

Core Self-Evaluations and Job and Life Satisfaction: The Role of Self-Concordance and Goal Attainment

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The present study tested a model explaining how the core self-evaluations (i.e., positive self-regard) concept is linked to job and life satisfaction. The self-concordance model, which focuses on motives underlying goal pursuit, was used as an explanatory framework. Data were collected from 2 samples: (a) 183 university students (longitudinal measures of goal attainment and life satisfaction were used) and (b) 251 employees (longitudinal measures of goal attainment and job satisfaction were utilized). In both studies, the core self-evaluations concept was positively related to goal self-concordance, meaning that individuals with positive self-regard were more likely to pursue goals for intrinsic and identified (value-congruent) reasons. Furthermore, in both studies, goal self-concordance was related to satisfaction (job satisfaction in Study 1 and life satisfaction in Study 2).

Recently, considerable research attention has centered on a broad personality trait termed *core self-evaluations*. Introduced by Judge, Locke, and Durham (1997), the core self-evaluations concept represents the fundamental assessments that people make about their worthiness, competence, and capabilities; such evaluations vary from positive to negative self-appraisals. In their original development of the concept, Judge et al. identified three fundamental, broad, and self-evaluative traits (self-esteem, generalized self-efficacy, and neuroticism) that indicated core self-evaluations. They suggested that locus of control might qualify as a core trait; therefore, most subsequent research includes all four core traits. In the past 6 years, there have been 16 investigations of core self-evaluations. Although the core self-evaluations concept has been related to several criteria—including motivation (Erez & Judge, 2001), job performance (Judge & Bono, 2001), stress (Best, 2003), and leadership (Eisenberg, 2000)—the most commonly investigated criterion is job satisfaction. The studies that have investigated the relationship between core self-evaluations to job satisfaction have shown that there is a relationship between the two concepts (Judge & Bono, 2001), shedding light on the processes by which individuals with a positive self-regard are more satisfied with their jobs (Judge, Bono, & Locke, 2000; Judge, Locke, Durham, & Kluger, 1998). However, these studies have focused on only one specific mediating factor—intrinsic job characteristics—and have not tested a theoretical framework that might further explain psychologically how and why those with positive core

self-evaluations are more satisfied with their jobs. As Judge, Bono, Erez, Locke, and Thoresen (2002) commented, “Other theoretical mechanisms will need to be studied to more fully understand the nature of the relationship between core self-evaluations and job satisfaction” (p. 70).

One psychological mechanism that may link core self-evaluations to job satisfaction is the way in which people choose goals. A growing body of research suggests that people who choose goals that are concordant with their ideals, interests, and values are happier than those who pursue goals for other (e.g., extrinsic or defensive) reasons (see Sheldon & Elliot, 1998). In addition, several authors (Elliot & Sheldon, 1998; Elliot, Sheldon, & Church, 1997) found that people who perceive themselves positively (i.e., high self-esteem, low neuroticism) tend to pursue self-concordant goals to a greater extent than people with a negative self-view. On the basis of this research, Judge and Larsen (2001) have suggested that positive individuals may also be more likely to evoke and pursue *approach work goals* (i.e., goals that entail moving toward a positive outcome or state; Elliot et al., 1997) or accomplishment through the attainment of aspirations (Shah & Higgins, 2001). In contrast, they argued that negative individuals should be more likely to pursue avoidance or prevention goals (goals that entail moving away from a negative outcome or state or averting a negative result; Elliot et al., 1997; Shah & Higgins, 2001). Thus, one mechanism that may link core self-evaluations (positive self-regard) and job satisfaction is the motivation underlying goal pursuit such that approach goals are likely to lead to satisfaction, and avoidance goals are more likely to lead to dissatisfaction (Roberson, 1990).

In summary, the arguments advanced by goal researchers (i.e., Elliot & Sheldon, 1998; Elliot et al., 1997) are that people with a positive self-regard tend to pursue self-concordant goals and that these self-concordant goals make them happy. In parallel fashion, industrial and organizational (I/O) psychologists argue that people

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with positive self-regard tend to be more satisfied with their work and life (Judge & Bono, 2001; Judge et al., 1998, 2000). However, these two lines of research have not yet been combined in a meaningful manner. Thus, the overall purpose of this research was to test a model that brings together these two theoretical models—the *core self-evaluations model* and the *self-concordance model* (Sheldon & Elliot, 1998), a model explaining the approach and avoidance processes underlying goal pursuit—in further understanding the dispositional source of job satisfaction. In the next section of the article, we describe the theoretical concepts that are at focus here: core self-evaluations and self-concordance. We then introduce a hypothesized model and provide theoretical support for linkages in the model.

Core Self-Evaluations, Self-Concordance, and Hypothesized Models

Core Self-Evaluations Model

According to Judge et al. (1997), the core self-evaluations concept is a higher order trait representing the fundamental evaluations that people make about themselves and their worthiness, competence, and capability. In the core self-evaluations theory, the core concept is indicated by four traits: self-esteem, locus of control, neuroticism, and generalized self-efficacy. Self-esteem can be defined as the overall value that one places on oneself as a person (Harter, 1990). Generalized self-efficacy is an appraisal of how well one can handle life's challenges (Locke, McClellan, & Knight, 1996). Neuroticism is the tendency to have a negativistic outlook and to focus on negative aspects of the self (Watson, 2000). Finally, locus of control is concerned with beliefs about the causes of events in one's life—locus is internal when individuals see outcomes as being contingent on their own behavior (Rotter, 1966).

In considering the relationships among these traits, it is worth noting that self-esteem, locus of control, and neuroticism (also known as emotional stability or emotional adjustment) are the most widely studied personality concepts in psychology—cumulatively, the traits have been the subject of more than 50,000 studies (Judge & Bono, 2001). Despite the prominence of these traits, and some rather obvious connections among them, few investigations have included more than a single core trait. Recently, in the most thorough analysis of the traits to date, Judge, Erez, Bono, and Thoresen (2002) found that an overall core self-evaluations factor could be extracted from the correlations among the four traits, and that this common factor was an important positive predictor of life satisfaction and a negative predictor of stress, strain, and depression. Moreover, Judge, Erez, et al. found that the individual core traits were highly related, displayed quite similar patterns of correlations with other variables, and failed to add incremental validity beyond the common core factor. That the individual core traits fail to add incremental validity beyond the common core factor provides support for the validity of the core self-evaluations concept, suggesting that the variance attributable to each individual core trait is less important than the variance these traits share in common (which represents core self-evaluations).

In trying to explain the relationship between core self-evaluations and job satisfaction noted earlier, Judge et al. (1998)

found that the link was mediated by perceptions of intrinsic job characteristics. For example, individuals with a positive self-regard were more likely to perceive their jobs as interesting, significant, and autonomous than individuals with negative self-regard. Expanding on this explanation, Judge et al. (2000) demonstrated that individuals with positive self-regard, measured in early childhood, not only perceived their job as more intrinsically satisfying, but also were more likely to hold more complex jobs. In turn, choosing more complex jobs was associated with increased levels of job satisfaction. Thus, this study provided both perceptual and behavioral explanations for the link between core self-evaluations and job satisfaction. However, it did not account for, nor has other research accounted for, the psychological or cognitive mechanisms that underlie these relationships. Similarly, although Judge et al. (2002) and Judge, Erez, Bono, and Thoresen (2003) found strong relationships between core self-evaluations and life satisfaction, no theoretical explanations were given to account for these relationships. In this study, we attempt to illuminate these psychological mechanisms by using the self-concordance model.

