

## Happiness is a warm abstract thought: Self-construal abstractness and subjective well-being

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### Abstract

Research investigating the relationship between self-construals and subjective well-being has traditionally focused on understanding how dimensions such as positivity–negativity and internality–externality relate to well-being. This paper presents two studies that investigate how a potentially important yet unexamined dimension, the abstractness versus concreteness of people’s self-construals, is related to life satisfaction. Study 1 showed that happier people tend to think about themselves with higher level of abstraction than less happy people, even after controlling for the overall valence and internality of their construals. Study 2 found that people randomly assigned to think about themselves in abstract rather than concrete terms reported greater pre- to post-manipulation increases in reports of life satisfaction. Implications of these findings for understanding individual differences in well-being are discussed, and directions for future research are presented.

**Keywords:** *Abstraction, life satisfaction, self concept, subjective well-being*

### Introduction

A large body of research on mental health and well-being has focused on understanding how various dimensions of self-related thinking are associated with emotional well-being and life satisfaction (Beck, 1991; Diener, Suh, Lucas, & Smith, 1999; Lyubomirsky, 2001; Taylor & Brown, 1988). For example, one dimension of self-view that has received prominent attention in social and personality research is self-esteem, or how positively a person views oneself in general. Not surprisingly, research shows that people who report favorable views of themselves also tend to report better emotional well-being and have more favorable views of their lives in general (Lucas, Diener, & Suh, 1996).

In this paper, we examine an understudied dimension of self-view that may hold promise in further explicating the relationship between the self and subjective well-being. Specifically, we propose that the level of abstraction with which people view important aspects of themselves and their lives is an important factor that shapes their evaluations of themselves and their lives. We propose that people who view important aspects of themselves and their

lives *abstractly*, that is, by focusing on broad descriptions rather than specific events or criteria, are likely to report higher life satisfaction than people who tend to view important aspects of their lives more *concretely*, that is, by focusing on specific events or criteria rather than broader descriptions.

To illustrate, consider a student who has a generally favorable view of her intellectual ability. She may construe this view rather abstractly (e.g., “I am a smart person”), or she may construe it rather concretely (e.g., “I hold a 4.0 GPA”). Will one manner of construal be more reliably associated with subjective well-being than the other? In this paper, we will present the findings of two studies that suggest that construing important aspects of oneself and one’s life abstractly rather than concretely may confer benefits to subjective-well being.

### Theoretical context

It is almost axiomatic that people strive to maintain a favorable view of themselves, whether the views take the form of specific trait evaluations, global self-esteem, or overall life satisfaction (Diener et al., 1999; Greenwald, 1980; Taylor & Brown, 1988). Further, it is well-known that people tend to evaluate

themselves favorably to the degree that the criteria for such judgments can be flexibly and idiosyncratically defined (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Dunning, Meyerowitz, & Holzberg, 1989; Felson, 1981). In the context of life satisfaction judgments, for example, a person has a great deal of flexibility in weighing their standing across a number of life domains. In fact, happy individuals have been shown to disproportionately weight their most favorable life domains in broader judgments of life satisfaction compared to unhappy individuals (Diener, Lucas, Oishi, & Suh, 2002). However, even within particular domains, people maintain a great deal of flexibility in how they can construe these evaluations. They may focus on concrete examples of status or performance (i.e., marital status, GPA), or on more abstracted descriptions of themselves in each domain (“happily married”, “smart”). Although there are likely to be individual differences in how abstractly or concretely people construe these evaluations, little is known about how this dimension of self-focused thought is related to subjective well-being.

Although few studies have specifically examined the dimension of abstractness–concreteness in the context of self-focused thought, there are a number of lines of research that support a prediction that greater abstractness should be tied to greater subjective well-being. For example, in experimental studies, Alicke et al. (1995) and Dunning et al. (1989) have shown that people tend to evaluate themselves favorably when the criteria for judgments are ambiguous. For example, Alicke et al. (1995; Study 1) demonstrated that when college students are asked to compare themselves to an “average” student (i.e., an ambiguous standard of evaluation), they overwhelmingly rate themselves as better than average. However, when the comparison target is made more specific and concrete, for example, to a specific person rather than a hypothetical “average,” this self-enhancement bias is substantially reduced (Alicke et al., 1995; Studies 3 and 4). Similarly, Dunning et al. (1989; Studies 1 and 2) have shown that when people are allowed to choose their own idiosyncratic criteria for trait descriptors, self-enhancement abounds. When criteria are experimentally constrained, self-enhancement abates (Dunning et al., 1989; Study 4). Thus, this experimental evidence suggests that when people are motivated to evaluate themselves and their lives favorably, using abstract criteria will offer a person more latitude to do so than concrete criteria.

