

# To Discover or to Create: Metaphors and the True Self

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**ABSTRACT** Three studies examined how endorsement of self-discovery and self-creation metaphors influences belief in the true self and its use as meaning source. It was hypothesized that discovery metaphors contribute to belief in the true self and bolster the relationship between true self-knowledge and meaning. Study 1 supported the hypothesis that discovery is positively associated with belief in the true self among a sample of college students ( $N = 311$ ). Studies 2 and 3 extended the analysis by showing that the discovery metaphor also facilitates perceptions of meaning and the use of the true self specifically as a source of meaning in a second sample of college students ( $N = 75$ ) as well as an adult sample of university employees ( $N = 173$ ). Implications for understanding what enables the true self to infuse life with meaning, as well as an individual differences approach to metaphoric cognition, are discussed.

Philosophers and psychologists have long suggested that people's answers to questions about identity and life's meaning may be inextricably linked. In particular, it has been suggested that who you *really* are should inform what you do in life because meaning comes from living in accord with your true self (e.g., Horney, 1950; Kierkegaard, 1849; Miller, 1979; Rogers, 1959; Winnicott, 1960). Recent empirical research lends credence to these claims by demonstrating that true self-knowledge and true self-expression positively predict people's judgments of how meaningful their lives are (e.g., Kernis & Goldman, 2006; Schlegel, Hicks, Arndt, & King, 2009;

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Schlegel, Hicks, King, & Arndt, 2011). The current research explores one potential explanation for this phenomenon: that the capacity of the true self to imbue life with meaning is, in part, a function of the metaphors people use to understand identity development.

Specifically, we investigated the role of two relevant metaphors identified by Waterman (1984): self-discovery and self-creation, each of which has different implications for the existence of the true self. For reasons that will be subsequently reviewed, self-discovery may bolster (and self-creation may threaten) the belief that the true self is something that is ontologically real. Because it may be necessary to believe that the true self is “real” in order for it to effectively contribute to meaning, we propose that the use of discovery metaphors may ultimately contribute to its ability to do so. Guided by this analysis, three studies examined the possibility that creation and discovery metaphors have different implications for belief in the true self and, as a result, how true self-knowledge relates to meaning in life.

### **The True Self**

As mentioned at the outset, the idea that the true self is an important part of healthy human functioning is beginning to find empirical support. For example, the subjective feeling that you know your true self positively predicts self-actualization, vitality, mindfulness, self-esteem, and active coping (Kernis & Goldman, 2006; Lakey, Kernis, Heppner, & Lance, 2008). Similarly, the subjective feeling of expressing your true self (i.e., through authentic behavior) contributes to psychological need satisfaction, positive affect, and subjective well-being (Bettencourt & Sheldon, 2001; Harter, Marold, Whitesell, & Cobbs, 1996; Kernis & Goldman, 2006; Lakey et al., 2008; Ryan, LaGuardia, & Rawsthorne, 2005; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997; Wood, Linley, Maltby, Baliousis, & Joseph, 2008).

In addition to these general well-being effects, research also indicates that the true self is an important source of existential meaning specifically. We (along with others) have argued that people use their true selves as a guide for a variety of decisions in order to imbue those decisions with meaning and value (e.g., Schlegel & Hicks, 2011; Schlegel et al., 2009). For example, people use the true self to justify their decisions (Baumeister, 1991; Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985) and report perceiving meaning when they feel that their goals or experiences are connected to their true self (Debats,

Drost, & Hansen, 1995; McGregor & Little, 1998). Even the mere cognitive accessibility of one's true self-concept positively predicts meaning in life judgments (Schlegel et al., 2009).

One corollary of the relationship between the true self and meaning is that people place great importance on *knowing* their true selves. After all, if you are going to use your true self to inform decision making, it follows that you need to know it well. Based on this reasoning, Schlegel and colleagues (2011) found that perceived true self-knowledge also positively predicts meaning in life judgments.

Extant research thus implicates the significance of the true self for psychological functioning in general and meaning specifically. What is less clear, however, is whether individual differences in the way that people think about the true self play a role in shaping this relationship.

### Metaphors and the True Self

How do we gain access to some of the fundamental ways that people comprehend their true self? We propose that beliefs about the nature of the true self can be revealed through the metaphors people use to understand identity development, and specifically, the extent to which they look upon this as a process of self-discovery or self-creation.

#### *Metaphors of Self-Discovery and Self-Creation*

The metaphor of “self-discovery” is rooted in the eudaimonic and humanistic perspectives of writers like Aristotle, Maslow, and Rogers (Waterman, 1984). The metaphor of discovery is akin to the acts of scientists and explorers; it refers to the act of finding something that already exists. From this perspective, a discovery metaphor prescribes that each person has an innate set of characteristics, or real self, inside. Using a discovery metaphor may enhance belief in the true self by conferring the belief that it is an innate aspect of the person, thereby enhancing its role as a guide for decisions and life judgments.