Self-Concordance Model

Goals have played an important role in psychology. In I/O psychology, the performance implications of goal setting are well documented (Locke & Latham, 2002). In the subjective well-being literature, goals have been thought of as personal strivings (Emmons, 1992). Recent research on how goals contribute to well-being has been conducted by Sheldon and Elliot (1998, 1999) under the auspices of the self-concordance theory. Self-concordance theory, derived from Deci and Ryan's (1985) self-determination theory, predicts that individuals are happiest when stated goals match enduring interests and values. The authors argue that self-concordance leads to well-being because (a) it enables individuals to put effort into goals, thus increasing the probability of goal attainment, and (b) people are more likely to have attained the goals that will make them happy (because the identified and intrinsic goals better fulfill an individual's enduring needs, interests, and values).

The self-concordance model argues that individuals may pursue a goal for one or more of four types of reasons (Sheldon & Elliot, 1998):

1. External: pursuing a goal that is due to others' wishes or to attain rewards that indirectly satisfy needs or interests (e.g., performing a task to earn money);
2. Introjected: pursuing a goal to avoid feelings of shame, guilt, or anxiety (e.g., organizing one's files out of a sense of guilt or obligation);
3. Identified: pursuing a goal out of a belief that it is an intrinsically important goal to have (e.g., helping a co-worker with a computer problem out of a belief that it is important to help other employees); and
4. Intrinsic: pursuing a goal because of the fun and enjoyment it provides (e.g., setting aside time to chat with a coworker because one finds the conversation personally engaging).

There are several points worth noting with respect to the self-concordance model. First, these reasons are not argued to be mutually exclusive; individuals may pursue a goal for several reasons. Second, Sheldon and Elliot (1998) argued that goals pursued for identified or intrinsic reasons represent autonomous motives because they emanate from self-choices that reflect deeply held personal values, whereas goals pursued for extrinsic or introjected reasons represent controlled motives because they emanate from forces outside the self to which the person does not give full assent (Elliot et al., 1997, have equated autonomous motives with *approach* goals and controlled motives with *avoidance* goals). Third, in self-concordance research, goals are not objectively classifiable. Rather, two individuals may pursue the same goal for different reasons. Thus, in order to measure self-concordance, one must ask people about their reasons for pursuing various goals rather than assuming certain goals per se are self-concordant or not self-concordant. Of course, it is true that some goals are inherently more likely to be self-concordant for most individuals than are others (e.g., reading an important book vs. serving on a dull, unimportant committee or task force).

Research on the self-concordance model has been supportive. Sheldon and Elliot (1999) found that self-concordant motives are more likely to lead to well-being. According to these authors, when a person strives because of strong interest or because of self-identified personal convictions, the goals are held to be well integrated with the self. Self-concordant goals are likely to receive sustained effort over time, be more attainable, and as such are more satisfying. In contrast, goals pursued only because of external pressure or because of feelings of guilt and anxiety are assumed to come from nonintegrated areas of the self. Because they are less integrated and representative of stable interests, the motivational strength behind non-self-concordant goals is likely to fade, thus making them less attainable and less satisfying. Indeed, in three separate studies, Sheldon and Elliot found that self-concordant goals were more sustainable and more attainable, which led to increased levels of subjective well-being. Moreover, there is also evidence that self-concordance leads to an upward

spiral of well-being, which in turn leads to stronger effects over time (Sheldon & Houser-Marko, 2001).

Although prior research has linked goal self-concordance to happiness (e.g., Sheldon & Houser-Marko, 2001) and a broad subjective well-being composite that includes both affect and life satisfaction (e.g., Sheldon & Elliot, 1999), no research has specifically tested the self-concordance model with respect to life satisfaction per se. More important, no research has tested self-concordance as a mediator of the relationship between core self-evaluations and life satisfaction. Similarly, given the broad support for the self-concordance model, it is somewhat surprising that little published research has studied the model in a work context in general or linked it to job satisfaction in particular. If self-concordant goals do indeed lead to an increased level of happiness and satisfaction with the job and life, it seems important to identify the antecedents to the adoption of the different types of goals. However, with only few exceptions (Sheldon & Elliot, 1999), very little work has been conducted to identify these antecedents. We argue in the next section of the article that the common core of the four dispositional traits of self-esteem, neuroticism, generalized self-efficacy, and locus of control should be considered as one of the major antecedents for choosing self-concordant goals.

Hypothesized Model

Figure 1 displays the hypothesized model linking core self-evaluations to self-concordant goals, goal attainment, and job satisfaction. The model posits, consistent with prior research (Judge et al., 1998, 2000), that the core self-evaluations concept is indicated by self-esteem, generalized self-efficacy, locus of control, and neuroticism. As shown in Figure 1, the loadings of the first three traits onto the latent factor should be positive, whereas the loading of neuroticism should be negative.

The structural portion of the model includes a link from core self-evaluations to self-concordant goals. On the basis of prior self-concordance research (e.g., Sheldon & Elliot, 1998, 1999), we define goals as self-concordant based on the degree to which they

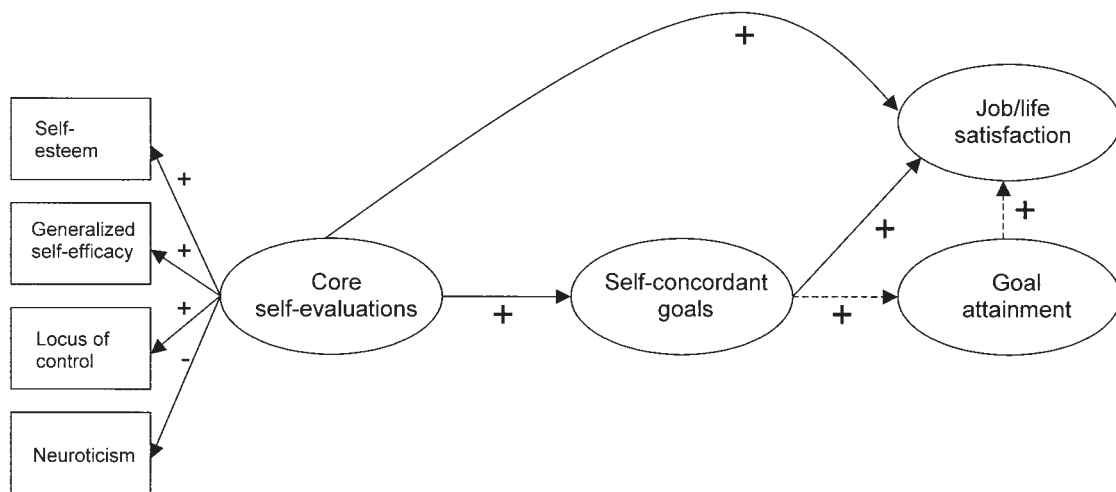


Figure 1. Hypothesized model linking core self-evaluations, goal self-concordance, goal attainment, and job/life satisfaction. Dashed lines indicate mediating role of goal attainment tested in separate model.

