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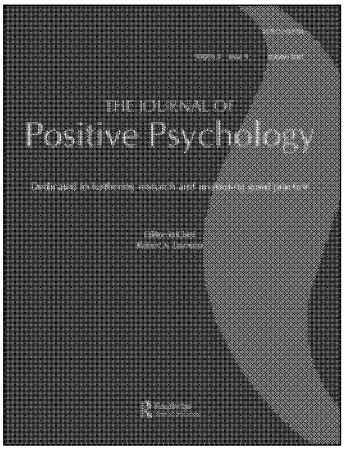

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Positive mood and social relatedness as information about meaning in life

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Positive mood and social relatedness as information about meaning in life

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Meaning in life is widely considered a cornerstone of human functioning, but relatively little is known about the factors that influence judgments of meaning in life. Four studies examined positive affect (PA) and social relatedness as sources of information for meaning in life judgments. Study 1 ($N = 150$) showed that relatedness need satisfaction (RNS) and PA each shared strong independent links to meaning in life. In Study 2 ($N = 63$), loneliness moderated the effects of a positive mood induction on meaning in life ratings. In Study 3 ($N = 65$), priming positive social relationships reduced the contribution of PA to subsequent judgments of meaning in life. In Study 4 ($N = 95$), relationship primes decreased reliance on PA and increased reliance on RNS compared to dessert primes. Results are discussed in terms of the value of integrating judgment processes in studies of meaning in life.

Keywords: meaning in life; positive affect; relatedness need satisfaction

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Introduction

The experience of meaning in life is such a fundamental aspect of human functioning (Frankl, 1963/1984; Steger, 2009; Wong & Fry, 1998), it is easy to lose track of the fact that much of what we know about meaning in life comes from self-report ratings. For example, questionnaire measures of meaning in life ask individuals to evaluate themselves in response to items such as, 'My personal existence is very purposeful and meaningful' (from the Purpose in Life test, PIL; Crumbaugh & Maholick, 1964). As such, meaning in life, like other aspects of well-being, is essentially a subjective judgment (e.g., Schimmack & Oishi, 2005; Schwarz & Strack, 1990). Like these other judgments, meaning in life judgments may depend on various sources of chronically and temporarily accessible information (Schimmack & Oishi, 2005).

Considering meaning in life as the product of a judgment process opens the door to examining the variables that serve as informational input for this judgment and to addressing the questions of when and how these variables feed into judgments of meaning in life. When participants rate their lives as meaningful (or not), what variables account for their judgments? The present studies take up this question, focusing on positive affect (PA) and social relatedness as two sources of information for meaning in life judgments. Studies 1 and 2 examined the contributions of PA and social connections to judgments of meaning in life. Studies 3 and 4 examined how manipulating the availability of information influences the use of that information in judgments of meaning in life. Before describing these studies, we briefly consider the relationships of PA and social connections to meaning in life and offer a tentative model of the factors that contribute to meaning in life judgments.

PA, social relatedness, and meaning in life

The strong links between PA and social relatedness and meaning in life have been addressed theoretically and demonstrated empirically. On a theoretical level, both PA and social relationships have been recognized as playing important roles in the experience of meaning in life. Although recently PA and meaning in life have often been separated conceptually (as distinct components of hedonic and eudaimonic well-being respectively, e.g., Ryff & Singer, 2008; c.f., Biswas-Diener, Kashdan, & King, 2009; Kashdan, Biswas-Diener, & King, 2008), the potential role of positive feelings in the experience of meaning in life has long been recognized (Aristotle, 350 BCE/1998 CE; James, 1900; Klinger, 1977; Yalom, 1980). Similarly, numerous theories suggest that social connections provide a primary source of meaning in life (e.g., Baumeister & Leary, 1995; Mikulincer, Florian, & Hirschberger, 2005; Ryan & Deci, 2001). Research has shown PA (Hicks & King, 2007, 2008; King, Hicks, Krull, & Del Gaiso, 2006) and social bonds (Krause, 2007; Steger, Kashdan, Sullivan, & Lorentz, 2008) are

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strongly correlated with self-reported meaning in life. Moreover, experimentally induced PA increases meaning in life (Hicks & King, 2008; King et al., 2006). Similarly, experimentally manipulated social exclusion decreases meaning in life (Stillman, Baumeister, Lambert, Crescioni, DeWall, & Fincham, 2009; Twenge, Cantanese, & Baumeister, 2003; Williams, 2007).

Finally, both pleasant affect and social relationships appear in naïve theories of meaning in life. When asked to list what makes their lives meaningful, people often mention sources related to pleasure and happiness (Ebersole, 1998) as well as social relationships (Ebersole, 1998; Wong, 1998). In a recent study (Lambert, Stillman, Fincham, Graham, Hicks, & Baumeister, 2009), participants were asked to rank 12 different sources of meaning (e.g., 'friends,' 'religious faith,' 'achievements,' 'self-worth,' etc.) by their relevance to the experience of meaning in life. The highest ranked source was 'family' and the second highest ranked source was 'happiness.'

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The meaning in life judgment process

Thus, both PA and social relatedness appear to be viable sources of information for meaning in life judgments. The question remains, how and when do these sources of information matter? We propose that at least three factors play a role in the judgment of life's meaning namely, the perceived relevance of various sources of information, their accessibility, and the valence of the answer they provide (Hicks & King, in preparation). We consider each of these factors in turn.

First, the relevance of a particular source of information might play a role in whether that source informs meaning in life ratings. When confronted with an item such as 'My life has a very clear goals and aims,' the information consulted should be that which an individual finds to be most immediately relevant to the judgment or information that is activated immediately in response to the question. Individuals may consult an array of possible indicators, ranging from current mood to longstanding beliefs and values.