Further, Wegner and Vallacher’s (1986) theory of action identification also suggests a link between the abstraction of a person’s self-construals and their subjective well-being. Wegner and Vallacher (1986) argue that people can identify their behaviors and

actions in a variety of ways, ranging from low-level, concrete representations of “what” (e.g., “moving fingers on typewriter,” “lifting a glass”) to higher-level abstract representations of “why” (e.g., “expressing my creativity,” “drinking to relieve tension”). According to this theory, variations in levels of action identification should be tied to both characteristics of a particular task as well as characteristics of a particular person (Vallacher & Wegner, 1989). For example, Wegner and Vallacher (1986) argue that the level of identification depends on how difficult a person perceives a particular behavior to be. Specifically, behaviors that are perceived as difficult will be identified at lower, more concrete levels, whereas behaviors that are perceived as easy will be identified at higher, more abstract levels. Thus, according to this theory, if people perceive important domains of their lives to be going relatively well, they may be more likely to construe them abstractly. However, if people perceive important aspects of their lives to be going relatively poorly, they may construe them more concretely. Although this line of reasoning suggests that abstractness may simply be a marker rather than a determinant of well-being, it does suggest a specific link between the two.

However, action identification theory also proposes that people vary in their characteristic manner of identifying actions. Some people tend to identify actions at low levels, whereas others tend to identify actions at higher levels that reflect the action’s causal effects, social meanings, or self-descriptive implications. In this sense, a person’s general tendency to view themselves abstractly may actually contribute to well-being, as Vallacher and Wegner (1989) find that people who identify their actions abstractly levels are better able to withstand threats to the self than people who identify their actions more concretely. Thus, according to action identification theory, a person’s tendency to construe themselves and their actions abstractly may both contribute to and serve as a marker of well-being.

More recently, Pyszczynski, Greenberg, and Goldenberg (2003) have similarly argued that people are likely to function more adaptively when their self-esteem is based on abstract rather than concrete standards of evaluation. In particular, they argue that abstract bases of evaluation are likely to be more stable and less vulnerable to disconfirmation. Although there are no empirical tests of Pyszczynski et al.’s (2003) proposition, there is evidence that people whose self-worth is based on internal rather than external standards report higher well-being. For example, Crocker and her colleagues (Crocker, Luhtanen, Cooper, & Bouvette, 2003) have examined people’s contingencies of self-worth; that is, the bases on which people stake their self-esteem.

In their research, they have found that the most common bases of self-worth can be arranged on a continuum from internal (i.e., God's love, virtue) to external (i.e., others' approval, appearance, competition). Crocker et al. (2003) found endorsement of external bases to be negatively related to self-esteem, while endorsement of internal bases was more positively related to self-esteem. Similarly, based on studies that employed an explicit social comparison paradigm, Lyubomirsky and Ross (1997) found that happy individuals were more likely than unhappy individuals to base self-evaluations on internal, subjective standards, whereas the self-evaluations of unhappy individuals were more sensitive to tangible information in the environment (see also Wayment & Taylor, 1995). Thus, while both Crocker et al.'s (2003) and Lyubomirsky and Ross' (1997) findings point to the importance of understanding the internal-external dimension of self-evaluation, we note that there is likely to be substantial overlap between the internal-external and the abstract-concrete dimensions. For example, many of Crocker et al.'s (2003) internal bases (e.g., God's love, virtue) are likely to be construed abstractly because they have relatively few concrete exemplars. Conversely, many of Crocker et al.'s (2003) external bases (e.g., physical appearance, competition) are likely to have highly accessible and concrete standards of evaluation. Thus, these studies point to the potential role of abstractness as an important dimension of self-construal, but also highlight the importance of demonstrating its unique relationship with well-being beyond any associations with dimensions such as internality-externality.

Taken together, these studies suggest that abstractness-concreteness may be an important dimension of self-construal that has implications for understanding individual differences in subjective well-being. Thus, the purpose of our paper was to examine whether self-construal abstraction is associated with subjective well-being. In particular, this paper addresses two main questions: (1) do people differ in how abstractly or concretely they view important aspects of themselves and their lives; (2) are such differences in how people view themselves uniquely and reliably associated with their reports of life satisfaction? Across two studies using complementary methodologies, we tested our hypothesis that people who view themselves in a more abstract manner will report higher levels of life satisfaction than people who view important aspects of themselves more concretely. Additionally, we examined whether self-construal abstractness was most strongly associated with life satisfaction among people who held primarily positive views of themselves. We examined this latter question because if self-construal abstractness benefits well-being

by promoting stable self-evaluations in the face of inevitable challenge (Pyszczynski et al., 2003; Vallacher & Wegner, 1989), then self-construal abstractness should be most beneficial for individuals whose self-evaluations are the most positive to begin with.

## Study 1

Study 1 used a correlational approach to examine the relationship between self-construal abstraction and life satisfaction. Participants rated their life satisfaction, and then listed the criteria they based their judgment on. We then examined how differences in the level of abstraction of the criteria were related to how favorably they evaluated their lives.