On the other hand, believing that there is nothing inherently “true” about the true self—that there is nothing to be discovered—may undermine the meaning-making value of the true self. This may be the view that is fostered by a self-creation metaphor. In contrast to

discovery metaphors, the metaphor of “self-creation” is rooted in both existential philosophy and psychology, and may be best represented in the writings of people like Sartre (1956), Fromm (1947), and Szasz (1973). A creation metaphor is akin to the acts of artists and inventors, and can be seen as the process of making something new that has never existed before. To believe that the self is created may imply that there is no underlying true self and that identity is simply a product of choices. As Waterman (1984) contended, when identity is thought of as something that is created, the self can be seen as a choice among endless possibilities. A number of psychological perspectives have interestingly suggested that, although freedom and choice may seem appealing, confrontation with choices often fosters feelings of being overwhelmed, anxious, or fearful (e.g., Fromm, 1941; May, 1950; Schwartz, 2004). Thus, making a choice between multiple possibilities may feel overwhelming and arbitrary, potentially arousing existential anxiety and resulting in what Waterman calls “existential dread” (1984, p. 335). Such possibilities suggest that using a self-creation metaphor may attenuate the use of the true self as a source of meaning.

Because of these different implications, we propose that individual differences in the use of self-creation and self-discovery metaphors may have important implications for the relationship between true self-knowledge and meaning in life. Of course, another possibility is that these metaphors are simply forms of speech with no real psychological importance.

### *Evidence That Metaphors Shape the Psychological World*

A growing body of theory and research guided by the perspectives of Lakoff and Johnson (1980, 1999) and others (e.g., Gibbs, 1992) suggests that self-discovery and creation metaphors may be more than things we say. These perspectives argue that metaphors, rather than being isolated figures of speech, are conceptual in nature. By linking abstract ideas to relatively more concrete and easier-to-understand concepts, metaphors are proposed to form the foundation for much human thought. Consistent with this idea, studies are increasingly finding that many concepts are grounded in metaphorical representations. For example, Meier, Hauser, Robinson, Friesen, and Schjeldahl (2007) found that people were faster to categorize God-related concepts when they were presented near the top of a

computer screen compared to the bottom of screen, suggesting that the concept of God may be represented in terms of physical verticality (i.e., God is *up* in heaven). This process of altering abstract perceptions and behaviors through the activation of metaphorically linked concrete sensorimotor experiences is referred to as metaphoric transfer (for a review, see Landau, Meier, & Keefer, 2010).

These previous studies rely on what Lakoff and Johnson (1999) refer to as “primary metaphors,” metaphors that rely on sensorimotor experiences such as looking up or seeing something bright. Lakoff and Johnson argue that the learning of primary metaphors is automatic, unconscious, and inevitable. Complex metaphors, by comparison, are built from the combination of primary metaphors and other forms of knowledge, such as folk theories or cultural models. Complex metaphors may not be as concrete as primary metaphors, but represent concepts that are relatively easier to understand than the completely abstract constructs to which they are linked. Lakoff and Johnson (1999; see also Lakoff, 1996) offered the true self as an example of a complex metaphor that is the combination of an image (i.e., a core-like entity inside an external casing) and the prevalent folk theory of “Essences” (i.e., the idea that each person has an inherent something that makes him or her different from each other person). The metaphors of discovery and creation are examples of complex metaphors because they are not directly rooted in sensorimotor experiences and are likely shaped by cultural beliefs and folk theories about the self. Thus, although discovery and creation are relatively abstract when compared to other metaphors (such as brightness and spatial location), it is still relatively easy to imagine, for example, an explorer discovering something that was already there or an inventor creating something that never previously existed.

Importantly, metaphoric transfer has also been observed for complex metaphors. In a particularly relevant example of this phenomenon, Landau and colleagues (2011) demonstrated that exposure to an enlarging (relative to constricting) core-like entity subsequently increased feelings of self-actualization and reduced behavioral conformity. These results are consistent with the complex metaphor that links authentic self-expressions to the expansion of the integral core-like entity that we think of as the true self.

The above research suggests that metaphors have powerful psychological consequences and lay a foundation for our prediction that

endorsing self-discovery or self-creation metaphors may influence perceptions and operations of the true self. Yet, while existing metaphor research has revealed metaphoric-transfer effects, no research has explored the psychological consequences of individual differences in the endorsement of different metaphors. This is somewhat surprising given that Lakoff (1996) suggested that some abstract concepts are conceptualized by a variety of different metaphors, and that the evaluation of such concepts depends on which of those alternative metaphors is applied. For example, a concept like morality can be metaphorically represented in terms of physical strength or physical nurturance (Lakoff, 1996), and the extent to which people use either of these metaphors can influence their beliefs about the nature of society. Similarly, Landau and colleagues (2010) called for future research on “the downstream consequences of using different metaphors for thought, feeling, and behavior” (p.14).

Drawing from this analysis, we propose that the extent to which people endorse self-creation or self-discovery metaphors will, in turn, influence the extent to which they believe in the true self as “real” and its relationship to meaning in life. The present research is thus positioned to yield new insights into the nature of the true self and establish the potential utility of introducing an individual differences approach to the empirical study of metaphoric thought.

### Overview of Studies

To uncover the potential implications of using self-discovery and self-creation metaphors, we conducted three studies that measured individual differences in metaphor endorsement (we refer to these variables simply as “discovery” and “creation” throughout the results sections), belief in the true self, and meaning in life judgments (Studies 2–3).