Among these varied indicators, information that is cognitively accessible is likely to play a role in meaning in life judgments. For example, recent research has shown that enhancing the accessibility of aspects of the true self increases meaning in life ratings (Schlegel, Hicks, Arndt, & King, 2009). Thus, similar to previous research on judgments of life satisfaction (e.g., Schimmack & Oishi, 2005; Schwarz & Strack, 1990), meaning in life judgments are susceptible to relatively subtle manipulations of cognitive accessibility. In addition, chronically accessible sources of information about meaning in life have been shown to moderate the relationship of PA to meaning in life judgments. For example, religious commitment moderated the relationship of naturally occurring and induced PA to meaning in life (Hicks & King, 2008). PA predicted meaning in life for those low on religious commitment but did not predict meaning in life for those high on such commitment. Individuals high on religious commitment report high levels of meaning in life regardless of mood. These results suggest that chronically accessible sources of information about meaning in life may reduce the use of PA as information for meaning in life judgments.

Accessible information may not always inform meaning in life judgments, however. Meaning in life has been recognized as a central human motivation (Frankl, 1963/1984). This motivational aspect of meaning in life suggests that the sources of information that drive meaning in life judgments are those that are likely to offer a positive answer to life's biggest question. Thus, if accessible information about a source of meaning in life suggests that life is not meaningful, this information is unlikely to be used in judgments of meaning in life, a contention supported by research showing that when Christians were primed with words related to hell, religious commitment no longer predicted meaning in life (Hicks & King, 2008). Thus, it seems likely that meaning in life judgments should represent the information gleaned from relevant, accessible, and affirming sources of information.

In the present investigation, Studies 3 and 4 addressed the role of the accessibility of positive information about social relationships in the meaning in life judgment process. These studies specifically examined the effects of enhancing the accessibility of social relationships in the information (mood or social relatedness) used in evaluations of meaning in life. Prior to examining these processes, Studies 1 and 2 were conducted to lay the groundwork for these studies, by demonstrating the relevance of both PA and social relatedness to meaning in life judgments.

Overview and predictions for Study 1

The purpose of Study 1 was to establish the independent links between the two variables of interest (PA and social relatedness) and judgments of meaning in life. Participants completed questionnaire measures of PA, relatedness need satisfaction, and meaning in life. Mediational analyses examined whether social relatedness might explain the relationship between PA and meaning in life, and whether PA might explain the relationship between social relatedness and meaning in life.

Additionally, we examined whether social relatedness would moderate the relationship of PA and

meaning in life, in a manner similar to religious commitment. That is, we tested whether PA would predict meaning in life only for those low on relatedness need satisfaction. Such moderation would suggest that social connections serve as a chronically accessible source of information for meaning life judgments.

Study 1

Method

Participants

One hundred and fifty undergraduates (70% women) enrolled in a personality psychology course completed a packet of questionnaires for extra credit. Ages ranged from 18 to 27 years ($M = 20$, SD = 1.35).

Materials

Participants completed measures of positive mood, relatedness need satisfaction and meaning in life. As a measure of PA, participants rated 4 mood adjectives (joyful, happy, pleased, enjoyment/fun) in terms of their general tendency to experience these emotions. To measure relatedness need satisfaction, participants completed the 8-item Relatedness Need Satisfaction scale from the Basic Psychological Needs Scale (RNS; Gagné, 2003). Sample items include, 'I get along with people I come into contact with,' and 'People in my life care about me.' Finally, participants completed two measures of meaning in life, the presence of meaning subscale from the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006) and items from the PIL. The MLQ consists of presence of meaning and search for meaning subscales. Each subscale has shown convergent and discriminant validity, as well as high test-retest reliability (Steger et al., 2006; Steger & Kashdan, 2007). Sample items from presence subscale include 'I understand my life's meaning' and 'My life has no clear purpose' (reverse scored). In addition, participants rated 4 items adapted from the PIL (Crumbaugh & Maholick, 1964), including, 'In life, I have very clear goals and aims,' 'My personal existence is very purposeful and meaningful,' 'I have clear goals and a satisfying purpose in life,' and 'I regard my ability to find a meaning, purpose, or mission in life to be very great.' These items have been identified as tapping meaning in life, specifically, and not simply PA (McGregor & Little, 1998), and have been used in past research on meaning in life (Hicks & King, 2007, 2008; King et al., 2006). Items for all questionnaires were rated on a scale from 1 (very slightly or not at all) to 7 (very much). Participants completed the PA measure followed by the RNS measure. In order to reduce potential item order effects, participants completed a variety of unrelated personality questionnaires (approximately 50 items) before completing the meaning in life questionnaire.

Results and discussion

Descriptive statistics, reliabilities, and correlations among the measures are shown in Table 1. As expected, PA and RNS were related to both measures of meaning in life and these measures were related to each other. To simplify analyses, a composite meaning in life measure was created by averaging the PIL items and the MLQ presence scale. This composite was regressed on PA (alone) and RNS (alone) as well as both variables entered simultaneously (for the latter equation, Multiple $R^2 = 0.27$; $F(2, 147) = 26.21$, $p < 0.001$). Standardized beta weights for PA and RNS in these equations are shown in Table 1. Both variables were strongly related to meaning in life when entered into equations alone, and both remained significant predictors of meaning in life when entered into the equation simultaneously. Sobel's test for mediation of the relationship between RNS and meaning in life by PA was significant (Aroian version 3.14, $p < 0.001$). Likewise, the relationship between PA and meaning in life was significantly mediated by RNS (Aroian version 2.95, $p < 0.004$; per Baron & Kenny, 1986). Thus PA and RNS each share a robust

Table 1. Meaning in life, positive affect, and related need satisfaction, Study 1.

	PA	RNS	Purpose in life	Presence of meaning	Meaning in life composite
PA	0.92				
RNS	0.58	0.85			
PIL	0.47	0.51	0.89		
Presence	0.39	0.34	0.75	0.92	
Composite	0.46	0.51	0.93	0.94	0.85
Mean	5.13	5.70	4.97	4.48	4.72
SD	0.97	0.84	1.32	1.32	1.24
Multiple regressions					
Equation 1					0.46
β_{PA}					
Equation 2					0.45
β_{RNS}					
Equation 3					
$\beta_{PA.RNS}$					0.30
$\beta_{RNS.PA}$					0.28

Note: $N = 150$. PA = Positive Affect; RNS = Relatedness Need Satisfaction. Coefficients along the diagonal are Cronbach α's. All correlations are significant, $p < 0.01$. β_{PA} = standardized beta weight for PA predicting composite; β_{RNS} = standardized beta weight for RNS predicting composite. $\beta_{PA.RNS}$ and $\beta_{RNS.PA}$ = standardized beta weights for PA and RNS (respectively) when entered simultaneously into a third regression equation. All coefficients are significant $p < 0.002$.