## Method

### *Participants*

Eighty-six undergraduate students (70 females, 16 males<sup>1</sup>) enrolled in a psychology course participated in Study 1 in exchange for course credit. Participants ranged in age from 19 to 47 ( $M = 22.91$ ,  $SD = 4.90$ ).

### *Procedure*

Participants first completed the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), a widely-used questionnaire for assessing life satisfaction. The SWLS asks participants to rate their agreement on a 7-point scale (1 = "strongly disagree," 7 = "strongly agree") to five statements such as "In most ways, my life is close to my ideal" and "If I could live my life over, I would change almost nothing." Cronbach's alpha for this measure was 0.82.

Following administration of the SWLS, participants were then asked to list the five most important aspects of themselves and/or their lives that they thought about when they completed the SWLS. After describing the five aspects they considered, participants briefly stated how it influenced their evaluation of their life satisfaction (i.e., "did it make you more or less satisfied with your life?").

### *Coding*

A team of four trained research assistants rated the open-ended thoughts along the dimensions of abstractness-concreteness and satisfaction-dissatisfaction. The abstractness-concreteness dimension was rated on a continuum with endpoints of 1 ("extremely concrete") to 7 ("extremely abstract"). An extremely concrete thought was

Table I. Sample statements coded at the concrete end (1–2) and abstract end (6–7) of the concrete–abstract dimension (Study 1).

Concrete thoughts (rated 1–2)	Abstract thoughts (rated 6–7)
I have my own car. This helps me be independent and get around.	Things that are important I have found ways to get them.
Engagement: I am satisfied with my life in that I am marrying who I want to marry.	Working hard to make a better self.
My car was stolen. It sucks!	Life is not perfect, but as compared to others, I cannot complain about my life.
I'm very satisfied that I live in a clean green place near the beach.	I thought about my past and how I have grown to be the woman I was predestined to be.
I'm trying to workout and diet to lose weight. Since I haven't reached my ideal weight goal, I'm less satisfied.	I thought about other possible situations better and worse. This made me feel more satisfied because I don't need much more than I have.
If someday my mom would approve my significant other, I'll be more satisfied with my life.	Life is what you make it. My choices and actions brought me to where I am now.
Significant other: since I don't have a boyfriend currently, this is making my life less satisfying.	Recently I have made some interesting spiritual discoveries. I have a lot of room to improve but I feel like I am on the right track as far as happiness is concerned.

defined *a priori* as one that refers to a particular experience or event, something a person clearly can have or not have (e.g., “3.5 GPA”) or something that states clear and objective criteria (e.g., “getting into UCLA law school”). In contrast, an extremely abstract thought was defined as one that focuses on broad descriptions, is vague, undefined, or could be judged flexibly by the participant (e.g., “I am a good friend” or “I am successful”). The interrater reliability of the ratings along the abstractness–concreteness dimension was good, two-way intraclass  $r = 0.72$ . Table I provides examples of thoughts at each end of the abstract–concrete continuum.

Satisfaction–dissatisfaction was coded by four raters on a continuum with endpoints 1 (“extremely unsatisfied”) to 7 (“extremely satisfied”), and referred to raters’ judgment of how satisfying a particular thought was. For most thoughts, the degree of satisfaction was readily apparent from either participants’ direct statement (i.e., “This made me feel extremely satisfied”) or from the nature of the thought itself. Raters had little difficulty in making consistent judgments along this dimension, as interrater reliability was excellent, two-way intraclass  $r = 0.91$ .

To assess the degree to which the abstractness dimension might have covaried with other dimensions such as internality (Crocker et al., 2003) or stability (cf. Pyszczynski et al., 2003), a team of two trained coders also coded the thoughts along the dimensions of internality–externality and stability–instability.<sup>2</sup> The internal–external ratings were made on a scale ranging from 1 (“extremely external”) to 7 (“extremely internal”) and reflected the degree to which the thought referred to something about the persons’ environment versus something about the person. The stable–unstable ratings were made on a

scale ranging from 1 (“extremely unstable”) to 7 (“extremely stable”) and reflected the degree to which the thought referred to something that was likely to change or likely to remain the same for a long time. The interrater reliabilities for these dimensions were good, two-way intraclass  $r_s = 0.92$  and  $0.78$ , respectively.

For each participant, we averaged together the ratings on each of these dimensions to yield aggregated thought abstraction, satisfaction, internality, and stability measures. The reliabilities of the aggregated abstraction and satisfaction measures were good (thought satisfaction  $\alpha = 0.83$ , thought abstraction  $\alpha = 0.75$ ), indicating that a participant’s five thoughts were generally consistent in terms of satisfaction and abstraction. The reliabilities of the aggregated internality and stability measures were somewhat poorer (internality  $\alpha = 0.45$ , stability  $\alpha = 0.69$ ).