are pursued for autonomous (intrinsic and identified) reasons and the absence of their pursuit for controlled (extrinsic and introjected) reasons. Individuals with positive self-regard think of themselves as worthy, capable, and competent and therefore should be less influenced by external or introjected pressures. In effect, individuals with high self-esteem, the central component of core self-evaluations, have been shown to be less "plastic" in their behavioral responses to social influence and feedback (Brockner, 1988). As such, individuals with positive core self-evaluations should be more likely to choose self-concordant goals. In contrast, individuals with negative self-regard are likely to be more influenced by anxiety and guilt and should therefore be more likely to choose controlled (introjected and external) goals (Elliot et al., 1997). Thus, individuals with a positive self-concept are more likely to evoke and pursue approach (identified and intrinsic) work goals, whereas negative individuals are more likely to evoke and pursue avoidance (extrinsic and introjected) goals, thereby leading individuals with positive core self-evaluations to greater goal self-concordance.

Indeed, some empirical research has linked several of the individual core traits to aspects of self-concordance. Elliot and Sheldon (1997) found that avoidance goals were negatively related to self-esteem, and other research has shown that neuroticism is positively related to such goals (Elliot & Sheldon, 1998; Elliot et al., 1997). Furthermore, neuroticism has been shown to be negatively correlated with perceived autonomy and positively correlated with "controlledness" (Elliot & Sheldon, 1998). Thus, the combined conceptual and empirical evidence suggests that core self-evaluations will be positively related to goal self-concordance.

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

No previous research has been published linking the self-concordance model to job or life satisfaction. However, there is ample evidence that self-concordance is positively associated with subjective well-being (Elliot & Sheldon, 1997, 1998; Elliot et al., 1997; Sheldon & Elliot, 1999). Given this body of evidence, and the strong relationship between job satisfaction, life satisfaction, and happiness (Judge & Hulin, 1993; Tait, Padgett, & Baldwin, 1989), it seems likely that self-concordant goals will be positively related to job and life satisfaction. It is possible, however, to explicate the relationship between goal self-concordance and job and life satisfaction even further. Specifically, goal attainment should mediate, at least in part, the relationship between goal self-concordance and job and life satisfaction.

The first link in this mediational relationship requires that self-concordance leads to goal attainment. In the self-concordance model, self-concordant goals are more likely to be attained because individuals put forth more effort toward goals that are consistent with their enduring needs and values (Sheldon & Elliot, 1998). Empirical evidence supports the link between self-concordance and goal attainment (Sheldon & Elliot, 1998; Sheldon & Houser-Markeo, 2001). A recent review of the available studies revealed that all studies of the relationship between goal self-concordance and goal progress are positive, with $\bar{d} = .37$ (Koestner, Lekes, Powers, & Chicoine, 2002). If a similar situation operates with respect to work goals, then work goal self-concordance should be positively related to work goal attainment.

The second part of the mediational relationship requires that goal attainment be related to job and life satisfaction. Indeed, evidence indicates that goal attainment is positively related to satisfaction (Elliot et al., 1997; Emmons & Diener, 1986). As Sheldon and Elliot (1999) noted, "There are natural satisfactions to be found in the process of exercising one's competencies to move toward desired outcomes" (p. 484). Similarly, in the goal setting literature, "Goal success is viewed as leading to self-satisfaction" (Locke, 1991, p. 294). Maier and Brunstein (2001) found that progress toward goal accomplishment was positively related to job satisfaction. Koestner et al.'s (2002) review demonstrated that all studies on the relationship between goal progress to changes in well-being were also positive, with $\bar{d} = .61$. Thus, attainment of work and life goals should result in individuals being more satisfied with their jobs and lives (where the goals are attained). Although various hypothesized links are embedded in Figure 1 (e.g., a link from self-concordance to goal attainment), the key hypothesized links are as follows:

Hypothesis 2 (H-2): Goal self-concordance will partly mediate the relationship between core self-evaluations and job/life satisfaction.

Hypothesis 3 (H-3): Goal attainment will partly mediate the relationship between self-concordance and job/life satisfaction.

Finally, included in Figure 1 are direct links from core self-evaluations and self-concordance to job/life satisfaction. Though we believe that self-concordance will mediate the relationship between core self-evaluations and job satisfaction, and that goal attainment will mediate the relationship between self-concordance and job/life satisfaction, we do not believe that the mediation effect will be total. Intrinsic job characteristics have been shown to mediate the relationship between core self-evaluations and job satisfaction (Judge et al., 1998, 2000). Furthermore, there are other factors that may mediate the relationship between core self-evaluations and job satisfaction, such as actions people take on the job and the decisions people make (Judge et al., 1997), that have not been tested in previous research and are not the focus here. Similarly, in self-concordance research, self-concordance is thought to lead to satisfaction for reasons other than goal attainment (the intrinsically satisfying nature of goal pursuit; Sheldon & Elliot, 1999). For these reasons, we expect partial but not complete mediation.

Overview of Studies

Because no previous research has examined the mediating role of self-concordance in the relationship between core self-evaluations and job/life satisfaction, we conducted two studies. First, we examined the mediating role of self-concordance and goal attainment with respect to the personal goals of a prototypic sample in self-concordance research: undergraduate college students. However, to extend these results even further, we study self-concordance in the work situation. Specifically, in Study 2, we test a model parallel to that in Study 1, but focusing on work goals and job satisfaction (as opposed to personal goals and life satisfaction). Taken together, these results should determine whether

self-concordance (and goal attainment) mediates the relationship between core self-evaluations and job/life satisfaction and whether it is productive to apply the self-concordance framework to the work setting.

Study 1

Method

Participants and Procedures

Participants were 240 undergraduate management students (54% men; average age 20.4 years) at a southeastern U.S. university who participated in the study for extra credit. Participants completed two surveys, 2 months apart. Personality and self-concordance were measured at Time 1, and goal attainment and life satisfaction were measured at Time 2. One hundred and eighty-three of the original 240 participants (76%) responded to the Time 2 survey. No significant differences between respondents and nonrespondents were found for age, sex, or any of the study variables.

Measures

Core self-evaluations. Consistent with previous core self-evaluations research (e.g., Judge et al., 1998), the core self-evaluations concept was measured with four scales. Self-esteem was assessed with the 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965). Items include "On the whole, I am satisfied with myself" and "I wish I could have more respect for myself" (reverse scored). Generalized self-efficacy was assessed with 7 items developed by Judge et al. Sample items include "I avoid trying to learn new things when they look too difficult for me" and "New jobs are usually well within the scope of my abilities." Locus of control was assessed with 6 items from the Internality scale of Levenson's (1981) Internality, Powerful Others, and Chance (IPC) Scale. Sample items include "When I get what I want, it is usually because I worked hard for it" and "My life is determined by my own actions." Finally, neuroticism was measured using the 12-item Eysenck Personality Inventory (Eysenck & Eysenck, 1968) Neuroticism scale. Items in this scale include "I am a nervous person" and "I am a worrier." Responses for all four personality scales were anchored on a 5-point scale with responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The items within each scale were averaged to form a single score for self-esteem, generalized self-efficacy, locus of control, and neuroticism. Consistent with prior practices (Judge et al., 1998), the four scales were then treated as indicators of a higher order core self-evaluations concept.