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relationship with meaning in life, and each partially mediates the relationship of the other to meaning in life.

Interestingly, PA and RNS did not interact to predict meaning in life. When PA and RNS were centered and entered into a hierarchical regression equation (per Aiken & West, 1993) predicting meaning in life, the interaction term (their product) did not contribute significantly (R^2 *change* = 0.004, $p > 0.40$). Similar results obtained regressing each meaning in life measure separately on PA, RNS, and their interaction. Thus, in contrast to past research, self-reported social relatedness did not moderate the relationship between PA and meaning in life. This lack of moderation was not due to multicollinearity or lack of remaining variance to be explained (tolerance > 0.80 after entering the main effects). These null results suggest that social connections may not be chronically accessible or immediately activated when judging meaning in life. In order to further probe the independent link between social connections and meaning in life, Study 2 examined the role of another measure of social connections, loneliness, in judgments of meaning in life as a function of induced PA.

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Overview and predictions for Study 2

In this study, participants first completed a measure of loneliness. They were later brought into the laboratory where they experienced either a positive or neutral mood induction. Finally, they completed a measure of meaning in life. We predicted that loneliness would moderate the effects of mood induction condition on judgments of meaning in life. Specifically, we expected individuals high on loneliness to be most susceptible to the effects of the mood induction and those low on loneliness to report high levels of meaning in life regardless of mood condition, a finding that would strongly support the notion that social connections indeed share a strong relationship meaning in life, independent of PA.

Study 2

Method

Participants

Sixty-three (79% women) undergraduates at the University of Missouri participated in return for course credit. Ages ranged from 18 to 22 years ($M = 18.57$, SD = 0.74).

Materials and procedure

Participants completed a large questionnaire packet containing a variety of individual difference measures. Embedded in the questionnaire packet was the UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). The UCLA Loneliness Scale assesses subjective feelings of social isolation and has been shown to have excellent concurrent and discriminate validity. Sample items include 'How often do you feel you have nobody to talk to?' and 'How often do you feel you are unable to reach out and communicate with those around you?' The items were rated on a 1 (not at all) to 7 (all the time; $M = 2.73$, SD = 1.10; $\alpha = 0.96$).

Approximately 3 weeks later, participants came to the lab where they were escorted to a visually isolated computer. Participants were told that they would complete a few unrelated tasks for various researchers from different areas of psychology. They were first randomly assigned to read one of two vignettes. In the positive mood induction condition ($n = 30$), participants read about finding a lost child at a park, helping reunite the child with her parents, and being hailed as a hero (adapted fromTice, Bratlavsky, & Baumeister, 2001). In the neutral condition ($n = 33$), participants read about a student's plans for the day. After reading the vignettes, participants were asked to write for 3 minutes on the computer about their thoughts and feelings about what they had just read. After 3 minutes, participants were prompted by the computer to rate themselves on a number of adjectives (e.g., intuitive, a deep thinker, etc.). As a mood manipulation check, one adjective included the word 'happy.' Items were rated on a scale from 1 (not at all) to 6 (extremely).

Next, in an ostensibly unrelated task, participants were asked to rate their 'thoughts and feelings' about their lives. Participants then completed the PIL items used in Study 1 (Crumbaugh & Maholick, 1964; $M = 4.83$, SD = 0.75, $\alpha = 0.81$), as well as a number of filler questionnaires. Items were rated on a scale from 1 (not at all) to 7 (extremely).

Results and discussion

Preliminary analyses

A *t*-test on the rating of 'happy' revealed that the positive mood condition ($M = 4.31$, SD = 0.74) significantly differed from the neutral mood condition ($M = 3.70$, SD = 0.66; $t_{(61)} = -2.90$, $p < 0.005$).

Mood induction, loneliness, and meaning in life

A hierarchical regression equation was computed to examine the contribution of mood induction condition and loneliness on meaning in life ratings. Loneliness scores were first converted to mean deviation scores to represent the main effect. Then, the product of these scores along with the dummy variable for mood condition (0 = neutral, 1 = positive) was used as the interaction term. Significant main effects

(R^2 *change* = 0.18, $p < 0.003$) for loneliness ($\beta = -0.54$, $p < 0.001$) and mood condition ($\beta = 0.39$, $p < 0.001$) were qualified by a significant loneliness X condition interaction entered on the second step (R^2 *change* = 0.09, $p < 0.02$; $\beta = 46$, $p < 0.01$). For the overall equation, Multiple $R^2 = 0.27$, $F_{(3,58)} = 7.03$, $p < 0.0001$.

To probe this interaction, meaning in life judgments were regressed on loneliness within each mood condition. Loneliness did not predict meaning in life in the positive mood condition ($\beta = 0.09$, $p = 0.64$); however, in the neutral mood condition, loneliness ratings were a strong predictor of meaning ($\beta = -0.49$, $p < 0.001$). The generated means of these effects are shown in Figure 1. As can be seen in the figure, at low levels of loneliness, individuals reported high levels of meaning in life, regardless of mood condition, conceptually replicating previous findings for religious commitment (Hicks & King, 2008).

Thus, although Study 1 failed to show moderation of the relationship between PA and meaning in life by social relatedness, Study 2 results do suggest such moderation. These differing results may be partially explained by the differing measures of social connectedness (i.e., relatedness need satisfaction vs. loneliness) and PA (i.e., trait vs. induced) used in the studies. In any case, taken together, the results of Studies 1 and 2 provide strong support for the notion that both PA and social connections serve as independent sources of information for meaning in life judgments. Studies 3 and 4 sought to examine the mechanisms by which these sources of information become incorporated into meaning in life judgments.