## Results

On the whole, participants’ scores on the SWLS reflected a moderately favorable level of life satisfaction ( $M = 4.86$ ,  $SD = 1.11$ ). Participants listed a total of 406 thoughts ( $M = 4.72$  per participant) in response to the thought-listing instructions. These thoughts were rated, on the whole, as somewhat satisfying ( $M = 4.72$ ,  $SD = 1.71$ ), abstract ( $M = 4.46$ ,  $SD = 1.71$ ), external ( $M = 3.69$ ,  $SD = 1.71$ ), and stable ( $M = 5.27$ ,  $SD = 1.01$ ).

Correlations among the measures are shown in Table II. As expected, happier participants listed thoughts that were rated as more satisfying than those listed by unhappier participants. More importantly, and consistent with our hypothesis, happier participants also listed thoughts that were rated as

Table II. Between-persons correlations among Study 1 measures.

Measure	1	2	3	4	5
1. SWLS	–				
2. Thought abstractness	0.34**	–			
3. Thought satisfaction	0.77***	0.27*	–		
4. Thought internality	–0.05	0.47**	–0.12	–	
5. Thought stability	0.21	–0.04	0.27*	–0.13	–

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

more abstract than those listed by unhappier participants. Thus, the life satisfaction ratings of happier participants were drawn from more abstractly-construed criteria compared to those of unhappier participants. Happy individuals were marginally more likely to list thoughts that were stable, compared to unhappy individuals. Interestingly, thought internality was not correlated with life satisfaction or thought satisfaction.

In addition to these between-persons differences, we also noted a significant relationship between thought abstraction and thought satisfaction at the level of the 406 individual thoughts. In particular, thoughts that were rated as more abstract were also rated as being more satisfying than more concrete thoughts,  $r = 0.21$ ,  $t(84) = 3.01$ ,  $p < 0.01$ .<sup>3</sup> Thought abstraction was also significantly correlated with thought internality,  $r = 0.35$ ,  $t(84) = 5.23$ ,  $p < 0.001$ , but was not correlated with thought stability,  $r = -0.02$ .

To examine the extent to which thought abstraction uniquely predicted participants' reports of life satisfaction, we regressed participants' life satisfaction ratings onto their average thought satisfaction, abstraction, internality, and stability scores. As hypothesized, thought abstraction was a significant predictor of life satisfaction ( $\beta = 0.17$ ,  $p = 0.05$ ) even after controlling for the influence of thought satisfaction ( $\beta = 0.71$ ,  $p < 0.001$ ), internality ( $\beta = -0.05$ , n.s.), and stability ( $\beta = 0.02$ , n.s.). Thus, participants who listed more abstract thoughts reported greater life satisfaction than participants who listed more specific thoughts, irrespective of how satisfying, stable, or internal the thoughts were.

Although not significantly different, we do note that this unique relationship between thought abstraction and SWLS was stronger among participants who had SWLS scores above the median ( $\beta = 0.32$ ) compared to participants who had SWLS scores below the median ( $\beta = 0.13$ ; Fisher's  $z = 0.83$ , n.s.). Similarly, the relationship between thought abstraction and SWLS was stronger among participants who reported thoughts that were above the median in satisfaction ( $\beta = 0.33$ ) compared to participants whose thoughts were below the median in satisfaction ( $\beta = 0.04$ ; Fisher's  $z = 1.36$ , n.s.).

Thus, results suggest that the abstractness one's self-construals may be more strongly tied to life satisfaction among individuals whose evaluations of themselves and their lives are primarily positive.

## Discussion

Study 1 provided initial evidence that the level of abstraction with which people naturally view themselves and their lives is uniquely associated with life satisfaction. The more abstractly people tend to view important aspects of themselves and their lives, the more satisfying they tend to rate their lives in general. Further, this relationship was most evident among individuals whose evaluations of themselves and their lives were primarily positive. Thus, construing important bases of self-construal abstractly, particularly bases that yield favorable evaluations, may confer benefits for overall well-being.

These findings are noteworthy in two respects. First, they extend the experimental findings of Alicke et al. (1995) and Dunning et al. (1989) which show that manipulating the abstraction of comparison targets leads to differences in the favorability of people's evaluations on specific traits. Our results indicate that there are clear individual differences in the level at which people construe important aspects of themselves and their lives. More importantly, this dimension of self-construal has implications for understanding individual differences in well-being. People who viewed themselves in more abstract terms reported more satisfying thoughts about themselves as well as a higher level of overall life satisfaction.

Second, these findings point to a unique association between self-construal abstractness and subjective well-being. As noted earlier, the work of Crocker et al. (2003) and Lyubomirsky and Ross (1997) suggests that basing self-judgments on internal rather than external criteria should confer benefits in terms of overall well-being. However, in non-experimental contexts (as in Study 1), the dimension of internality–externality is likely to covary substantially with other dimensions such as abstractness or valence, making it difficult to identify the unique contribution of any dimension. Study 1, however, was the first study to simultaneously examine the influence of abstractness and internality, and found abstractness to be the only dimension (aside from thought satisfaction) uniquely associated with life satisfaction.