Self-concordance. We used Sheldon and colleagues' goal-based measure of self-concordance (Sheldon & Elliot, 1998; Sheldon & Kasser, 1998). Participants were asked to record six of their short-term goals. Consistent with Sheldon and Elliot, we asked participants to reflect on their current life goals—goals that could reasonably be attained in the next 60 days. (We chose 60 days because, consistent with other self-concordance research that has utilized a similar time period [e.g., Elliot & Sheldon, 1997], it was a reasonable time period over which individuals could set and attain work-related goals.) After identifying their goals, participants were asked to report their reasons for goal pursuit, for each goal separately. Each of the six goals was followed by questions representing the four types of motivation that comprise the self-concordance construct (external, introjected, identified, and intrinsic). To measure the motives underlying goal pursuit, we used items developed by Sheldon and Elliot. Participants responded to each of the items for each of their six goals. Consistent with Sheldon and Elliot, responses were on a scale ranging from 1 (*not at all for this reason*) to 9 (*completely for this reason*). Responses were averaged across the six goals to form a single score for external, introjected, identified, and intrinsic motivation. We followed steps used by Sheldon and Elliot to form a self-concordance composite, adding together the Intrinsic and Identified Scales and subtracting the External and Introjected Scales. We calculated the reliability of the composite using procedures recommended by Hunter and Schmidt (1990).

Goal attainment. We used two items from prior self-concordance research (Sheldon & Elliot, 1999) as a self-report of goal attainment. The items are "I have made considerable progress toward attaining this goal" and "I accomplished what I set out to do with this goal." Participants responded to each of these items for each of their six goals, after 2 months. The same 5-point scale used for core self-evaluations was used for goal attainment. Responses were averaged across items and goals to form a goal attainment score.

Life satisfaction. Life satisfaction was measured with the five-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). The five items are "In most ways my life is close to ideal," "The conditions of my life are excellent," "I am satisfied with my life," "So far I have gotten the important things I want in life," and "If I could live my life over, I would change almost nothing." Participants used the same 5-point scale used for job satisfaction. Items were averaged to form a single life satisfaction score.

Analyses and Results

Correlations among the variables are presented in Table 1. To test the hypotheses, we used structural equation modeling

Table 1
Means, Standard Deviations, and Intercorrelations Among Study 1 Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12
1. Self-esteem	4.15	0.65	.88											
2. Generalized self-efficacy	3.92	0.56	.63	.85										
3. Locus of control	2.54	0.71	.44	.49	.78									
4. Neuroticism	3.86	0.51	-.67	-.49	-.35	.89								
5. Core self-evaluations composite	3.64	0.30	.63	.73	.71	-.11	.78							
6. Intrinsic goal pursuit	4.68	1.53	.14	.20	.23	-.13	.19	.67						
7. Identified goal pursuit	7.31	1.13	.11	.10	.17	.00	.20	.40	.69					
8. Introjected goal pursuit	4.68	1.67	-.10	-.07	.20	.09	.08	.16	.26	.77				
9. External goal pursuit	3.89	1.83	-.09	-.10	-.01	.03	-.08	-.13	-.07	.40	.83			
10. Self-concordance composite	4.17	6.02	.17	.20	.09	-.11	.16	.62	.36	-.40	-.81	.83		
11. Goal attainment	4.62	0.85	.23	.18	.18	-.25	.15	.25	.09	.00	-.12	.22	.68	
12. Life satisfaction	5.40	1.04	.50	.30	.30	-.38	.33	.19	.17	.06	-.11	.18	.32	.83

Note. $n = 183$. Scale reliabilities are on the diagonal in bold. Correlations greater than .15 are significant at $p < .05$. Correlations greater than .19 are significant at $p < .01$.

(LISREL 8.3; Jöreskog & Sörbom, 1993) to estimate a series of models. Figure 2 presents the results of a model testing H-1 and H-2. The fit statistics of the hypothesized model— $\chi^2(12, N = 183) = 28.17, p < .01$; root mean square error of approximation (RMSEA) = .08; root mean square residual (RMSR) = .09; Comparative Fit Index (CFI) = .97; IFI (Incremental Fit Index) = .97—show an adequate fit to the data. In this model, the link between core self-evaluations and self-concordant goal pursuit was significant ($\hat{\gamma} = .24, p < .01$), supporting H-1. In addition, the link between self-concordance and life satisfaction was also significant ($\hat{\beta} = .26, p < .01$). Examination of the direct and indirect effects of core self-evaluations on life satisfaction revealed a total effect of .54 ($p < .01$), with an indirect effect (through self-concordant goal pursuit) of .06 ($p < .05$), supporting H-2. However, because the indirect link was small, we tested an alternative model in which self-concordant goals do not mediate the core self-evaluation–life satisfaction link. That is, in this alternative model we dropped a link from self-concordant goal pursuit to life satisfaction. The overall fit statistics for this alternative were lower than those of the hypothesized model: $\chi^2(13, N = 183) = 39.25, p < .01$; RMSEA = .11; RMSR = .10; CFI = .94; IFI = .95. Chi-square differences between the hypothesized and the alternative models, $\Delta\chi^2(1, N = 183) = 11.08, p < .01$, also showed a significantly poorer fit of the alternative model to the data. Thus, we conclude that some, though not all, of the association between core self-evaluations and life satisfaction were mediated by self-concordance, supporting H-2.

To test H-3, we added goal attainment to our model. Overall fit statistics of the hypothesized model were good, $\Delta\chi^2(10, N = 180) = 14.69, p < .10$; RMSEA = .05; RMSR = .04; CFI = .99; IFI = .99. Results presented in Figure 3 reveal a significant link between goal attainment and life satisfaction ($\hat{\beta} = .20, p < .05$). However, the link between self-concordant goals and goal attainment was only marginally significant: $\hat{\beta} = .18, p < .10$, with $t(1) = 1.95$. The indirect link from self-concordant goals to life satisfaction through goal attainment was not significant (.05), thus, H-3 was not supported. Although not officially hypothesized, we also tested the link from core self-evaluation to goal attainment through goal self-concordance. This indirect effect (.06, $p < .05$) revealed that self-concordant goals fully mediated the relationship between core self-evaluations and goal attainment.

