paths from education, salary, hours of work, time to find job of comparable pay, and number of offers were not significant.

FIGURE 2: Structural Estimates of Self-Report Model



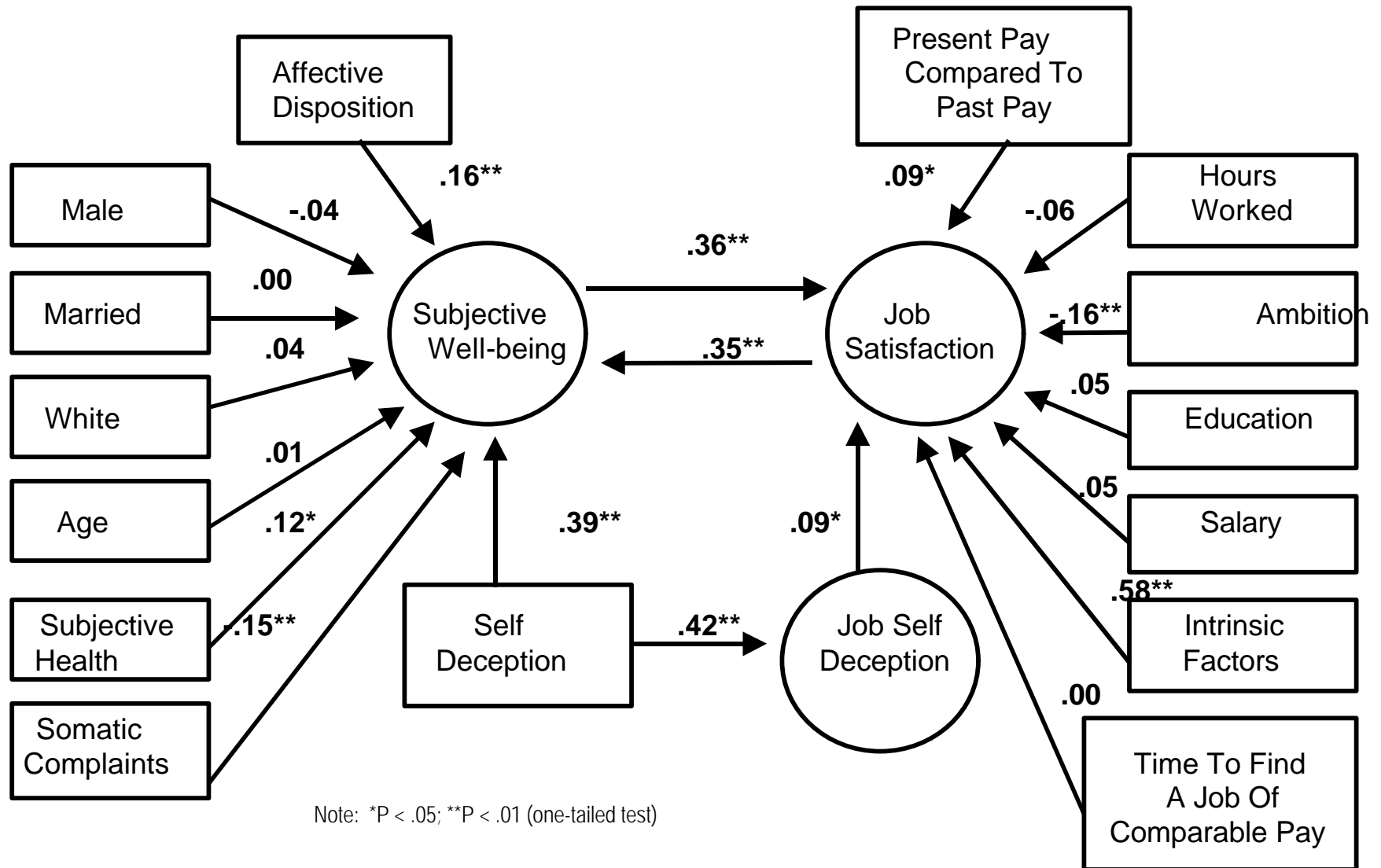
The LISREL program also calculates indirect effects, the influences of one variable on another as mediated through a third variable (Hayduk, 1987). The self-report model indicated that self-deception indirectly influenced job satisfaction (+.25; $p < .01$) through its effects on subjective well-being and job self-deception. Finally, although not subject to formal hypotheses we also investigated two other relationships in the model. Self-deception was not hypothesized to directly influence job satisfaction, but rather, to indirectly effect job satisfaction through increasing individuals' happiness and changing their job evaluations. Indeed, the direct relationship from self-deception to job satisfaction was not significant. Also, although no causal direction between affective disposition and self-deception was hypothesized, we believed that assuming relationship between these constructs is warranted. Indeed, estimation of the non-causal relationship between affective disposition and self-deception was +.23 ($p < .01$).