## Study 2

One obvious limitation of Study 1 was the correlational design, so the findings are subject to a number of possible explanations. For one, it is difficult to

pinpoint the direction of causality, because positive moods have been shown to influence the breadth of people's thinking (Fredrickson & Branigan, 2005) as well as their reports of life satisfaction (Suh, Diener, Oishi, & Triandis, 1998). Thus, Study 2 tested the role of abstraction more specifically, by experimentally manipulating the level at which people thought of themselves and their lives, and examining the effects on their judgments of life satisfaction. This approach capitalizes on the fact that although life satisfaction judgments tend to be stable over time (Pavot & Diener, 1993), they have also been shown to be sensitive to the influence of temporarily accessible thoughts and feelings (Oishi, Schimmack, & Colcombe, 2003; Schwarz & Strack, 1991).

In Study 2, we had participants complete a task that manipulated the level of abstraction at which they viewed themselves and their lives. We then examined the effects of this experimental task on pre- to post-task changes in life satisfaction ratings. We hypothesized that participants induced to think about themselves and their lives abstractly would report higher levels of life satisfaction, as compared to participants induced to think about themselves more concretely.

## Method

### Participants

Ninety-six undergraduate students (71 females, 25 males) participated in Study 2 in exchange for extra credit in psychology courses. Data for one participant in the abstract condition was eliminated from analyses because her pre- and post-manipulation life satisfaction scores showed significant deviation from univariate and multivariate normality ( $p < 0.01$ ). The remaining participants ranged in age from 18 to 45 years ( $M = 20.95$ ,  $SD = 3.93$ ).

### Procedure

After completing a short pre-manipulation measure of general life satisfaction, participants were randomly assigned to one of two versions of a computer-based task that was designed to put participants into either a concrete or an abstract self-focused mindset. In each version, participants were asked to view the same set of 10 emotionally-neutral images selected from the International Affective Picture System (IAPS; Lang & Ohman, 1988). Following the presentation of each image, participants were asked to write down a short thought about themselves or their lives that came to mind as a result of the image. In the concrete version, participants

were instructed to write down a very concrete self-related thought for each image (i.e., "focusing on concrete facts about yourself or very specific events in your life"). In the abstract version of the task, participants were instructed to write down a very abstract self-related thought for each image (i.e., "focusing on any idea, attitude, or opinion you might have regarding yourself or your life as a whole"). Each image was displayed for 10 seconds, followed by 20 seconds of blank screen during which participants could write their thoughts. After completing the image-priming task, participants completed a short open-ended manipulation check item, followed by a post-manipulation measure of life satisfaction and momentary emotions.

### Measures

The pre-manipulation measure of life satisfaction consisted of three items that asked participants to rate how happy or unhappy they feel about their current, past, and expected future life experiences. Responses were provided on a 7-point scale ranging from 1 ("very unhappy") to 7 ("very happy"), and the three items were averaged to yield a single index of pre-test satisfaction ( $\alpha = 0.68$ ). Post-manipulation life satisfaction was assessed using the SWLS, which was also rated on a 7-point scale (Diener et al., 1985;  $\alpha = 0.82$ ). In a prior study utilizing a similar sample of undergraduates ( $N = 104$ ), the 3-item measure showed good reliability,  $\alpha = 0.77$ , and was highly correlated with a SWLS measure administered in the same session ( $r = 0.82$ ;  $r = 0.93$  when corrected for measurement error) suggesting that the two measures assess nearly identical constructs. In the present study, different pre- and post-manipulation measures of life satisfaction were used to prevent participants from simply repeating their prior responses to the measure.

Post-manipulation emotions were assessed on 5-point scales with five positive (excited, proud, pleased, enthusiastic, friendly;  $\alpha = 0.82$ ) and five negative (upset, irritable, lonely, nervous, guilty/ashamed;  $\alpha = 0.64$ ) items. Perceived difficulty of the image-rating task was assessed with a scale ranging from 1 ("very easy") to 7 ("very difficult").

## Results

Overall, participants reported relatively high levels of life satisfaction on the 3-item pre-manipulation ( $M = 5.24$ ,  $SD = 1.12$ ) and the 5-item post-manipulation ( $M = 4.54$ ,  $SD = 1.25$ ) measures. There were no pre-existing differences in life satisfaction between participants in the concrete task condition ( $M = 5.34$ ,  $SD = 1.08$ ) and those in

the abstract task condition ( $M = 5.14$ ,  $SD = 1.15$ ;  $t(93) = 0.88$ , n.s.).