Brief Discussion

Results from Study 1 revealed that self-concordance partly mediated the relationship between core self-evaluations and life satisfaction. Though previous research has linked self-concordance to subjective well-being (e.g., Sheldon & Elliot, 1999), no previous research has investigated whether it mediates the relationship between core self-evaluations and life satisfaction. This mediational relationship is significant because life satisfaction was measured several months after core self-evaluations and self-concordance were measured. Additionally, it appears that core self-evaluation also affected goal attainment through its effect on goal self-concordance. Thus, it seems that those who have positive self-evaluations tend to choose self-concordant goals, and this choice, in turn, results in goal attainment and life satisfaction. However, goal attainment did not explain the relationship between goal self-concordance and life satisfaction. Thus, we can conclude that part of the reason that individuals with a positive self-concept are happier is because they are more likely to set self-concordant goals. We can also conclude that they are more likely to attain their personal goals. However, we cannot conclude that the reason that people with positive self-concept are more satisfied with their lives is because they attain those goals.

What this study does not reveal, of course, is whether a similar mediational relationship will be found with respect to job satisfaction. Moreover, as with most previous self-concordance research, individuals in our sample are young adults in college. Though evidence indicates that age is weakly related to life satisfaction, individuals do adjust their goals as they age (Diener, Suh, Lucas, & Smith, 1999). Moreover, it is possible that goals and therefore the self-concordance process is different for working adults. Because previous self-concordance research has focused on personal goals (Koestner et al., 2002; Sheldon & Elliot, 1998, 1999; Sheldon & Houser-Marko, 2001), it is important to investigate self-concordance and goal attainment in a work context. This is the focus of Study 2.

Study 2

Method

Pilot Study

Because the self-concordance measure used in past research has not been studied in a work context, before testing the hypothesized model involving

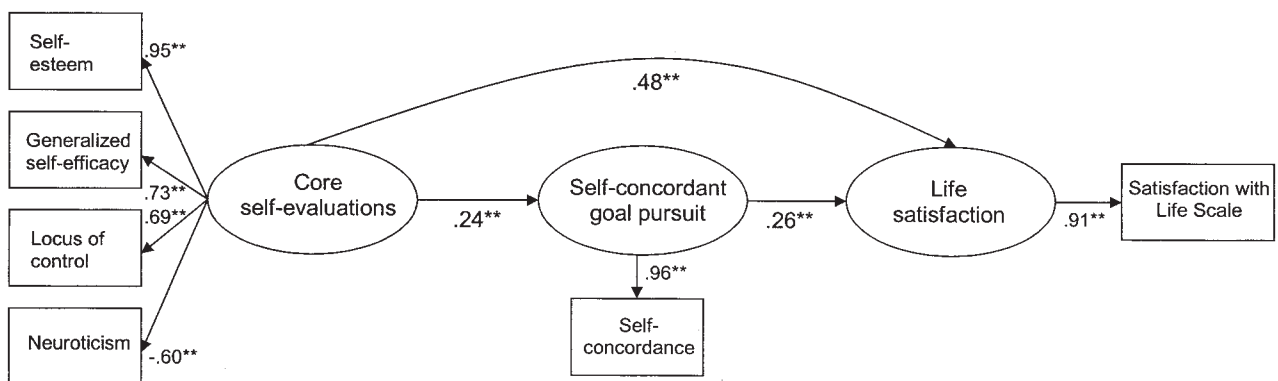


Figure 2. Study 1: Relationships among core self-evaluations, goal self-concordance, and life satisfaction. $n = 183$. ** $p < .01$.

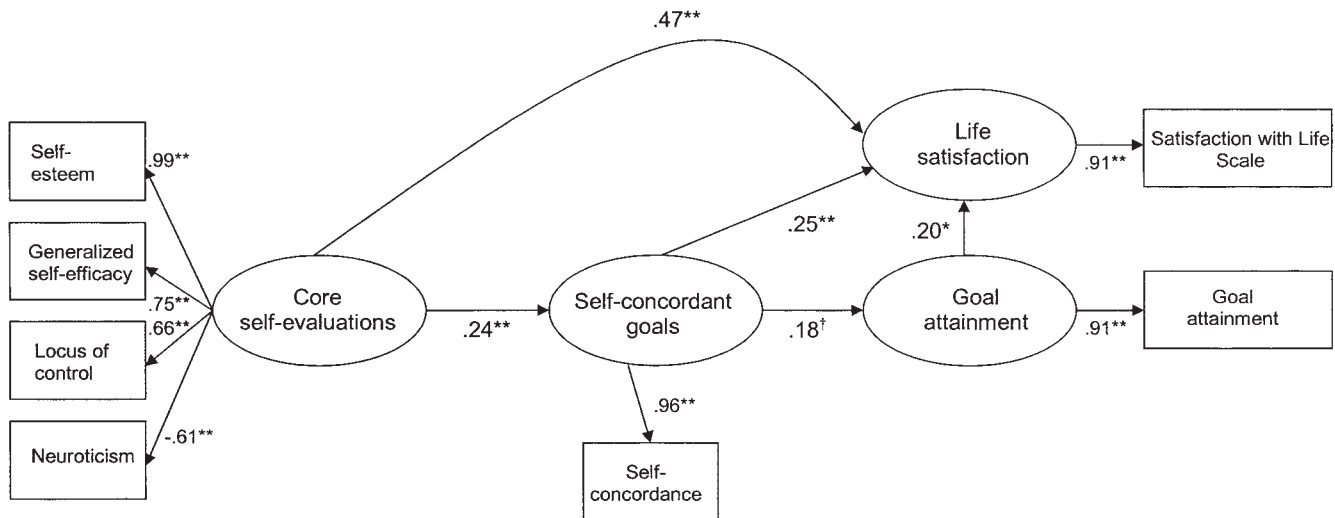


Figure 3. Study 1: Model testing the mediating role of goal attainment in relationship between goal self-concordance and life satisfaction. $n = 183$. † $p < .10$. * $p < .05$. ** $p < .01$.

work self-concordance, we sought to investigate the validity of the measure. Specifically, we administered the measure to 156 individuals who were members of a national management association. Because previous self-concordance research by Sheldon, Elliot, and colleagues has been based on college students in reference to life goals (e.g., Sheldon & Elliot, 1998), it was necessary to make some modifications to their measures. Specifically, participants were asked about work goals in the next 60 days. Other aspects of the measure were the same as Study 1 (see also description in Study 2). The results revealed that the self-concordance facets were relatively reliable (intrinsic, $\alpha = .80$; identified, $\alpha = .70$; introjected, $\alpha = .83$; external, $\alpha = .82$). Moreover, the overall self-concordance composite was also reliable ($\alpha = .83$). These results suggest that it is possible to measure work goal self-concordance well.

Participants and Procedures

Participants were employees of a large defense contractor in the southwestern region of the United States; a manufacturing plant, also in the Southwest; and a small financial services organization in the Midwest whose supervisors participated in a study of leadership effectiveness (Bono & Judge, 2003). Participants completed two surveys on the Internet. The first survey included the personality and self-concordance items. An e-mail with an Internet link was sent to remind participants to complete a follow-up survey after 60 days. The Time 2 survey contained goal attainment and job satisfaction items. Surveys were received from 77% (260) of employees at Time 1. Of those who responded at Time 1, 72% also completed a survey at Time 2, resulting in a Time 1–Time 2 matched data set of 251 employees. These employees had been working for their current supervisor for 2 years, on average. Data from the two organizations ($n = 65$ for the financial services company and $n = 186$ for the manufacturing company) were combined into a single sample because data were collected using the same procedures, mean levels of key variables (core self-evaluations, goal achievement, self-concordance, and job satisfaction) were not significantly different between the two organizations, and the pattern of associations between key variables was consistent across organizations. Combining the two samples also increases our confidence that results from this study will generalize to diverse organizations.