Full Data Structural Model

As with the self-report model, the fit statistics of the full data model were in the range representing an adequate fit. The fit statistics from the full data model were as follows: $\chi^2=573.36$ ($df=314$, $N=197$); $\chi^2/df=1.82$; GFI=.85; AGFI=.77; $R^2=.76$; CFI=.88; IFI=.89. Figure 3 provides the parameter estimates of the structural model with full data.

A comparison of Figure 3 to Figures 2 reveals that the full data model results were very similar to the results of the self-report and the mixed data models. However, the effect of subjective well-being on job satisfaction was weaker than the effect in the other model. The coefficient representing the influence of job satisfaction on subjective well-being also was slightly weaker than the one in the self-report data. The coefficient depicting the influence of self-deception on subjective well-being was approximately equal in the two models, as was the effect of job self-deception on job satisfaction.

FIGURE 3: Structural Estimates of Full Data Model



The remaining links of the full data model were approximately equal to these links in the self-report model. The indirect effect of self-deception on job satisfaction through subjective well-being and job self-deception was $+0.18$ ($p < .01$). As in the self-report data model, and as expected, the direct relationship from self-deception to job satisfaction was not significant. The non-causal relationship between affective disposition and self-deception was $+0.23$ ($p < .01$). Based on these results, it can be concluded that the main hypotheses of this study have been confirmed. The nonrecursive relationship between subjective well-being and job satisfaction was significant in each estimation. In each case self-deception significantly influenced subjective well-being directly, and job satisfaction indirectly. Finally, in each model job self-deception significantly influenced job satisfaction, although its effect was modest in magnitude.

Discussion

We started this paper by claiming that existing research on the dispositional approach to job satisfaction is deficient in that it does not explicate the psychological processes leading to job satisfaction. On the basis of past research we suggested that self-deception may serve as an important dispositional variable that partly explains the dispositional source of job satisfaction. This study provided strong evidence that self-deception indeed plays a significant role in affecting judgments of job satisfaction, indicating that individuals disposed to engage in self-deceptive thought processes were, in general, more satisfied and happy. Moreover, our results suggest that engagement in self-deception may be a dispositional tendency with a direct influence on subjective well-being and indirect influence on job satisfaction. This in and of itself may explain job satisfaction stability. Individuals who habitually tend to engage in self-deception may be more prone to form and keep positive attitudes in several domains of life. The main advantage of our study, however, is not that it adds self-deception to the list of life and job satisfaction causes, but rather the principal contribution of this study is that it explicates one of the psychological processes by which dispositions influence job and life satisfaction.