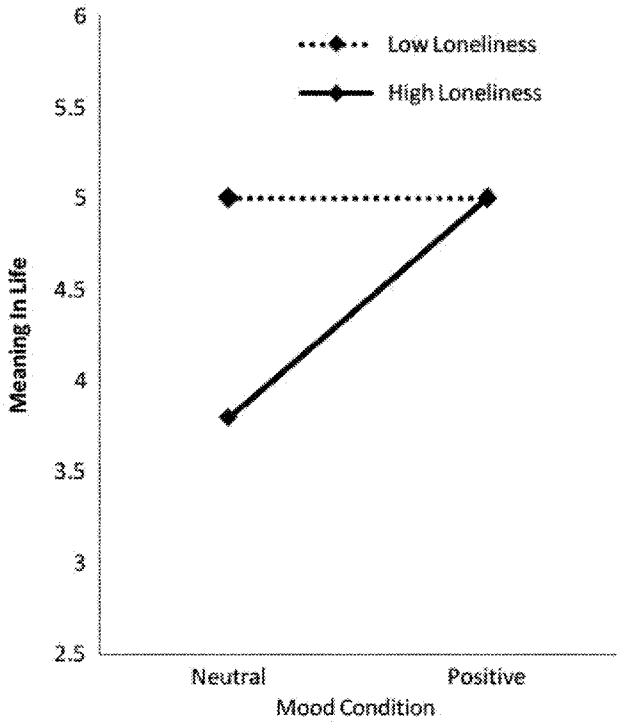

Figure 1. Meaning in life as a function of loneliness and induced PA, Study 2.

Study 3 examined the effects of priming social relationships on the relationship between naturally occurring PA and meaning in life judgments. One explanation of the relationship between PA and meaning in life is the well-established mood as information effect found in numerous studies in the social cognitive literature (Schwarz, 2001; Schwarz & Clore, 1996, 2003). This body of research demonstrates that when individuals judge an abstract life domain, rather than consult all of the possible relevant declarative information for the judgment, they may instead consult mood to provide an answer (Rucker & Petty, 2004; Schwarz, 2001; Schwarz & Clore, 1996, 2003; Sechrist, Swim, & Mark, 2003). Notably, from a mood as information perspective, the effects of mood on judgments should be attenuated when more relevant information is made accessible. To illustrate, Strack, Martin, and Schwarz (1988) found that the relationship between life satisfaction and dating frequency increases when the dating frequency assessment precedes the assessment of life satisfaction. Given this findings, it is likely that accessible information would also weaken the association between the judgment and other relevant sources of information (i.e., mood). Research to date has not addressed the intuitive relevance of either PA or social relatedness to meaning in life judgments. In order to examine the dynamic processes of meaning in life judgments, Study 3 provides a test of whether, in fact, social relationship primes would attenuate the relationship between PA and meaning in life, suggesting that such information is perceived as relatively more relevant than mood to the judgment.

Overview and predictions for Study 3

In this study, we supraliminally primed half of the participants with words associated with social connections; the other half of the participants were primed with neutral words (colors). In addition, we were able to obtain measures of meaning in life approximately one month prior to the lab visit. This premeasure allowed us to examine changes in meaning in life as a function of naturally occurring positive mood and prime condition. We predicted that the priming condition would moderate the relationship between PA and meaning in life, such that PA would be strongly related to meaning in life in the control condition but unrelated to meaning in life judgments for participants who were exposed to words associated with social relationships, in a pattern similar to Study 2.

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Study 3

Method

Participants

Sixty-five undergraduate students (45 women, 20 men) participated for extra credit in a psychology class. Participants' ages ranged from 18 to 25 years ($M = 20.38$, SD = 1.39). Represented ethnicities were 94% White/European American and 6% African American.

Materials and procedure

Participants first completed a questionnaire packet containing items to assess demographics, as well as the four meaning in life items from the PIL used in Study 1, rated on a scale from 1 (not at all) to 7 (extremely; $M = 5.31$, SD = 0.89, $\alpha = 0.81$). Approximately 6 weeks later, all participants completed a short laboratory session. Upon arrival, participants were escorted into a private cubicle that contained a computer and were told to follow the instructions displayed on the computer screen. To assess mood, participants first completed a short 20 item self-description questionnaire. Embedded in the questionnaire were 3 positive mood adjectives: joyful, happy, and pleased ($M = 4.30$, SD = 1.17, $\alpha = 0.86$). For the mood adjectives, participants rated the extent to which they were *currently* experiencing the particular emotion on a scale from 1 (not at all) to 7 (extremely much).

Supraliminal priming task. After completing the self-description questionnaire, the instructions on the screen read:

> We would now like you to complete a word fragment task. We are interested in how completing word fragments from similar or different categories influences performance on the task. Although we are primarily interested in how fast you can complete each word fragment, it is important that you try and spell each word correctly. Thank you.

In the control condition, participants were presented with nine words from two categories. The two categories included countries ('G_RMA_Y,' 'C_N_DA,' 'F_A_CE,' 'BEL_IU_,' 'E_G_AND,' 'ME_IC_,' 'AR_ENT_NA,' 'I_EL_ND,' and 'J_PA_') and colors ('RE_,' 'B_UE,' 'O_AN_E,' 'Y_LL_W,' 'P_NK,' 'P_RP_E,' 'G_E_N,' 'S_LV_R,' and 'MA_O_N'). In the experimental condition, the first nine word fragments were the same countries; however, the last nine word fragments were associated with the concept of relatedness. These fragments included ('FR_EN_S,' 'F_M_LY,' 'MOT_E_,' 'REL_T_ONSHIP,' 'CO_PAN_ON,' 'BU_D_,' 'MA_RI_GE,' 'FAT_E_,' and 'SI_LI_GS').

After the priming task, participants rated one item to measure mood, 'Overall, how do you feel right now?' on a 1 (very sad) to 11 (very happy) scale ($M = 7.12$, SD = 2.19) and the four PIL items from Study 1 on a 1 (not at all) to 7 (extremely) scale ($M = 5.07$, SD = 0.92, $\alpha = 0.81$). After completing a variety of unrelated measures, participants were probed for suspicion and debriefed. None expressed any awareness of the study's hypotheses.