Measures

Core self-evaluations. Self-esteem, generalized self-efficacy, and locus of control were measured with the same scales as in Study 1 (the

Rosenberg, 1965, Judge et al., 1998, and modified Levenson, 1981, scales, respectively). Neuroticism was measured using the 12-item NEO-FFI (Costa & McCrae, 1992). Sample items include “I rarely feel fearful or anxious” (reverse scored) and “I often feel helpless and want someone else to solve my problems.” As with Study 1, responses were evaluated on a 1–5 response scale, items within each scale were averaged, and then the four scales were treated as indicators of the latent core self-evaluations concept.

Self-concordance. On the basis of the results of the pilot study, individuals were asked to identify the work goals that they would pursue over the next 60 days. After identifying their work goals, participants reported their reasons for each goal. Each goal was followed by questions representing the four types of motivation that comprise the self-concordance construct (external, introjected, identified, and intrinsic). To measure the motives underlying goal pursuit, we adapted items developed by Sheldon and Elliot (1998). The items are “I pursue this goal because I really believe it is an important goal to have” (identified); “I pursue this goal because of the fun and enjoyment it provides” (intrinsic); “I pursue this goal because I would feel guilty, anxious, or ashamed if I did not” (introjected); and “I pursue this goal because somebody else wants me to or because the situation demands it” (external). Participants responded to each statement for each of their six goals. As in Study 1, responses were anchored on a 1–9 scale with responses ranging from 1 (*not at all for this reason*) to 9 (*completely for this reason*) and were then averaged across the six goals to form a single score for external, introjected, identified, and intrinsic motivation. We then followed Sheldon and Elliot (1998) in forming the self-concordance composite.

Goal attainment. We used two items adapted from prior self-concordance research (Sheldon & Elliot, 1999) as a self-report of goal attainment. The items are “I have made considerable progress toward attaining this goal” and “I accomplished what I set out to do with this goal.” Participants responded to each of these items for each of their six goals, after 2 months. The same 5-point scale used for core self-evaluations was used for goal attainment. Responses were averaged across items and goals to form a goal attainment score.

Job satisfaction. Job satisfaction was measured with the short form of the Brayfield and Rothe (1951) Job Satisfaction Scale. Items are “Most days I am enthusiastic about my work,” “I feel fairly satisfied with my present job,” “Each day at work seems like it will never end” (reverse scored), “I find real enjoyment in my work,” and “I consider my job rather unpleasant” (reverse scored). Responses were evaluated on the same

5-point scale used for personality and goal attainment. The five items were averaged to form a job satisfaction score.

Analyses and Results

Because data in this study were collected from employees of two organizations, we compared mean levels of variables between organizations. There were no significant mean level differences between the two companies in employee personality, goal self-concordance, or goal attainment. The mean level of job satisfaction in the two companies was significantly different. However, the differences were small (3.81 and 4.00 for the manufacturing and the financial services organizations, respectively).

Zero-order correlations among the variables are presented in Table 2. Our first model, testing H-1 and H-2, is presented in Figure 4. Fit statistics for this model were acceptable: $\chi^2(12, N = 251) = 31.20, p < .01$; RMSEA = .07; RMSR = .07; CFI = .97; IFI = .97. The core self-evaluations latent factor was significantly related to self-concordance ($\hat{\gamma} = .29, p < .01$), supporting H-1. We also found an indirect link between core self-evaluations and job satisfaction mediated by self-concordance (.06, $p < .05$). An alternative no mediation model (which dropped a link from self-concordant goal pursuit to job satisfaction) provided poorer fit statistics for the data overall: $\chi^2(13, N = 251) = 37.72, p < .01$; RMSEA = .09; RMSR = .07; CFI = .96; IFI = .96. Chi-square differences between the hypothesized and the alternative model, $\Delta\chi^2(1, N = 251) = 6.52 (p < .05)$ also revealed a significant drop. Thus, we also found that self-concordance mediated the core self-evaluations-satisfaction link, supporting H-2.

To test H-3, we added goal attainment to the model (see Figure 5). The overall fit statistics were good, $\chi^2(10, N = 251) = 21.82, p < .01$; RMSEA = .07; RMSR = .04; CFI = .98; IFI = .98. There was a significant link between self-concordant goals and goal attainment ($\hat{\beta} = .22, p < .05$). However, in this study, the link between goal attainment and job satisfaction was not significant ($\hat{\beta} = .10, p > .05$). The indirect link between self-concordant goals and job satisfaction through goal attainment was not significant (.02). Therefore, as in Study 1, H-3 was not supported. However, examination of the other indirect effects revealed that self-concordant goals did fully mediate the link between core self-evaluations and goal attainment (.06, $p < .05$).

Brief Discussion

Results from Study 2 provided some support for the hypothesized model. Specifically, the core self-evaluations latent factor was related to goal self-concordance, and goal self-concordance was related to job satisfaction and goal attainment. However, goal attainment was not related to job satisfaction. These findings also show that self-concordance can be measured with respect to work goals and that self-concordant work goals are linked to core self-evaluations and goal attainment. Moreover, work goal self-concordance mediates part of the relationship between core self-evaluations and job satisfaction. These results add to Study 1 by showing that work goal self-concordance mediates the link between core self-evaluations and job satisfaction (Study 2) in much the same way as personal goal self-concordance mediates the relationship between core self-evaluations and life satisfaction (Study 1).

In summary, results of these analyses provided support for the hypothesized model with respect to the role of self-concordant goals in predicting life satisfaction (Study 1) and job satisfaction (Study 2). Notably, though, the direct links were stronger than the indirect links. Judging from the results in the correlation matrix in this study as well as in Study 1 (see Table 1), it appears that autonomous (intrinsic and identified) motives underlying goal pursuit are the motives most correlated with job satisfaction. Accordingly, we estimated models using autonomous (intrinsic plus identified) goal pursuit in place of the overall self-concordance composite variable. Although the results with autonomous goal pursuit were slightly stronger in magnitude, the results were quite similar, and in no case did the significance of a variable change. Accordingly, consistent with the large body of research on self-concordance in the personality literature (Elliot & Sheldon, 1998; Elliot et al., 1997; Koestner et al., 2002; Sheldon & Elliot, 1998, 1999; Sheldon & Houser-Marko, 2001; Sheldon & Kasser, 1998), we retained the overall self-concordance composite.