Past research has demonstrated consistently that self-deception is negatively correlated with depression (Paulhus & Reid, 1991; Roth & Ingrain, 1985; Sackeim & Gur, 1979). This line of research also has suggested that self-deceivers not only block threatening information, but actively search for information to enhance positive affect (Paulhus & Reid, 1991). In line with this body of research, our results demonstrated that self-deception has a strong influence on happiness. Because our study also provided evidence that subjective

well-being influences job satisfaction, factors such as the tendency to engage in self-deception, resulting in a positive assessment of subjective well-being, seem to have a spillover effect on job satisfaction. Since happy individuals usually do not leave their good mood when they go to work and unhappy individuals do not suddenly become happy in the workplace, psychological factors such as self-deception which consistently increase happiness are very likely to increase positive affect on the job. Our results supported this conclusion, by indicating that self-deception significantly influenced job satisfaction as mediated by subjective well-being.

In addition, our results suggested that self-deception acts in a more direct way to influence job satisfaction. Individuals who tend to deceive themselves also appear to be more likely to use this mental process in the workplace. Thus, employees who are disposed to deceive themselves may habitually block undesirable but factual information about their jobs and actively search for more desirable information. For example, a few of the questions on the JSDQ concerned inequities that presumably would occur to all employees at one time or another. Employees who tended to engage in self-deception also tended to deny feeling resentful towards these inequities. In turn, those employees also reported more satisfaction with their jobs. Thus, employees' use of self-deception may mitigate the seriousness of inequities on the job. These results also may have implications for the use of job satisfaction measures as diagnostic tools for discovering existing problems in the workplace. Employees who tend to deceive themselves may report high levels of job satisfaction even when problems are present that they temporarily deny. This raises an interesting question: does the relationship between job dissatisfaction and withdrawal behaviors vary as a function of self-deception? On one hand, employees who deny real problems may not withdraw more because their dissatisfactions are continually denied (or offset by enhanced satisfaction with other parts of the job). On the other hand, such employees may, on occasion, accurately reflect on their problems, or they positively distort information about alternative jobs. Although we can only speculate about this issue in this study, future research may prove beneficial in addressing this provocative issue.

The observed reciprocal relationship between subjective well-being and job satisfaction provides further support to past research which has found a spillover effect of the job onto the life (Judge & Hulin, 1993; Judge & Locke, 1993; Judge & Watanabe, 1993). This strong reciprocal relationship may indicate that people actually experience some level of stability in their happiness and job satisfaction. Even when job prospects are temporarily bad, happy

individuals may maintain their job satisfaction for a longer time by emphasizing other more "promising" prospects of life. Equivalently, when life events turn "sour," job satisfaction may help in maintaining positive levels of happiness. Despite the fact that only longitudinal data can confirm this hypothesis, the results of this study make such a test worthy of future consideration.

Two dispositional variables were found to influence happiness and job satisfaction: self-deception and affective disposition. Both suggest that happiness and job satisfaction are not entirely dependent on life and job events, but rather have "within individual" stable components. However, while the processes by which self-deception influences happiness and job satisfaction have a strong theoretical basis, the psychological process by which affective disposition influences subjective well-being is not as clear. Those individuals who tend to deceive themselves maintain their positive level of happiness by turning to their positive mental assets and emphasizing them to neutralize threatening "harmful-to-the-self" information (Taylor, 1989). These individuals are also likely to maintain high levels of job satisfaction through their overall level of happiness and positive evaluations of their jobs. Self-deception is therefore a dispositional tendency with a clear and explicable link to job satisfaction. Although affective disposition was found to be related to subjective well-being, similar to other studies (Judge & Hulin, 1993; Judge & Locke, 1993), it is not completely apparent how and why evaluating stimuli in a positive manner tends to increase happiness directly and job satisfaction indirectly. One potential explanation is that positive disposition influences happiness through self-deception. Thus, individuals who tend to evaluate stimuli in a positive manner do that by actively searching for positive and desirable cues and denying negative and undesirable ones. This, in turn, may affect subjective well-being and job satisfaction. The significant relationship estimated between affective disposition and self-deception ($r=+.23, p > .01$) supports this conclusion. However, since self-deception and affective disposition are distinct constructs, it is not likely that the complete influence of affective disposition on subjective well-being is activated through self-deception. More research is therefore needed in order to determine how affective disposition influences subjective well-being and job satisfaction.