Results and discussion

Preliminary analyses

A *t*-test was computed to ensure that priming condition did not influence the single-item mood check. As expected, conditions did not differ on this item ($p = 0.91$). Pre-prime PA was related to meaning in life both at Time 1 ($r = 0.29$) and Time 2 ($r = 0.45$). The meaning in life measures were related to each other ($r = 0.49$; all $ps < 0.05$). In order to control for Time 1 meaning in life, the dependent variable in subsequent analyses was the standardized residual score for each participant created by regressing Time 2 meaning in life on Time 1 meaning in life, representing the change in meaning in life from Time 1 to Time 2.

PA, priming, and meaning in life

To examine the contribution of PA and primes on changes in meaning in life, a hierarchical regression equation was computed. PA scores were first converted to mean deviation scores. Priming condition was dummy coded (0 = control, 1 = relatedness). The product of these variables was used as the two-way interaction term. Main effects were entered on the first step contributing to a significant change in R^2 (R^2 *change* = 0.17, $p < 0.01$); with PA significantly ($\beta = 0.36$, $p < 0.01$) and condition, marginally, ($\beta = 0.22$, $p < 0.07$) predicting positive change in meaning in life. Main effects were qualified by a significant two-way interaction entered on the second step (R^2 *change* = 0.11, $p < 0.01$; $\beta = -0.42$, $p < 0.01$). Figure 1 shows the generated means for individuals ±1SD from the mean on PA within each condition. As predicted, PA was strongly related to enhanced meaning in life for the control condition ($\beta = 0.61$, $p < 0.001$); however, PA did not relate to change in meaning in life for those who received relationship primes ($p = 0.69$).

The results of Study 3 show that activation of concepts related to social relationships attenuated the effect of positive mood on judgments of meaning in life. In keeping with typical mood as information studies, these results suggest that people in the experimental condition used information other than mood when judging meaning in life. Importantly, these results demonstrate that social relationships are, apparently, experienced as more relevant to judgments

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of meaning in life than current positive mood. It might be noted from Figure 3 that simply thinking about social relationship concepts led to high evaluations of meaning in life, across all levels of PA.

The results of Study 3 leave open the question, if participants weren't basing meaning in life judgments on positive mood, what were they basing these judgments on? The primes presumably shifted individuals to social relationships (e.g., Oishi, Schimmack, & Colcombe, 2003) as a source of information about meaning in life, but this presumption was not directly tested. As such (in addition to replicating the results of Study 3), Study 4 examined whether exposure to primes associated with social relationships would not only decrease reliance on PA but also increase the likelihood that individual differences in relatedness need satisfaction would influence meaning in life judgments.

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Overview and predictions for Study 4

In Study 4, participants completed measures of PA and relatedness need satisfaction and were exposed to implicit primes of either social relationship words or other positive words in the control condition. The control primes in this study were drawn from a hedonistically positive (relatively meaningless) category, desserts, allowing us to examine whether it is priming relationships, per se, or priming anything positive (e.g., King et al., 2006, Study 5) that might explain the marginal main effect of primes in Study 3. It was predicted that PA would be *less associated* with meaning in life and relatedness need satisfaction would be *more associated* with meaning in life for participants primed with relationships compared to participants in the dessert condition. Essentially, Study 3 examined mood *and* relatedness need satisfaction as information about meaning in life.

Study 4

Method

Participants

Ninety-five participants (71 females, 24 males) enrolled in a personality psychology course at the University of Missouri participated for extra credit. Ages ranged from 18 to 40 years ($M = 20.17$, $SD = 1.25$). Represented ethnicities included 85% European American, 7% African American, 6% Asian American, and 1% 'other.'

Materials and procedure

Relatedness Need Satisfaction and Positive Affect. Upon arrival, participants were instructed they would be completing a variety of tasks. For the first task, participants completed a questionnaire packet (approximately 50 items). Embedded in the packet was the RNS subscale used in Study 1 ($M = 5.69$, $SD = 0.98$, $\alpha = 0.81$). The last measure in the packet assessed current mood. Participants rated six positive (e.g., 'happy,' 'joyful,' 'pleased') mood adjectives to provide a measure of state PA ($M = 5.02$; $SD = 0.91$. $\alpha = 0.82$; after Diener, Smith, & Fujita, 1995), on a 1 (not at all) to 7 (very much) scale.

Priming. Next participants were instructed they would complete a lexical decision task. This task was purportedly designed to examine how various types of stimuli influence performance on the task. For this task, participants were asked to categorize various stimuli as either words (by pressing the 'Z' key) or nonwords (by pressing the '/' key). They were additionally instructed that there would be a random string of letters presented before each stimulus was presented and that 'words from random categories (e.g., countries, personality traits, etc.) [would] be briefly flashed before each trial. We [were] interested in how the presentation of these stimuli influences subsequent lexical decisions.' Participants were told to respond as quickly as possible. Each trial began with a '+' presented in the middle of the screen for 1000 ms. Participants were instructed that they should stare at the '+' so as to help them respond as quickly as possible. After the '+' a string of '&'s appeared for 400 ms. After the string of '&'s, either social relationship or dessert words were presented for 250 ms. Examples of words in the social relationship condition included 'friends,' 'companion,' 'partner,' 'relationship,' and 'family.' In the dessert condition, participants were primed with words such as 'cheesecake,' 'chocolate,' 'ice-cream,' and 'cookie.' Immediately after the primes, a string of 'X's was presented for 400 ms to serve as a backward mask. Following the string of 'X's, participants were presented with a letter string that served as the stimuli for their lexical decision (e.g., 'irony' or 'nogzp'). There were a total of 110 lexical decision trials.

Meaning in life. After the lexical decision task, participants completed a single post mood item, 'Overall, how do you feel right now?' rated on a 1 (very sad) to 11 (very happy) scale ($M = 6.96$, $SD = 1.99$) followed by the presence subscale of the MLQ, used in Study 1 ($M = 5.19$, $SD = 1.14$, $\alpha = 0.85$), rated on a scale from 1 (very slightly or not at all) to 7 (extremely). Participants then completed a variety of unrelated measures. Finally, they were debriefed and probed for suspicion. No one expressed any suspicion related to the study hypotheses.

Results and discussion

Preliminary analyses

A *t*-test verified that priming condition did not influence the single item mood check ($p=0.48$). As expected, correlations among the variables revealed that meaning in life was positively correlated with PA ($r=0.41$) and RNS ($r=0.48$), and PA was positively correlated with RNS ($r=0.43$; all $ps<0.01$).