We had four specific hypotheses concerning the discovery metaphor: (1) because discovery is more consistent with the essentialist worldview that predominates Western culture, people will be more likely to endorse a discovery metaphor than a creation metaphor; (2) discovery endorsement will evidence a positive relationship with people’s meaning in life judgments because of its existentially “comforting” implications; (3) discovery endorsement will positively predict belief in the true self; and (4) discovery endorsement will positively predict the use of the true self as a source of meaning in life. By comparison, because it lacks any validating implications for the

existence of the true self, we expected endorsement of the creation metaphor to evidence weaker (or even negative) relationships with belief in the true self, meaning in life, and the propensity to use true self-knowledge as a source of meaning.

Finally, we also explored potential interactions between the endorsement of discovery and creation metaphors. There is no specific reason to believe that the endorsement of discovery and creation metaphors is mutually exclusive. Indeed, people may endorse both metaphors (i.e., the self is both discovered and created) or endorse neither (i.e., the self is unimportant; everyone has the same true self). As such, it is conceivable that the endorsement of these metaphors may interact with each other such that the influence of one metaphor depends on the level of endorsement of the other. We had no specific hypotheses about this possibility; however, it was important to examine the possibility that the influence of either metaphor depended on the extent to which the other was endorsed. Doing so offered a more nuanced approach to understanding the ways that endorsements of these metaphors shape the understanding and operation of the true self in people's lives.

## STUDY 1

Study 1 assessed the hypotheses that people will be more likely to endorse a discovery metaphor than a creation metaphor and that discovery endorsement would enhance belief in the true self. The extent to which people endorsed a creation metaphor was expected to evidence a weaker (or even negative) relationship with belief in the true self. We also tested the possibility that the two metaphors might interact in their influence on belief in the true self.

### Method

Three hundred eleven undergraduates (195 females, 105 males, 11 not reporting gender) enrolled in a social psychology course completed the survey.<sup>1</sup> Ages ranged from 17 to 25 ( $M = 19.81$ ,  $SD = 1.26$ ). Represented

1. Because of the notably higher percentage of females in all studies, we tested for mean differences between the genders on all variables relevant to true self and metaphor, as well as meaning in life. The only observed difference was that women ( $M = 5.36$ ,  $SD = 1.32$ ) reported marginally lower liking of their true selves than men ( $M = 5.80$ ,  $SD = .80$ ;  $t(168) = 1.75$ ,  $p = .08$ ) in Study 3. Because this was the

ethnicities included 91% European American, 5% African American, 2% Hispanic American, 1% Asian American, and 1% other. Participants responded to three items: “the true self is real,” “the true self is something that people discover about themselves,” and “the true self is something that people must create for themselves.” For presentational ease, we refer to these variables as “belief in the true self,” “discovery,” and “creation” throughout the results for each study and in all tables and figures. Responses were made on a 6-point scale with anchors *strongly disagree* and *strongly agree*.

### Results and Brief Discussion

A *t* test,  $t(310) = 10.39$ ,  $p < .001$ , revealed that participants were indeed more likely to agree that the true self is discovered ( $M = 4.81$ ,  $SD = 1.51$ ) than created ( $M = 3.62$ ,  $SD = 1.62$ ). Discovery and creation were positively correlated ( $r = .17$ ,  $p < .05$ ), suggesting that they are not mutually exclusive.

A hierarchical regression was computed to assess the potential influence of metaphor endorsement on belief in the true self. The main effects of discovery and creation were entered in the first step, and their interaction was entered in the second step (variables were standardized prior to the creation of the interaction term). The results revealed significant (and opposite) main effects for discovery ( $\beta = .67$ ,  $p < .001$ ) and creation ( $\beta = -.14$ ,  $p < .05$ ). However, the interaction between discovery and creation was not significant ( $\beta = -.04$ ,  $p > .10$ ).

These results provide initial support for the hypotheses that people are more likely to endorse a discovery metaphor than a creation metaphor and that the discovery metaphor positively predicts belief in the true self. By contrast, creation was negatively associated with belief in the true self. The two metaphors did not interact, suggesting that each has an independent relationship with belief in the true self.

While both metaphors evidenced significant (and opposing) relationships with belief in the true self, the magnitude of the relationship was much stronger for discovery than creation. Supplementary  $R^2$  change analyses revealed that discovery accounted for 43% of the variance in belief in the true self, whereas creation only accounted for

only observed gender difference and true self liking was used only as a covariate, gender is not discussed throughout the remainder of the article.

1% (the interaction accounted for less than 1%). This suggests that discovery endorsement is much more consequential than creation endorsement to belief in the true self.