### Manipulation check

Following the image priming task and immediately prior to completing the post-manipulation life satisfaction measure (SWLS), participants were asked to complete the sentence stem “Something that makes me feel good is...” by writing up to 10 words on a sheet of paper. A positively-valenced stem was used to keep the valence of participants’ thoughts as constant as possible while allowing us to examine differences in the level of abstraction. Three trained researchers rated the level of abstraction of each participants’ responses on a scale with endpoints of 1 (“extremely specific/concrete”) to 7 (“extremely general/abstract”). The three raters’ ratings were then averaged to yield an abstraction index with high reliability (average measure intraclass  $r = 0.94$ ). As expected, participants in the concrete task condition completed the sentence stem with a more concrete idea ( $M = 3.78$ ,  $SD = 1.74$ ) than participants in the abstract task condition ( $M = 4.85$ ,  $SD = 1.71$ ),  $t(93) = 3.03$ ,  $p < 0.01$ , indicating that the task was successful in inducing an abstract vs. concrete self-focused mindset.

To test whether the manipulation had any effects on post-manipulation emotion or perceived task difficulty,  $t$ -tests compared the PA, NA, and task difficulty ratings between participants in each of the experimental conditions. None of these comparisons were significant, all  $ps > 0.45$ .

### Effect of task condition on pre- to post-task changes in life satisfaction

A regression analysis examined the effects of the experimental task on pre- to post-manipulation changes in life satisfaction ratings. In this analysis, post-manipulation life satisfaction was regressed on both pre-manipulation life satisfaction as well as experimental condition (effects coded:  $-1 =$  concrete,  $1 =$  abstract). Pre-manipulation life satisfaction significantly predicted post-manipulation life satisfaction,  $\beta = 0.66$ ,  $p < 0.001$ . Supporting our hypotheses, there was also a significant effect of task condition on post-test satisfaction,  $\beta = 0.16$ ,  $p < 0.05$ . Figure 1 shows the estimated marginal means of post-manipulation life satisfaction scores between the two conditions, after controlling for pre-manipulation life satisfaction. As shown, participants in the abstract condition reported greater post-manipulation life satisfaction (estimated marginal  $M = 4.73$ ,  $SE = 0.14$ ) relative to participants in the concrete condition (estimated marginal  $M = 4.33$ ,  $SE = 0.14$ ).

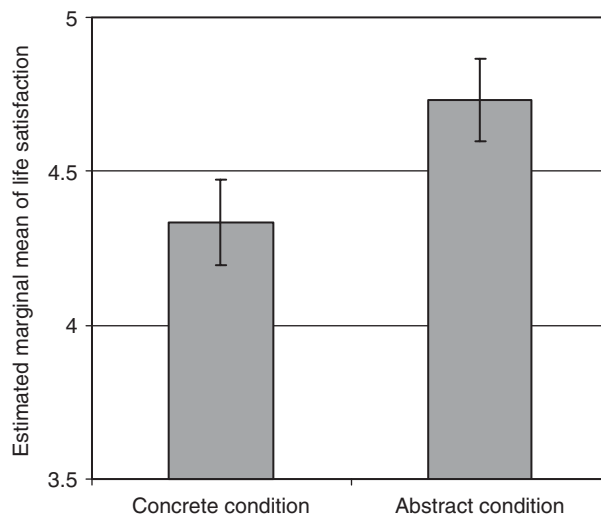


Figure 1. Estimated marginal means of post-manipulations life satisfaction scores for participants in the concrete and abstract task conditions.

To examine whether the effects of the manipulation may have differed depending on participants’ pre-manipulation reports of life satisfaction, we repeated the regression analysis above, but added a second step that included an interaction term between the centered pre-manipulation satisfaction measure and the experimental condition (cf. Aiken & West, 1991). This step did not predict a significant amount of incremental variance in post-manipulation satisfaction,  $F(1,91) = 1.11$ , n.s. However, the coefficient of this interaction term was negative ( $\beta = -0.08$ ), indicating that participants who were *less* happy had a tendency to be more strongly influenced by the manipulation. Indeed, participants with pre-manipulation levels of life satisfaction below the median were more strongly influenced by the manipulation ( $\beta = 0.26$ ) than participants above the median ( $\beta = 0.13$ ).

### Brief discussion of Study 2

Consistent with our hypotheses, participants who were induced to think about themselves in abstract terms reported higher levels of life satisfaction as compared to participants who were induced to think about themselves in more concrete terms, after controlling for pre-manipulation levels of life satisfaction. Further, this effect occurred in the absence of any observable effects on either positive or negative affect, or perceived task difficulty. However, contrary to our findings in Study 1, we did not find that the association between abstractness–concreteness and life satisfaction was strongest among our happiest participants.

Rather, there was a slight tendency for the life satisfaction judgments of our unhappiest participants to be more strongly influenced by the experimental manipulation. We note that these findings may be due to the fact that our sample, in general, reported high levels of life satisfaction to begin with. Thus, our happiest participants reported levels of life satisfaction close to the upper endpoints of our scales, and it may have been difficult for any manipulation to induce substantial changes in these participants' ratings. However, the findings of the study clearly show that, across all participants, those who were induced to think about themselves abstractly reported higher levels of subsequent life satisfaction than those induced to think about themselves concretely.