PA, RNS, priming, and meaning in life

In order to examine the contributions of PA, RNS, and prime condition to meaning in life, a hierarchical regression equation was computed. The PA and RNS scores were first converted to mean deviation scores. Priming condition was dummy coded (0 = dessert, 1 = relatedness). Then, the product of the continuous scores with each other and the dummy variable for the priming condition were used as the interaction terms. The main effects were entered on first step contributing a significant change in R^2 (R^2 *change* $=0.29$, $p<0.001$). In the absence of a main effect for condition, PA ($\beta=0.26$, $p<0.01$) and RNS ($\beta=0.36$, $p<0.01$) predicted meaning in life. The two-way interactions, entered on the second step (R^2 *change* $=0.14$, $p<0.001$), revealed significant PA X condition ($\beta=-0.25$, $p<0.05$) and RNS X condition interactions ($\beta=0.27$, $p<0.05$). The three-way interaction entered on the third step did not produce a significant change in R^2 ($p=0.21$)

The two-way interactions were probed by regressing meaning in life on PA and RNS in each condition separately. Generated means for the PA X condition interaction are shown in Panel A of Figure 2. In the relatedness prime condition, PA did not predict meaning in life ($\beta=0.07$, $p=0.58$), but in the dessert condition PA was strongly related to meaning in life ($\beta=0.53$, $p<0.001$). Generated regression lines for the RNS X condition interaction are shown in Panel B of Figure 3. RNS was more strongly related to meaning in life for those who were exposed to the relationship primes ($\beta=0.50$, $p<0.001$) compared to participants

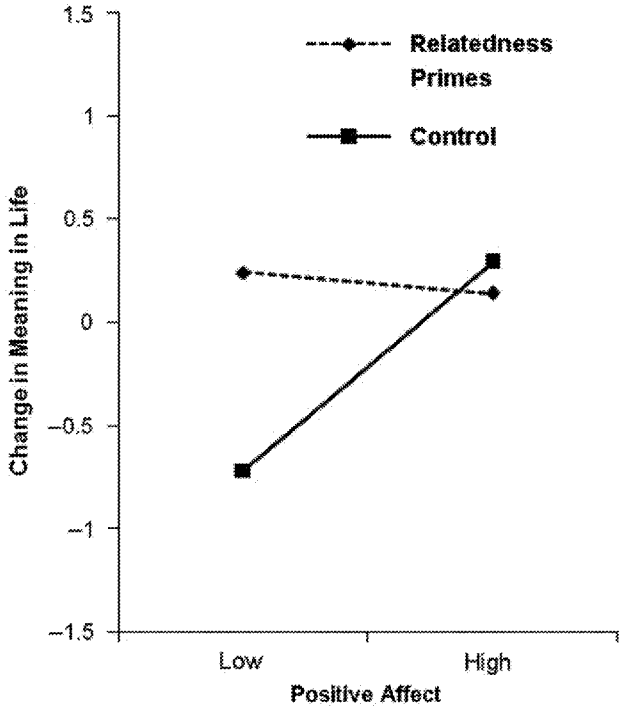

Figure 2. Meaning in life as a function of PA and prime condition, Study 3.

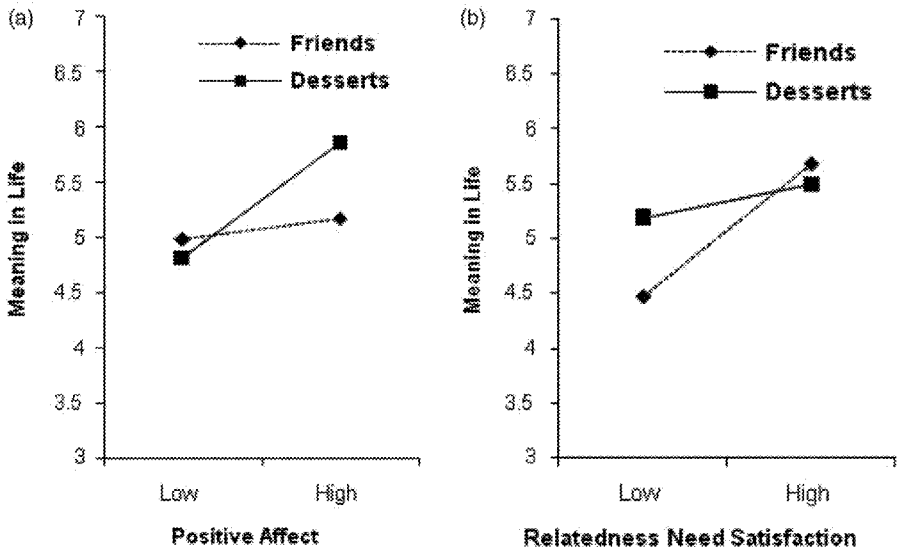

Figure 3. Meaning in life as a function of PA, relatedness need satisfaction and prime condition, Study 4.

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in the dessert condition ($\beta = 0.16$, $p = 0.20$). As predicted, primes associated with social relationships attenuated the association between PA and meaning in life and enhanced the association between RNS and meaning in life. It is certainly notable that in Panel A of Figure 3, participants eschewed PA as a source of meaning in life judgments, even if PA might have provided a higher level of meaning in life. Further, Panel B of Figure 3 indicates that, apparently, enhancing the salience of social relationships increased reliance on that source of meaning in life, even if it indicated a relatively lower level of meaning in life.

It might be noted that the attenuation of the relationship between PA and meaning in life observed in Studies 2 and 3 might be due to ceiling effects. That is, one could argue that mood did not predict meaning in life for those who were low on loneliness or primed with social relationships because those individuals reported very high levels of meaning, making it impossible for mood to further enhance these judgments. Importantly, in Study 4, PA remained unrelated to meaning in life in the relatedness prime condition even though the relationship primes did not lead to enhanced levels of meaning in life, ruling out the possibility that the observed pattern of results was simply due to ceiling effects.