Although the results from the self-report and full data models were similar, some variations occurred. As expected, the relationship between self-deception and subjective well-being was smaller in magnitude in the foil data model than in the self-report model. These less significant results may be due to the fact that the full data model controlled for common method variance. Thus, the full data model may represent the more accurate results between

the two models because it controls for common method variance. The difference also may be due to an opposing interpretation: the self-report results may contain less error variance (and thus be stronger) under the assumption that focal employees know their satisfaction levels better than anyone else. Although investigation into the relative merits of these explanations is beyond the scope of this study, the fact that the different estimations yielded roughly equivalent results increases confidence in the validity of the findings.

Other links in the model did not present many surprises. Subjective and objective health influenced subjective well-being in opposite directions, as expected. The relationship between job intrinsic factors and job satisfaction replicates findings of many studies. The negative relationship between ambition and job satisfaction supported Judge and Locke's (1993) argument that employees will be less satisfied if they are ambitious. More surprising was the evidence that salary did not significantly influence job satisfaction and that no demographic variables significantly influenced subjective well-being. However, these results are similar to other studies demonstrating that demographic characteristics are not strongly related to attitude formations (Judge & Locke, 1993), and that the influence of pay on job satisfaction is mainly through perceived current pay relative to past pay (Judge & Hulin, 1993).

One limitation of this study is that we investigated only one kind of thought process: self-deception. Future research would benefit from integrating into the model other thought processes and other dispositional influences like locus of control, self-esteem, and dysfunctional thought processes. A gestalt of dispositions and thought processes may give a more complete picture of how dispositions are linked to job attitudes. It is also important to recognize limitations in our analytic technique. Covariance structure modeling does not permit proof of causality but merely supports tentative inferences of causality (Hayduk, 1987; Joreskog & Sorbom, 1989). Direct demonstrations of causality only allow the possibility that variable A causes variable B. Thus, unless the causal relationships are specified as reciprocal, the model should not permit the possibility that B is causing A. Therefore, relationships in causal models should be based on theoretical evidence that implies only clear one-way causal directions. Based upon theory and past research most of our specifications of the relationships hypothesized in our study confirm to this condition. Causal links that were not supported by theory, as for example, the link between affective disposition and self-deception, were included in the model as non-causal relationship. However, as with most studies dealing with attitudinal or "soft" data, it is possible to question the causal relationship among the variables (Meehl, 1978). Thus, the hypothesized relationships specified in this model should be interpreted as

"more or less reasonable relative to alternative specifications" (Joreskog & Sorbom, 1989), and therefore tentative pending more rigorous support.

Despite these limitations, this study does make a contribution to the literature in that it adds a strong cognitive component in explaining how dispositions are linked to job satisfaction. These results add another facet to a growing body of literature suggesting that differences in reported levels of job satisfaction may reflect individual differences in emotional adjustment and thinking styles as much as differences in job conditions. Thus, from a practical standpoint, worker satisfaction may be increased by programs which focus employee's attention on the positive versus negative aspects of their working environment and conditions. In fact, although dispositional states such as self-deception are relatively stable, research has suggested that counseling programs can reinforce or combat dispositional tendencies. Examples are programs to reinforce optimistic thinking styles (Scheier & Carver, 1992), rational-emotive therapy to reduce dysfunctional thinking (Ellis, 1993), and most relevant to this study, programs which demonstrate the benefits of positive illusions and selective attention (Taylor, 1989). While the above interventions focus on individual counseling programs, some research has extended cognitive training programs to organizations, with successful results (Klarriech, DiGiuseppe, & DiMattia, 1987; Manz, 1986, 1992). While such programs may not be appropriate for every worker or for every organization, the results of this study do add to an emerging body of research calling into question the assumption that situational interventions are the only viable means to improve worker attitudes.

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