### General discussion

In two studies, we found that individuals who construe important aspects of themselves and their lives abstractly tend to evaluate their lives more positively than individuals who construe such aspects more concretely. This association between level of abstraction and well-being was observed using both correlational and experimental methods and was independent of any general effects of the satisfaction or internality of people's thoughts (Study 1) and did not appear to be related to either positive or negative mood (Study 2).

These findings point to the unique role that self-construal abstractness may play in shaping individual differences in subjective well-being. As noted earlier, a number of theorists have highlighted the potential role that the abstractness–concreteness dimension of self-focused thought may play in well-being (Pyszczynski et al., 2003; Vallacher & Wegner, 1989). Further, the findings of a number of empirical studies have highlighted the role that abstract standards may play in the general process of self-evaluation (Alicke et al., 1995; Dunning et al., 1989). Accordingly, the aim of our studies was to specifically examine the role of self-construal abstractness, and we found that this dimension was indeed associated with life satisfaction. More importantly, it was the dimension of abstractness, rather than internality (Crocker et al., 2003; Lyubomirsky & Ross, 1997), that was uniquely predictive of life satisfaction. In other words, people may place value on different aspects of their lives (such as intellectual competence, or physical health, or social skill) but regardless of the particular domains from which people derive a sense of self-esteem or life satisfaction, the level at which people construe themselves has an important and unique influence on people's well-being. To our knowledge, this is a novel finding

that offers an important insight for understanding the intricate links between cognition and well-being.

Our findings are conceptually consistent with a number of other studies that have examined the dimension of abstractness–concreteness as it relates to evaluative processes. As noted earlier, Alicke et al. (1995) found that people are more likely to make self-enhancing trait evaluations when a comparison target is construed abstractly. Similarly, when people have the flexibility to freely choose their own definitions of traits, they tend to rate themselves more favorably on those traits than when the definitions are constrained (Dunning et al., 1989). People are also likely to make overly optimistic self-judgments when thinking about themselves in the distant future (Gilovich, Kerr, & Medvec, 1993), which is typically construed more abstractly than the present or near future (Lieberman, Sagristano, & Trope, 2002). Further, people tend to describe easy actions in more abstract terms, whereas they describe difficult actions in more concrete terms (Wegner & Vallacher, 1986). Thus, the findings of our study are conceptually similar to those of prior research, by showing that abstract forms of thought tend to be associated with more favorable evaluations than concrete forms of thought. However, our findings are unique because they affirm the specific role of self-construal abstractness in understanding individual differences in subjective well-being.

Interestingly, our manipulation of abstract self-focused thinking in Study 2 found effects on life satisfaction ratings that could not be explained by changes in emotions. This may have been due to the fact that our methods for assessing emotions were not as sensitive as our methods for assessing pre- to post-manipulation changes in life satisfaction. However, it may also indicate that self-construal abstraction is not related to life satisfaction simply because abstract self-construals are more emotionally pleasing than concrete self-construals. Rather, inducing an abstract self-focused mindset may lead to more favorable life satisfaction judgments because these cognitive states tend to go together in everyday life. As action identification theory (Vallacher & Wegner, 1989; Wegner & Vallacher, 1986) suggests, for example, people tend to view their actions more abstractly when things are going relatively smoothly. Thus, being in an abstract rather than concrete self-focused mindset may serve as a situational cue that things are going well, and hence caused individuals to report greater life satisfaction. Thus, our experimental findings highlight a unique relationship between self-construal abstractness and well-being, but future research may benefit by examining additional mechanisms that explain the



link between abstract self-construal and subjective well-being.

Another important question for future research to examine is *when* is self-construal abstraction most strongly implicated in well-being? Our studies demonstrated links between self-construal abstraction and life satisfaction in very mundane contexts, yet the link is likely to be stronger in more emotionally-charged situations. In particular, we expect that self-construal abstraction should be most strongly tied to well-being in situations when the self-enhancement motive is strongest, such as in situations involving a threat to the self. For example, receiving a C+ grade will clearly be more of a threat to a student who construes intellectual ability concretely (i.e., "I hold a 4.0 GPA") as compared to another who construes intellect abstractly (i.e., "I am smart"). Does the level of abstraction of other important but unrelated aspects of the self moderate the impact of the threat on self-esteem and well-being? Will an affirmation of an unrelated but abstractly-construed aspect of the self serve as a better buffer than an affirmation of a concretely-construed aspect of the self? To the extent that holding an abstract self-construal will mitigate one's cognitive and affective responses to threats, we expect that people with more abstract construals should be more likely to maintain a stable sense of self and show less emotional variability across time. Indeed, research from our lab has found self-construal abstractness to be uniquely tied to self-esteem stability across time (Updegraff, in prep.). Given that both self-esteem instability (Butler, Hokanson, & Flynn, 1994; Kernis et al., 1998; Roberts & Gotlib, 1997; Roberts & Monroe, 1992) and emotional instability (Vitterso, 2001) are negatively associated with well-being, construing oneself abstractly may benefit well-being by protecting one's sense of self from the inevitable threats of everyday life. Future research will benefit by examining individual's responses to self-relevant threats as a particularly important mechanism that accounts for the link between abstract self-construal and subjective well-being.