A potential ambiguity in this study is whether dessert primes promoted unusually high reliance on PA ($\beta = 0.53$) in judging meaning in life. Comparing these results to those of the control condition in Study 3 ($\beta = 0.61$) suggests they did not. Additionally, in a study priming heaven, hell, or neutral controls words (hubcap, violin, ripple), the beta weight for PA in the control condition ($\beta = 0.55$; Hicks & King, 2008) was quite similar to that found in the dessert condition. Thus, priming a hedonistic category did not lead to especially high reliance on PA in judging meaning in life. The results of Study 4 provide a glimpse into the dynamics of meaning in life judgments. The primes apparently directed participants to a particular source of information and the appropriate individual difference then informed those judgments. These results suggest that enhancing the accessibility of a source of information for those judgments leads to greater reliance on that source in judgments of meaning in life, regardless of the level of meaning in life that source might imply.

General discussion

Given the vital place of meaning in life in psychological approaches to the good life, understanding how individuals come to judge life as meaningful provides an important in-road to understanding human functioning. Study 1 demonstrated that both PA and social relatedness serve as independent predictors of meaning in life. Although Study 1 results failed to demonstrate that relatedness was a chronically accessible source of information about meaning in life, Study 2 showed that individuals with strong social bonds (i.e., those low on loneliness) judged their meaning in life to be high regardless of mood induction condition. In Study 3, following primes of social relationships, PA was rendered irrelevant to meaning in life. Moreover, Study 4 demonstrated that primes influenced not only decreased the relevance of mood to meaning in life but also increased relevance of relatedness need satisfaction. Taken together, these results have implications for our continuing understanding of judgments of meaning in life and where they come from, and highlight all that remains to be learned about this important construct.

With regard to Study 1, it is worthwhile to consider the ways that PA and social relationships relate to meaning in life. PA, when it occurs, is by definition a positive experience but relationships may be more affectively rich. Social relationships are certainly a source of great joy in human life but they may also be a source of extreme misery. As such, it may be that the variance in meaning in life that is accounted for by social relationships (independent of PA) includes some aspects of life that are unpleasant but still meaningful.

Social relationships are clearly an important contributor to meaning in life (e.g., Baumeister & Leary, 1995; Ryan & Deci, 2001; Mikulincer et al., 2004) and the viability of social connections as a source of meaning in life is certainly demonstrated in Study 2. Nevertheless, it is notable that unlike other tested moderators (Hicks & King, 2007, 2008), naturally occurring relatedness did not emerge as a moderator of the relationship between PA and meaning in life (Study 1). When primed with desserts, meaning in life judgments emerged independently of relatedness (Study 4). Apparently, despite their acknowledged role in the Good Life (Twenge & King, 2005) relationships can fade into the background requiring some prodding compared to other moderators. Results of Studies 3 and 4 indicate that what accounts for the meaning in life judgments depends on what is in the foreground of mental life. Manipulating the contents of this foreground can influence the meaning in life judgment process. The results of the present studies suggest that while a high level of meaning in life might be desirable (King & Napa, 1998), individuals may not maximize their sense of meaning in life at any given moment. In Study 4, no three-way interaction emerged, suggesting that the primes of relationships enhanced reliance on relatedness need satisfaction in judging meaning in life, even if this variable dictated a relatively lower level of meaning in life. Of course, individuals in these studies espoused relatively high levels of meaning in life, generally, so the costs of tempering these

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judgments might be considered rather low. These results might help to explain low levels of meaning in life when they do occur. Individuals with chronically accessible negative thoughts or impoverished sources of meaning may judge their lives as meaningless because of this cognitively accessible information. The results of Study 3 suggest that those low on PA might have improved their meaning in life by simply thinking about social connections. The results of Study 4 would suggest that those low on social connections might have experienced a higher level of meaning in life by consulting their positive mood instead.

The potential benefits of something as simple as being in a good mood may be lost on individuals facing the grand existential dilemma of life's meaningfulness. Indeed, James (1900) recognized the role of simple pleasure in securing meaning in an essay entitled 'On a Certain Blindness in Human Beings.' The role of mild positive emotions in the experience of meaning in life may not be obvious. Notably, in Study 2, individuals who were lonely benefited from the brief positive mood induction in terms of their meaning in life. Expanding the relevance of sources of meaning and, potentially, changing the accessibility of these may be a way to promote a sense of meaning in life.

Of course, future research might consider which level of meaning in life reflects an individual's 'true level' of this variable, and which is inflated (or deflated) by momentary, transient variables. Such research might incorporate peer ratings of meaning in life as well as multiple measures over time to identify the aspects of meaning in life that change and those that remain stable despite transient factors. Examining the influence of factors such as accountability and stability in meaning in life judgments would also help to address this question. In a related vein, one question that these results suggest for future research is examining whether the bases of meaning in life judgments have an influence on the functional quality of these judgments. Research examining the tendency to rely on particular sources of information for meaning in life judgments along with measures of well-being and mental health will be necessary to address this fascinating question.

Results of Studies 3 and 4 showed that social relationships can overshadow positive mood in judgments of meaning in life, when these relationships are made salient to the person making the judgment. Might there be times when PA would overshadow social connections? Recent findings suggest that the answer is likely yes, particularly when cues of loneliness are primed (Hicks, Schlegel, & King, under review). In Studies 3 and 4, the relationship primes were all essentially positive words. As such, the tendency for such primes to attenuate the relationship between PA and meaning in life may be partially due to the positive answer they would generally provide for meaning in life judgments. Primes of loneliness, in contrast, tend to promote reliance on PA and wipe out the influence of social relatedness in judgments of meaning in life (Hicks, Schlegel, & King, under review). Thus, we might begin to consider judgments of meaning in life as the product of a complex balancing of the motivation to affirm that life is meaningful, the contribution of substantive sources of information, as well as more transient factors.

Acknowledging that meaning in life is the product of a judgment process does not demean this important aspect of well-being. Finding that meaning in life judgments are susceptible to the effects of mood or laboratory manipulations does not imply that meaning in life measured via self-report is not a valid or appropriate methodological tack (see Lucas, Dyrenforth, & Diener, 2008, for a similar argument about well-being measures). But the present results do suggest that research on meaning in life should begin to recognize the influence of variables that have not been explored with regard to this important judgment.