## STUDY 2

In Study 2, we attempted to replicate the findings of Study 1 and to extend them by also investigating the potential influence of each metaphor on the relationship between true self-knowledge and meaning. To meet these aims, participants completed measures of metaphor endorsement, true self-knowledge, and meaning in life, as well as measures of mood (to serve as covariates) and belief in the true self. It was predicted that the extent to which participants endorsed a discovery metaphor would moderate the relationship between true self-knowledge and meaning in life. Specifically, we expected that participants with stronger discovery endorsement would use their true self-knowledge as a source of meaning in life, whereas this relationship would be attenuated for participants with weaker self-discovery endorsement. By comparison, we predicted that creation endorsement would either be unrelated to the use of the true self as a source of meaning or that greater endorsement would attenuate its use as a meaning source relative to weaker endorsement. We also explored the possibility that the influence of discovery and creation endorsement might depend on people's relative endorsement of the metaphors by testing the potential interaction between discovery and creation as well as the potential three-way interaction between discovery, creation, and true self-knowledge.<sup>2</sup>

2. Studies 2 and 3 also attempted to manipulate endorsement of discovery and creation via a writing task that asked participants to write about how they either discovered or created their true self (details of the manipulation and analyses are available upon request). However, although Study 2 revealed a main effect of condition on meaning in life ( $\beta = .19, p < .05$ ), with participants in the discovery condition reporting greater meaning in life than their counterparts in the creation condition, this effect did not replicate in Study 3, and in neither study did metaphor condition interact with true self-knowledge to predict meaning. This may be because, as suggested by responses to manipulation check items, identification with metaphors for identity formation is difficult to manipulate and/or because the manipulations were not sufficiently strong to do so. But in either case, these manipulations did not compromise the approach of measuring individual differences and thus examining the primary hypotheses of interest.

## Method

### *Materials and Procedure*

A total of 75 participants (17 males, 58 females) were recruited from introductory psychology courses to complete the study for partial course credit. The age of the participants ranged from 18 to 27 ( $M = 18.95$ ,  $SD = 1.50$ ), and the majority of participants were White (76% White, 12% African American, 3% Hispanic, 7% Asian American, 2% other).

*True self-knowledge.* Following the procedures of Schlegel et al. (2011), we used the subjective ease with which participants were able to describe their own true selves as a measure of true self-knowledge. Participants were instructed that various random topics would appear on the screen and to write down words that they believed best described each topic. After each topic was presented, they were given information related to the average number of descriptors people had given for that topic in previous research (e.g., “8”) and instructed, “Take your time and please try to list [8] descriptors that best describe the [topic].” Participants first completed two filler topics (i.e., breakfast and Columbia, Missouri). The purpose of the filler topics was simply to disguise the purpose of the study.

For the third topic, participants were asked to write down eight words that best described their true selves. Specifically, participants were instructed, “Please list the words that you would use to describe who you really are. Specifically, we’d like you to think about the characteristics, roles or attributes that define who you really are—even if those characteristics are different than how you sometimes act in your daily life. Most people list about 8 words that describe who they really are.” The prompt was based on directions used in previous studies (e.g., Bargh, McKenna, & Fitzsimmons, 2002; Schlegel et al., 2009). After each topic, participants rated two items that assessed how easy/difficult it was to think of words that describe the particular topic on a 9-point scale with the anchors *extremely difficult* and *extremely easy*. The average of the two ease items served as a measure of true self-knowledge ( $M = 7.15$ ,  $SD = 1.88$ ,  $\alpha = .97$ ).

*Mood, meaning in life, metaphor endorsement, and true self-validity.* Participants then completed a writing task (see footnote 2) and a measure of mood. Participants rated six positive (e.g., “happy,” “joy,” “pleased”) and five negative (e.g., “blue,” “depressed,” “anxious”) mood adjectives on a 1 (*not at all*) to 7 (*extremely much*) scale to provide measures of positive affect ( $M = 4.32$ ,  $SD = 1.20$ ,  $\alpha = .87$ ) and negative affect

( $M = 3.37$ ,  $SD = 1.11$ ,  $\alpha = .72$ ). Participants were instructed to rate how much they were experiencing the particular emotion “right now.” These items were included as covariates because previous research suggests that mood can influence meaning in life ratings (King, Hicks, Krull, & Baker, 2006).

Next, participants completed the five-item Presence of Meaning scale from the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006). All items were rated on a 1 to 7 scale with the anchors *strongly disagree* and *strongly agree*. Sample items from the MLQ include “I understand my life’s meaning” and “I have a good sense of what makes my life meaningful.” Responses to the five items were averages to create a composite ( $M = 4.83$ ,  $SD = 1.40$ ,  $\alpha = .91$ ).

At the end of the study, participants indicated their agreement on a 6-point scale with the statements “The true self is something that people discover about themselves” and “The true self is something that people create for themselves” as measures of their own discovery ( $M = 4.96$ ,  $SD = 1.19$ ) and creation endorsement ( $M = 4.19$ ,  $SD = 1.50$ ). Finally, several items (also on a 6-point scale) were used to assess participants’ belief in the true self, such as “The true self is real,” “It is important to me to have a clear idea of who my true self is,” and “My true self is an important part of who I am” ( $M = 5.11$ ,  $SD = .79$ ,  $\alpha = .81$ ).

## Results and Brief Discussion

### *Preliminary Analyses*

Data screening revealed three participants who were multivariate outliers (i.e.,  $z$  residuals  $> 2.5$ ) in the primary regression analyses. These participants were removed from all of the analyses reported below. Bivariate correlations between all study variables are presented in Table 1.