We note that our studies are limited by the fact that we assessed the relationship between abstraction and life satisfaction in the context of relatively healthy, happy individuals. Thus, our studies suggest that when people are generally happy and have generally positive self-construals, holding abstract self-construals can confer benefits for well-being. We note that people in general, particularly Westerners, tend to report moderately high levels of life satisfaction (Diener & Diener, 1996) and hold moderately high self-evaluations (Baumeister, Tice, & Hutton, 1989; Taylor & Brown, 1988). Relatively few people report levels of life satisfaction or

self-esteem that are below neutral (Diener & Diener, 1996; Baumeister et al., 1989). Thus, our findings uncover a dimension of self-construal that helps elucidate the link between self-evaluation and subjective well-being in non-clinical populations. However, for individuals who hold more explicitly negative self-evaluations (such as unhappy or depressed individuals) construing negative aspects abstractly may be more harmful than construing them concretely, especially if it contributes to the persistence of unfavorable self-evaluations. Thus, additional research is needed to more fully explicate the role that self-construal abstractness plays in the well-being of both happy and unhappy individuals.

However, we must acknowledge that all forms of abstract self-relevant thinking may not necessarily be beneficial for well-being. For example, Emmons (1992) examined the abstractness and concreteness of adults' recurring goal strivings and found that people who reported more abstract goal strivings (e.g., "get closer to God") reported higher levels of depression than people who reported more concrete goal strivings (e.g., "say 10 Hail Marys"). Emmons' (1992) findings may seem at odds with our findings, but we note that Emmons (1992) focused on the abstractness of people's articulated goals (i.e., *what to do*), whereas our studies focused on the abstractness of people's bases of self-evaluation (i.e., *what I am* or *how am I doing?*). When goals are phrased abstractly rather than concretely, people may be unable to identify clear steps to achieve the goal, and progress towards abstract goals may seem more slow than progress toward concrete goals (Emmons, 1992). Further, while abstract goals may be perceived as more personally meaningful than concrete goals, they are also likely to be viewed as more challenging, and less likely to be met with success than more concretely-phrased goals (Little, 1988, 1989). Thus, as these studies show, construing important goals and strivings at an abstract level may put one at risk for disappointment. However, our data suggest, construing important standards of evaluation abstractly may mitigate such disappointment, by offering a person more flexibility in evaluating their overall progress and status.

Lastly, how is culture related to the abstraction of people's self-construal? In individualistic cultures such as North America, self-enhancement tendencies are so robust and prevalent that they are believed to be normative (Taylor & Brown, 1988), whereas they are much less pronounced in more collectivistic, East Asian cultures (Heine & Lehman, 1995; Kashima & Triandis, 1986; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). Similarly, happiness is more strongly valued and is more of a frequent concern for Americans than it is for Chinese (Diener, Suh, Smith, & Shao, 1995). Further, when

judging one's own happiness, members of collectivist cultures place a heavier weight on one's standing in regards to external norms and referents, as compared to members of individualistic cultures who tend to focus more on internal, subjective experience (Suh et al., 1998). Taken together, these findings suggest that North American culture may push for a greater degree of self-construal abstraction relative to East Asian cultures. Further, and more importantly, it is possible that existing cultural differences in subjective well-being may be due, in part, to cultural differences in people's chronic self-construal abstractness (Suh, 2000). Thus, an important avenue for further research is to examine the extent to which our findings regarding individual differences in self-construal abstractness also generalize to understanding cultural differences in life satisfaction. Preliminary data suggest that these findings do generalize (Park & Suh, 2005), but future research would benefit by examining this understudied yet potentially important link between culture, self-construal, and subjective well-being.

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### Notes

1. Gender was not significantly associated with any of the analytical variables described in either Study 1 or 2, and will not be discussed further.
2. We did not code the thoughts along a third dimension identified in the attributional literature, globality vs. specificity (Alloy, Peterson, Abramson, & Seligman, 1984). The globality vs. specificity dimension refers to the degree to which a particular attribution for a negative event is likely to affect an individual's whole life (global) or just a few discrete areas (specific), a qualitatively different dimension than abstractness–concreteness. For a majority of the written responses, participants did not provide enough detail for our coders to assign ratings along this dimension. Further, because the participants' written responses were justifications for broad

life satisfaction judgments, one could assume that all of the responses were invariably global. Thus, it is unlikely that variability in the abstractness–concreteness dimension (for which the raters had little difficulty assigning codes) reflected any meaningful variability in the global-specific dimension.

3. Because the individual thoughts are not entirely independent observations (i.e., each participant provided more than one thought), the significance test is derived from a random-effects model that accounts for the non-independence of observations. Hence, the test has fewer degrees of freedom (84) than the number of observations in the analysis (406).

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