General Discussion

In the past decade, two significant trends have emerged in personality psychology. First, although vendors of folk wisdom have inscribed for decades the virtues of positive thinking (see

Table 2
Means, Standard Deviations, and Intercorrelations Among Study 2 Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Self-esteem	4.14	0.61	.87											
2. Generalized self-efficacy	4.03	0.51	.59	.77										
3. Locus of control	2.50	0.63	.43	.41	.58									
4. Neuroticism	3.64	0.45	-.72	-.57	-.31	.84								
5. Core self-evaluations composite	3.58	0.45	.88	.80	.64	-.85	.80							
6. Intrinsic goal pursuit	4.60	2.12	.18	.22	.24	-.10	.22	.84						
7. Identified goal pursuit	7.53	1.38	.32	.25	.31	-.19	.33	.45	.82					
8. Introjected goal pursuit	3.74	2.11	-.12	-.08	-.06	.16	-.13	.25	.27	.86				
9. External goal pursuit	4.51	1.55	.04	.03	.08	.03	.03	.04	.28	.42	.80			
10. Self-concordance composite	3.94	6.17	.23	.23	.22	-.19	.27	.72	.32	-.34	-.56	.86		
11. Goal attainment	3.56	0.69	.11	.17	-.01	-.13	.13	.21	.19	.08	.00	.16	.84	
12. Job satisfaction	3.86	0.67	.40	.24	.17	-.37	.38	.22	.22	-.07	-.03	.25	.16	.82

Note. n = 251. Scale reliabilities are on the diagonal in bold. Correlations greater than .12 are significant at $p < .05$. Correlations greater than .16 are significant at $p < .01$.

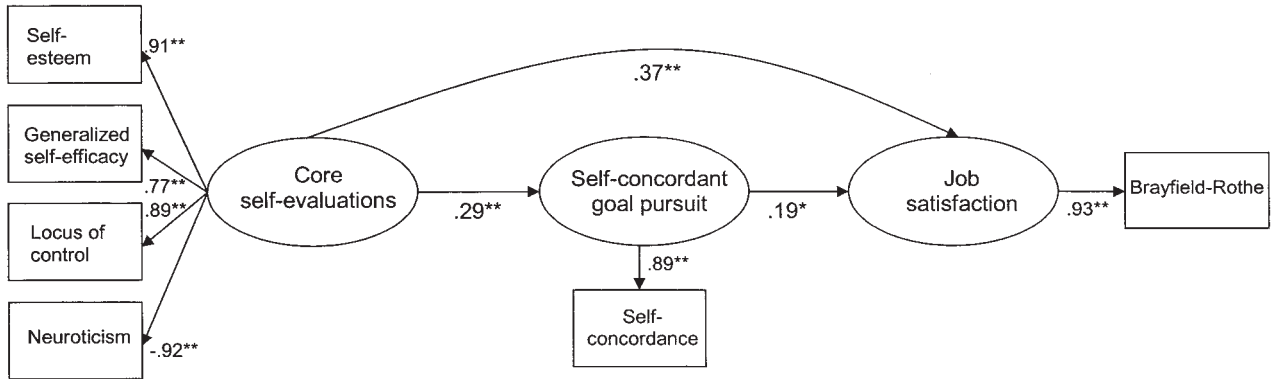


Figure 4. Study 2: Relationships among core self-evaluations, goal self-concordance, and job satisfaction. $n = 251$. * $p < .05$. ** $p < .01$.

Peale, 1952), only recently have researchers started to methodologically investigate the consequences of positivity (see Seligman & Csikszentmihalyi, 2000). Second, as noted by Locke (1997), researchers have begun to investigate the importance of personal goals as the central organizers of affect (Sheldon & Elliot, 1999), which complements research on the positive consequence of goals. Despite the relatively short time that these two research trends have existed, they have produced some impressive results (see Diener, 2000, for review). The hypothesized model, investigated in this study, combines these two promising approaches to human motivation. According to this model, people with positive self-regard are more likely to have self-concordant goals. In turn, those with more self-concordant goals—goals that reflect feelings of intrinsic interest and identity congruence rather than feelings of introjected guilt and external compulsion (Sheldon & Houser-Marko, 2001)—should be happier and more satisfied with their goals, themselves, and ultimately their lives. Our results link these two literatures by showing that goals are one of the means by which positivity has its effects.

Turning to the specific results, Study 1 was conducted with students, as was the case with most previous self-concordance studies. Here, self-concordance was longitudinally associated with life satisfaction. Previous self-concordance research (e.g., Koestner et al., 2002; Sheldon & Elliot, 1999) has typically used mood-focused affect items, whereas this study used direct questions about life satisfaction. This study shows that affective implications of self-concordance are not confined to a single affect scale. More important, Study 2 shows that self-concordance in work goals leads to satisfaction at work, much in the same way that self-concordance with general life goals leads to life satisfaction in previous research.

Specifically, the correlations (see Tables 1–2) reveal that whereas the more autonomously chosen goals typically had positive and significant correlations with goal attainment, job satisfaction, and life satisfaction, the “controlled” (introjected and extrinsic) reasons typically had nonsignificant correlations with these variables. It is worth asking why goals chosen for controlled reasons had so little effect on goal success and satisfaction. Con-

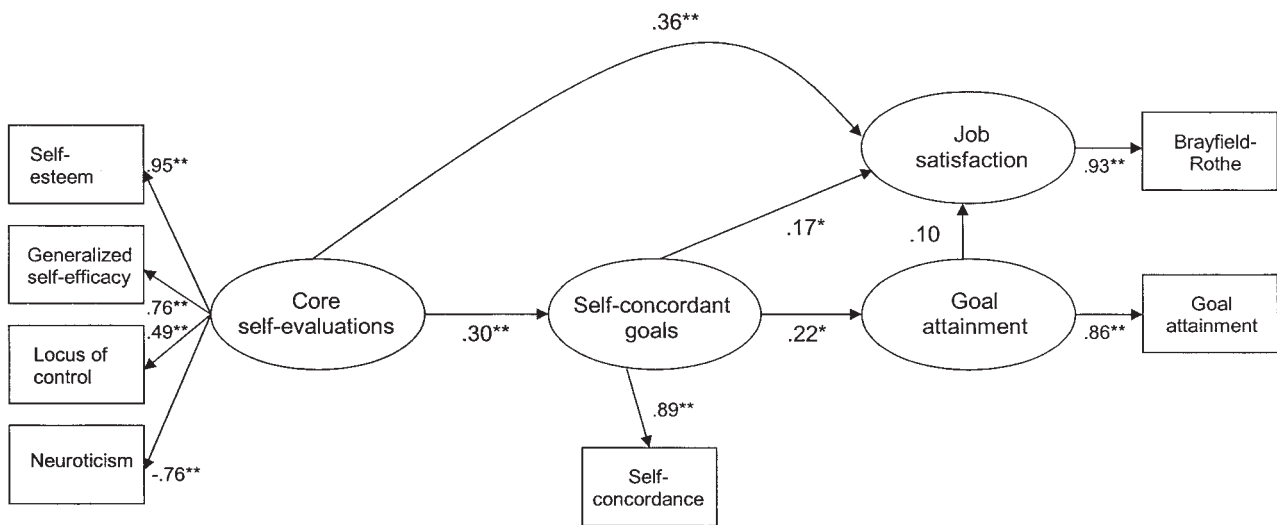


Figure 5. Study 2: Model testing the mediating role of goal attainment in relationship between goal self-concordance and job satisfaction. $n = 251$. * $p < .05$. ** $p < .01$.

sider, for example, introjected goals, which amount to pursuing goals because one would feel guilty by not pursuing them. Such goals could actually be rational, self-enhancing actions (e.g., eating healthy food, exercising, being honest), but actions about which one feels conflict. Thus, the beneficial effects of these goals could be cancelled out by the fact that one was not fully and personally committed to such goals. Similarly, external goals "assigned" by others might also be important goals, but less satisfying because they are pursued for others, or because one feels quiet resistance to them.