### *Primary Analyses*

*Belief in the true self.* A hierarchical regression parallel to the one conducted for Study 1 found that both discovery ( $\beta = .40$ ,  $p < .001$ ) and creation ( $\beta = .21$ ,  $p = .05$ ) positively predicted belief in the true self. The two metaphors also evidenced a marginally significant interaction ( $\beta = -.21$ ,  $p = .06$ ). The nature of this interaction revealed that people who were low in both discovery and creation endorsement reported lower belief in the true self than all the other participants. Participants high in discovery, high in creation, or high in both reported similar belief in the true self to each other.

**Table 1**  
**Studies 2–3: Correlations Among Variables**

	1	2	3	4	5	6
1. Discovery	—	.02	.41*	.09	.25*	—
2. Creation	-.07	—	.22 <sup>†</sup>	.06	-.04	—
3. Belief in the true self	.43*	.20*	—	.39*	.21 <sup>†</sup>	—
4. True self-knowledge	.06	.06	.29*	—	.11	—
5. Meaning in life	.20*	.17*	.44*	.31*	—	—
6. True self-liking	.21*	.20*	.38*	.51*	.34*	—

*Note.* Correlations for Study 2 are presented above the diagonal and Study 3 below the diagonal.

<sup>†</sup> $p < .10$ . \* $p < .05$ .

Supplementary  $R^2$  change analyses were conducted to compare the magnitude of the relationships between metaphor endorsement and belief in the true self. Although the direction of the relationship between creation and belief in the true self differed from Study 1, the comparative variance explained was generally consistent across studies. Here discovery accounted for much more variance in belief in the true self (16%) than creation endorsement (5%; the interaction accounted for 4%). While the percentage of variance accounted for by discovery is notably lower than that observed in Study 1, this pattern is consistent in its suggestion that discovery is the more consequential metaphor.

*Meaning in life.* A hierarchical regression analysis was conducted to examine the potential effects of discovery, creation, and true self-knowledge on meaning in life. The covariates were entered in the first step (i.e., positive affect, negative affect, age); the main effects of creation, discovery, and true self-knowledge were entered in the second step; the three two-way interactions were entered in the third step; and the three-way interaction between discovery, creation, and self-knowledge was entered in the final step.

In the first step, positive affect was the only covariate that predicted meaning in life (see Table 2). The second step revealed a significant positive relationship between discovery and meaning in life that suggested that the more participants endorsed self-discovery,

**Table 2**  
Studies 2–3: Summary of Results

	Study 2	Study 3
Step One		
Positive affect	.63*	.43*
Negative affect	-.12	-.16*
Age	.10	.04
True self-liking	—	.14*
Step Two		
Discovery	.21*	.18*
Creation	-.04	.11 <sup>†</sup>
True self-knowledge	.04	.17*
Step Three		
Discovery × True Self-Knowledge	.24*	.15*
Creation × True Self-Knowledge	.03	.04
Discovery × Creation	.10	-.08
Step Four		
Discovery × Creation × True Self-Knowledge	-.18	-.05

*Note.* All effects reported are standardized betas predicting meaning in life. Study 1 did not include true self-liking.

<sup>†</sup> $p < .10$ . \* $p < .05$ .

the more they believed their life had meaning. Neither true self-knowledge nor creation was related to meaning in life. The third step revealed a significant interaction between true self-knowledge and discovery (see Figure 1). Follow-up analyses using simple slope analysis (Aiken & West, 1991) revealed that true self-knowledge was a significant positive predictor of meaning in life for those high in discovery ( $\beta = .27, p < .05$ ), but was a negative predictor of meaning for those low in discovery ( $\beta = -.30, p = .07$ ). The two-way interaction between discovery and creation was not significant, nor was the three-way interaction between discovery, creation, and true self-knowledge.

Study 2 provided converging evidence for the importance of the discovery metaphor to belief in the true self. Specifically, discovery positively predicted belief in the true self and moderated the relationship between true self-knowledge and meaning in life. Participants who reported relatively strong discovery endorsement used their true self-knowledge as a source of meaning, whereas participants who

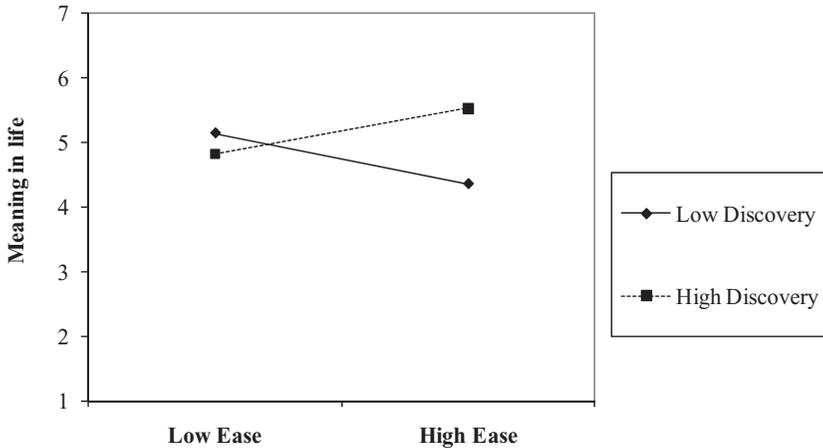


Figure 1

**Study 2: Interaction between true self-knowledge and discovery predicting meaning in life.**

reported relatively weak discovery endorsement did not. By comparison, creation endorsement did not moderate the relationship between true self-knowledge and meaning in life. Taken together with the results of Study 1, this pattern of results suggests that it may be the presence or lack of discovery beliefs that lends the true self its ability to make meaning.