Why do people adopt controlled goals at all if they produce such difficulties in self-regulation? Sheldon and Elliot (1998) argued that such goals are selected when individuals fail to assess accurately their inner needs, values, and interests. As such, people who lack this type of inner self-information may select goals based on perceived external requirements or may incorporate the needs, demands, or values of others as one's own (introjection) rather than the needs of the self. However, because goals derived from controlled processes do not represent real interests of the self, they may unintentionally fade, despite the individuals' best original intentions to keep at them. As a result, individuals who pursue controlled goals may be unlikely to attain these goals or may find their attainment less pleasurable, either of which may lead to dissatisfaction.

One of the more important contributions of this research was to illuminate the effect of core self-evaluations on self-concordance and its consequences. In both studies, there were significant associations between core self-evaluations and self-concordance. People who see themselves as worthy, efficacious, and in control of their lives (positive core self-evaluations) were most likely to set goals for autonomous or self-chosen reasons. According to Sheldon and Houser-Marko (2001), the ability to select self-concordant goals is a difficult skill that requires both "accurate self-perceptual abilities and the ability to resist social pressures that may sometimes push one in inappropriate directions" (p. 162). Our research showed that the core self-evaluations concept is a potentially important factor influencing this ability for successful goal pursuit. In other words, people with positive core self-evaluations were especially good in demonstrating this adaptable ability to select "self-concordant" goals that represent their implicit interests, values, and growth needs, and were more satisfied with their jobs and lives in turn.

Somewhat surprisingly, the results involving goal attainment were relatively weak. Perceived goal attainment failed to mediate the relationship between self-concordance and satisfaction. Furthermore, the relationship between self-concordance and goal attainment, while significant in both studies, was not strong (see Figures 3 and 5). Though little research has linked goals and job satisfaction (for an exception with organizational newcomers, see Maier & Brunstein, 2001), the weak association between goal progress or attainment and job satisfaction, under the auspices of the self-concordance model, is contrary to past self-concordance research. The relationship between goals and job satisfaction is complex, perhaps more complex than we have been able to model in the present study. Whereas setting difficult performance goals for oneself may be dissatisfying in the short term because they may cause the individual to have low expectations for goal attainment (Mento, Locke, & Klein, 1992), the attainment of those goals (which is facilitated by the setting of difficult goals) is argued to

lead to satisfaction (Locke & Latham, 1990). Because we did not separate goal expectancy from goal attainment in our study, further study of this relationship is warranted.

Although we found in our study some support to that effect in the direct relationship between core self-evaluations and satisfaction, we also found some support for an indirect effect through dynamic processes in the form of goal pursuit. Our results join an increasing body of research (e.g., Koestner et al., 2002; Sheldon & Houser-Marko, 2001; Sheldon et al., 2002) that shows that it is possible to become more satisfied with job and life through one's pursuits, if one picks the right goals and does well with them. In fact, our results may suggest that core self-evaluations may serve more like a trigger than an anchor. People with positive core self-evaluations strive "for the right reasons," and therefore "get the right results," both of which in turn increase their levels of satisfaction. Moreover, such increases in levels of satisfaction appear to last (both of our studies were longitudinal) and perhaps lead to even more positive changes in an upward spiral of positive outcomes (Ryff & Singer, 1998). For individuals with less positive core self-evaluations, it is particularly important that such individuals introspect on the nature of their goals and the reasons they pursue them because there is a greater risk that they pursue goals for controlled reasons. Such introspection may hold the promise of leading to an alteration or reappraisal of goals and goal pursuit, which could then initiate the aforementioned upward spiral.

There are several limitations to our studies. First, the reliabilities of some of the individual scales were low. For example, the Intrinsic and Identified Scales in Study 1, the measure of goal attainment in Study 1, and the Locus of Control Scale in Study 2 were below .70. However, with the exception of the goal attainment measure in Study 1 ($\alpha = .68$), these scales were used as indicators of the broader concepts that were included in the causal model. Specifically, measures of the motives underlying goal pursuit and measures of locus of control were used as indicators of an overall self-concordance and core self-evaluations factor, respectively. These overall factors were measured reliably across all three studies ($\bar{\alpha} = .80$). Thus, that the individual scales were, in some cases, measured unreliably does not mean that the factors the scales indicated were measured unreliably. The marginal reliability of goal attainment measure in Study 1, however, should be acknowledged.

Second, the variables were collected from the same source. However, because all studies were longitudinal, temporal separation is one means of reducing same-source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A third limitation is that the relationships between goal attainment and satisfaction, though significant, were not very high ($\hat{\beta} = .20$ in Study 1 and $\hat{\beta} = .16$ in Study 2). In a job setting, satisfaction is not just a function of the attainment of goals over which one has control. It is also a function of job conditions (e.g., leadership, coworkers, working conditions, and compensation) for which goal setting may be unrealistic. Even in a student setting, life satisfaction may be affected by events and conditions over which one has limited influence (e.g., looks, wealth, family relationships, and faith). Future studies of job satisfaction would do well to include measures of satisfaction with the personal job strivings divorced from uncontrollable conditions, although it is notable that the correlation with overall job satisfaction was significant nonetheless.

Finally, though past self-concordance research has used an overall self-concordance composite (Koestner et al., 2002; Sheldon & Elliot, 1999; Sheldon & Houser-Marko, 2001), it may be productive for future research to investigate the motives separately. As noted earlier, we did find differential validity by the four self-concordance components, with intrinsic motives generally being the most strongly related to satisfaction. Because the intrinsic and extrinsic dimensions anchor the extremes of the self-concordance continuum (Sheldon & Houser-Marko, 2001), these two dimensions may be the most appropriate to consider in future research.

Despite these limitations, the study makes some significant contributions to the literature on antecedents of job and life satisfaction. First, this study showed that it is possible not only to become happier through one's goal pursuit, as other studies have showed (see Sheldon & Houser-Marko, 2001), but also that it is possible to become more satisfied with one's job through choosing the right goals. Second, our study showed that people who are more self-positive (high core self-evaluations) tend to choose the goals that have the best chance to make them happy (with their jobs and lives). Third, we found that the pursuit of self-concordant goals may explain part of the relationship between dispositions and the feelings of fulfillment and satisfaction. Finally, the incorporation of goals in the job satisfaction literature has another distinct advantage. Although goal constructs such as self-concordance show enough temporal stability to affect variables of interest over time, self-concordant beliefs have shown an ability to change when individuals receive instruction on how to do so (Sheldon et al., 2002). Precisely because of their flexibility and sensitivity to changing contexts, it is possible to help people pursue "better goals." The investigation of such interventions may be a fruitful target for future research, a research that may help people in identifying ways to improve their jobs and their lives.

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