### STUDY 3

The goal of Study 3 was to use the same approach from Study 2 to examine the role of the discovery and creation metaphors in an adult sample. Importantly, the relationship between true self-knowledge and meaning in life has rarely, if ever, been assessed in nonstudent samples. The use of older adults in true self research is a critical issue, as examining only college students in these studies may be capitalizing on the unique nature of the sample. Specifically, college students are likely to be in a critical time of transition and identity development (e.g., Erikson, 1968; Kegan, 1982; Pascarella & Terenzini, 1991).

It may be useful to briefly consider three possibilities for how the observed patterns may differ for adults (compared to college

students). First, it is possible that finding and knowing one's true self becomes less important with age after people settle into more stable careers and lives. Perhaps older adults will be less invested in the idea of a true self and thus will be unlikely to use the true self as a source of meaning in life, regardless of metaphor use. This possibility would predict that true self-knowledge is unrelated to meaning in life across the entire sample, regardless of participants' discovery and creation endorsement. A second possibility is that older adults are invested in their true selves but are less wed to the discovery metaphor. It could be that older adults have had more opportunities to recognize the ways that experiences have shaped who they are. Thus, it is possible that older adults use the true self as a source of meaning, regardless of metaphor use. This possibility would predict a simple main effect of true self-knowledge unmoderated by discovery or creation. A third alternative is that the patterns observed in the student sample will generalize to the adult sample and participants with stronger discovery endorsement will use their true self-knowledge as a source of meaning in life, whereas those with weaker discovery endorsement will not.

## Method

### *Participants*

University of Missouri employees were recruited for participation in return for a chance to win a raffle for a \$100 gift card to a local business. An invitation for participation was sent to all staff members as part of a weekly campus newsletter. Interested participants were sent a link to an online survey and asked to complete it at their own pace. A total of 173 participants (25 men, 148 women) completed the survey. The age of the participants ranged from 21 to 64 ( $M = 40.66$ ,  $SD = 11.77$ ), and the majority of participants were White (92% White, 2% African American, 1% Hispanic, 1% Asian American, 4% Other).

### *Materials and Procedure*

The same methods and procedures from Study 2 were utilized in Study 3, with a few exceptions. First, the filler topics used in Study 2 were not included. It was hoped that this would help increase the salience of the ease of the task to the participants, as this information may have been diluted in Study 2. Also, we included a one-item measure of how much participants liked their true selves. This allowed us to control for how

**Table 3**  
Study 3: Descriptive Statistics and Reliabilities for All Measures

	<i>M</i>	<i>SD</i>	$\alpha$	Scale Range
Discovery	5.44	1.36	—	1–7
Creation	4.48	1.69	—	1–7
Belief in the true self	5.50	1.12	.88	1–7
True self-knowledge	6.37	2.23	.91	1–9
Positive affect	4.83	1.13	.90	1–7
Negative affect	2.29	1.16	.88	1–7
True self-liking	7.25	1.56	—	1–9
Meaning	5.05	1.27	.91	1–7

*Note.* For measures with no alpha reported, the measure was a single item.

much participants liked their true selves (which could be correlated with true self-knowledge). Finally, participants completed the study online rather than coming to the laboratory. Descriptive statistics and alphas for all of the measures in Study 3 can be found in Table 3.

## Results

### *Preliminary Analyses*

Data screening revealed three participants who were multivariate outliers (i.e.,  $z$ -residuals  $> 2.5$ ) in the primary regression analyses. These participants were removed from all of the analyses reported below. Bivariate correlations between all study variables are presented in Table 3.

### *Primary Analyses*

*Belief in the true self.* A multiple regression parallel to the one conducted for Studies 1 and 2 found that both discovery ( $\beta = .44$ ,  $p < .001$ ) and creation ( $\beta = .23$ ,  $p < .01$ ) positively predicted belief in the true self. There was also a significant two-way interaction between the two beliefs ( $\beta = -.39$ ,  $p < .001$ ). The pattern of this interaction was nearly identical to the interaction in Study 2 and suggested that people who were low in both discovery and creation reported lower belief in the true self than all the other participants.

We again conducted supplementary  $R^2$  change analyses to compare the magnitude of these relationships. Consistent with

Studies 1 and 2, these analyses revealed that discovery accounted for more than three times as much variance (18%) in belief in the true self than did creation (5%; the interaction accounted for 14%).

*Meaning in life.* A set of hierarchical regressions nearly identical to those computed in Study 2 were conducted. The only difference was that we included the true self-liking variable with the other covariates in the first step.

The first step of the regression revealed significant effects of positive and negative affect as well as true self-liking. The second step revealed positive main effects of true self-knowledge and discovery as well as a marginal effect of creation (see Table 2). This replicates the findings from Study 2 that discovery can be directly beneficial to meaning in life. Also replicating Study 2, the third step revealed a significant interaction between discovery and true self-knowledge. The nature of the interaction was nearly identical to that found in Study 2 (see Figure 1) and suggested that those participants with greater discovery endorsement used their true self-knowledge as a source of meaning in life ( $\beta = .21, p < .001$ ), whereas their counterparts with lower self-discovery endorsement did not ( $\beta = .01, p > .90$ ).

Finally, consistent with Study 2, the two-way interaction between discovery and creation was not significant, nor was the three-way interaction between discovery, creation, and self-knowledge.

Study 3 provided converging conceptual evidence that the use of the true self as a source of meaning is at least partly dependent on the presence of the discovery metaphor. Specifically, the relative strength of discovery endorsement influenced the use of the true self in meaning judgments. Whereas there was a relationship between true self-knowledge and meaning for participants with stronger discovery endorsement, this relationship was attenuated for those with weaker discovery endorsement. Also consistent with Study 2, endorsement of the creation metaphor did not influence the use of the true self as a meaning source and explained a relatively small proportion of the variance in belief of the true self (compared to discovery).

## GENERAL DISCUSSION

Recent empirical research has begun to shed light on the variety of ways in which the true self enriches well-being (e.g., Harter et al.,

1996; Kernis & Goldman, 2006; Sheldon et al., 1997). Of particular interest to the current work, one of the ways the true self appears to enrich well-being is by serving a meaning-making function (Debats et al., 1995; McGregor & Little, 1998; Schlegel et al., 2009). However, research had yet to examine how different ways of conceptualizing the true self might alter these relationships. The current research begins to address this issue by examining one factor (metaphor endorsement) that influences when the true self is and is not related to meaning. By identifying such moderating influences, we are better able to understand the conditions that determine when the true self is perceived to be and used as a valid source of meaning.

Three studies were conducted to examine how the endorsement of two specific complex metaphors, discovery and creation (e.g., Waterman, 1984), might moderate the relationship between true self-knowledge and meaning in life. These two specific metaphors were identified as potentially important because each has different implications for one's understanding of the self. Whereas describing the self as something that is discovered implies that there is something inherently true about the self to be exposed, a creation metaphor suggests that the self is predicated on experiences and choices and that there is no underlying self waiting to be found. If the true self is not thought of as something that is inherently "real," it may be less likely to imbue meaning in people's lives. Based on this reasoning, it was hypothesized that belief in the true self and use of the true self as a meaning source may, in part, rely on the endorsement of the discovery metaphor.

### *Discovery and Creation*

The results provided converging conceptual evidence for these claims. In all three studies, self-reported discovery endorsement was positively correlated with belief in the true self (i.e., the belief that the true self is "real" and important). Further, in both Studies 2 and 3 self-reported discovery moderated the relationship between true self-knowledge and meaning in life. The nature of the interactions suggested that participants who reported relatively weak discovery endorsement did not use their true self-knowledge to inform their meaning judgments, whereas those with relatively stronger discovery endorsement did. Interestingly, in both studies, discovery endorsement was also directly related to meaning in life, suggesting that the

discovery metaphor may have direct existential benefits independent of true self-knowledge.

Conversely, endorsement of the creation metaphor did not manifest parallel relationships, showing overall a much weaker profile in its contribution to belief in the true self, meaning in life, and the capacity for true self-knowledge to facilitate meaning in life. Creation endorsement was negatively related to the belief in the true self in one of the three studies (Study 1) and even evidenced a positive relationship (albeit much weaker than discovery) with belief in the true self in Studies 2 and 3. Creation also failed to interact with true self-knowledge in any way in Studies 2 and 3. Although Studies 2 and 3 suggested that creation can bolster belief in the true self for people with relatively weak discovery endorsement, these results should be interpreted with some caution. These two studies included a number of measures that were not included in Study 1 (which suggested that discovery and creation did not interact to predict belief in the true self) that may have influenced responses to the true self belief measure (e.g., a true self-description task that may have inadvertently suggested the true self is real). The relative weak influence of the creation metaphor is further evidenced by the lack of interaction between creation and true self-knowledge (and between creation and discovery) in predicting meaning in life. The results also consistently revealed that discovery accounted for over three times as much variance in belief in the true self as creation.

Thus, the overall pattern of results suggests that discovery endorsement is the more instrumental factor, rather than creation, in shaping belief in the true self as well as whether people are able to use the true self to create meaning. In sum, the discovery metaphor appears to have a positive influence on people's search for meaning, whereas the creation metaphor is, at best, inconsequential to that search.<sup>3</sup>

#### *Broader Implications of Discovery and Creation*

Although the current studies focused on how the use of discovery and creation metaphors influences the relationship between the true

3. Exploratory cluster analyses were also conducted that suggested that those low in discovery beliefs (regardless of their creation beliefs) were more prone to adverse psychological outcomes (lower meaning in life and positive affect) as well as reduced endorsement of belief in the true self items. Although further analyses could be productive, this initially provides further support to the notion that it is the presence of lack of discovery that is driving the observed effects.

self and meaning, their use may have consequences in other domains as well. For example, discovery and creation metaphors may play an important role in people's life stories (McLean, Pasupathi, & Pals, 2007; Pasupathi, 2001). Much like themes of redemption (McAdams, 2006), discovery themes may be part of the cultural "expectations of what makes a healthy narrative and a healthy self" (McLean et al., 2007, p. 262). Narrative approaches could also be useful in examining the subjective experience of discovery. For example, the availability of prior stories that highlight a self characteristic may play an important role in creating feelings of self-discovery. When a person's ideas about whom he or she is change, successful searches of memory for stories that suggest one has "always been that way" may help solidify those changes, foster a sense of self-continuity, and help a person better integrate these changes into the self-concept.

The endorsement of metaphors may also inform other beliefs about the nature of the self. For example, metaphor endorsement may influence people's implicit self theories about whether or not the self can change (e.g., Dweck, 1999). A discovery metaphor implies that the self is relatively difficult to change (entity theory), whereas a creation metaphor implies that it is more malleable (incremental theory). While the current work suggests an existential benefit to endorsing discovery metaphors, work on implicit theories suggests that possessing an entity theory of personality can be psychologically damaging (particularly in response to negative feedback; Erdley, Cain, Loomis, Dumas-Hines, & Dweck, 1997; Goetz & Dweck, 1980). A particularly exciting direction for future research may be to consider how the endorsement of discovery metaphors about the true self and entity theories of personality yield different consequences for psychological functioning.

#### *An Individual Differences Approach to Metaphoric Cognition*

Adopting an individual differences approach to studying varying endorsement of metaphors allowed the present research to provide unique insights into the operations of the true self. This approach also yields an exciting direction for future research focused on metaphorical thought. Existing research on the psychological functions and implications of metaphors have primarily focused on the consequences of situationally activating specific, and generally primary, metaphors. The present research departs from this approach by

assessing individual differences in the endorsement of divergent and complex metaphors related to the same concept (i.e., the true self). Future research might build from these findings and utilize an individual differences approach to better understand the psychological significance of metaphoric thought and the stability of how people use metaphor to understand their lives.

### *Limitations and Future Directions*

Despite the insights offered by these studies, there are some limitations. Although Study 3 was among the first to extend research on the true self to a nonstudent sample, both samples were primarily White and female. The samples were also quite homogeneous with respect to cultural background. It will be important to extend these findings to other cultures in future research. This is of particular concern considering that the true self may be a primarily Western idea (though essential self metaphors seem to be more universal; see Lakoff & Johnson, 1999). It is also unclear whether other cultures use the same metaphors to describe identity development.

The current research also only assessed metaphor endorsement at one point in time and cannot speak to the stability of individual differences in metaphor endorsement. Metaphor endorsement may fluctuate in response to a variety of situational factors and cues. In this light, it is worth considering that the metaphor items were worded in terms of “people” rather than “I.” Perhaps with this implied orientation to others, participants were more likely to focus on dispositional contributions to self-discovery rather than the influence of situational factors affecting self-creation. Future research should certainly examine the stability of individual differences in metaphor endorsement as well as other ways of operationalizing metaphors. In a related vein, although our measure of true self-knowledge has been used in other research (Schlegel et al., 2011), it is possible that the measure is prone to the influence of factors other than self-knowledge. For example, because we ask participants to disclose the words that they believe describe themselves, the ease of the task may reflect both their self-knowledge and their comfort with this type of self-disclosure. Although Schlegel et al. did not find any indication that comfort with disclosure influenced the relationship between true self-knowledge and meaning, this remains an important issue to which future research should attend.

Finally, although the studies provide converging evidence that the lack of discovery attenuates the relationship between the true self and meaning, the findings were less clear with regard to explicit investment in the discovery metaphor. That is, although discovery seemed to be beneficial both to the use of the true self to create meaning and to meaning more generally, it would be interesting to know whether reliance on these metaphors actively affects the decisions that people make and the behaviors in which they engage. Might, for example, people who endorse discovery beliefs be more explicitly motivated to try to discover things about themselves? By stimulating such questions, the present findings offer a generative foundation for future research.

### CONCLUSIONS

The current studies contribute to at least two recent growing areas of the psychological literature. First, they provide converging evidence for the influence of metaphors on the ways we think about and interact with the world. In particular, the current research suggests that metaphors not only facilitate our understanding of abstract concepts but can also influence the conclusions we make about those concepts. To the best of our knowledge, these are the first studies to examine individual differences in the endorsement of different metaphors (as opposed to priming metaphors) and suggest that such individual differences in metaphor endorsement may have important consequences for a variety of other processes. Second, the current studies offer some clues to understanding why the true self is able to confer meaning. The idea that the true self is something discovered (and is thus something inherently real) about each person seems to foster its perceived validity as a guide to how we are to meaningfully live our lives. It is remarkable to think that the use of metaphors can have such a profound effect on the way we approach a question as fundamental as “who am I?”

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