Although a potentially grand aspect of human life, the experience of meaning in life is also tied to its measures for scientists interested in studying this important facet of well-being. Acknowledging these earthly trappings does not diminish the standing of this variable in human functioning. Rather, understanding the nuances of the judgment that underlies meaning in life promises to illuminate one of life's great mysteries.

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References

Aiken, L.S., & West, S.G. (1993). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Aristotle (350 BCE/1998 CE). *Nicomachean Ethics*. J.L. Ackrill, J.O. Urmson, & D. Ross (Trans). New York: Oxford University Press.

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529.

Biswas-Diener, R., Kashdan, T.B., & King, L.A. (2009). Two traditions of happiness research, not two distinct types of happiness. *Journal of Positive Psychology, 4*, 208–211.

Downloaded By: [University of Florida] At: 19:10 8 December 2009

Crumbaugh, J.C., & Maholick, L.T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology, 20*, 200–207.

Diener, E., Smith, H., & Fujita, F. (1995). The personality structure of affect. *Journal of Personality and Social Psychology, 69*, 130–141.

Ebersole, P. (1998). Types and depth of written life meanings. In P.T.P. Wong, & S.P. Fry (Eds.), *The human quest for meaning: A handbook of psychological research and clinical applications* (pp. 179–191). Mahwah, NJ: Lawrence Erlbaum.

Frankl, V.E. (1984). *Man's search for meaning* (3rd ed.). New York: First Washington Square Press. (Original work published 1963).

Gagné, M. (2003). The role of autonomy support and autonomy orientation in prosocial behavior engagement. *Motivation and Emotion, 27*, 199–223.

Hicks, J.A., & King, L.A. (2007). Meaning in life and seeing the big picture: Positive affect and global focus. *Cognition and Emotion, 21*, 1577–1584.

Hicks, J.A., & King, L.A. (2008). Mood and religion as information about meaning in life. *Journal of Research in Personality, 42*, 43–57.

Hicks, J.A., & King, L.A. (in preparation). *A social cognitive motivational model of meaning in life judgments.* Manuscript in preparation, Texas A&M University.

Hicks, J.A., Schlegel, R.J., & King, L.A. (2009). *Love, happiness, and the dynamics of meaning in life judgments.* Manuscript submitted for publication.

James, W. (1900). Talks to students on some of life's ideals. New York: Henry Holt and Company.

Kashdan, T.B., Biswas-Diener, R., & King, L.A. (2008). Reconsidering happiness: The costs of distinguishing between hedonics and eudaimonia. *Journal of Positive Psychology, 3*, 219–233.

King, L.A., & Hicks, J.A. (2007, August). *A competition of cues model for the search for meaning in life.* Presented in a Symposium entitled The Search for meaning: Social and Clinical Perspectives, Michael Steger, Chair. The American Psychological Association Convention, San Francisco, CA.

King, L.A., Hicks, J.A., Krull, J., & Del Gaiso, A. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology, 90*, 179–196.

King, L.A., & Napa, C.K. (1998). What makes a life good? *Journal of Personality and Social Psychology, 75*, 156–165.

Klinger, E. (1977). Meaning and void. Minneapolis, MN: University of Minnesota Press.

Krause, N. (2007). Longitudinal study of social support and meaning in life. *Psychology and Aging, 22*, 456–469.

Lambert, N.M., Stillman, T.F., Fincham, F.D., Graham, S.M., Hicks, J.A., & Baumeister, R.F. (under review). Family begets meaning: The unique contribution of family relationships to meaning in life. Journal of Positive Psychology.

Lucas, R.E., Dyrenforth, P.S., & Diener, E. (2008). Four myths about subjective well-being. *Social and Personality Psychology Compass, 2*, 2001–2015.

McGregor, I., & Little, B.R. (1998). Personal projects, happiness, and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology, 74*, 494–512.

Mikulincer, M., Florian, V., & Hirschberger, G. (2004). The terror of death and the quest for love – An existential perspective on close relationships. In J. Greenberg, S.L. Koole, & T. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 287–304). New York: Guilford.

Oishi, S., Schimmack, U., & Colcombe, S. (2003). The contextual and systematic nature of life satisfaction judgments. *Journal of Experimental Social Psychology, 39*, 232–247.

Rucker, D., & Petty, R.E. (2004). Emotion specificity and consumer behavior: Anger, sadness, and preference for activity. *Motivation and Emotion, 28*, 3–21.

Russell, D., Peplau, L.A., & Cutrona, C.E. (1980). The revised UCLA loneliness scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology, 39*, 472–480.

Ryan, R.M., & Deci, E.L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. In S. Fiske (Ed.), *Annual review of psychology* (Vol. 52, pp. 141–166). Palo Alto, CA: Annual Reviews, Inc.

Ryff, C.D., & Singer, B. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies, 9*, 13–39.

Schimmack, U., & Oishi, S. (2005). The influence of chronically and temporarily accessible information on life satisfaction judgments. *Journal of Personality and Social Psychology, 89*, 395–406.

Schlegel, R.J., Hicks, J.A., Arndt, J., & King, L.A. (2009). Thine own self: True self-concept accessibility and meaning in life. *Journal of Personality and Social Psychology, 96*, 473–490.

Schwarz, N. (2001). Feelings as information: Implications for affective influences on information processing. In L.L. Martin, & G.L. Clore (Eds.), *Theories of mood and cognition: A user's handbook* (pp. 159–176). Mahwah, NJ: Lawrence Erlbaum.

Schwarz, N., & Clore, G.L. (1996). Feelings as phenomenal experiences. In E.T. Higgins, & A. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 433–465). New York: Guilford.

Schwarz, N., & Clore, G.L. (2003). Mood as information: 20 years later. *Psychological Inquiry, 14*, 296–303.

Schwarz, N., & Strack, F. (1990). Evaluating one's life: A judgement model of subjective well-being. In F. Strack, M. Argyle, & N. Schwarz (Eds.), *Subjective well-being. An interdisciplinary perspective* (pp. 24–47). Oxford: Pergamon.

Sechrist, G.B., Swim, J.K., & Mark, M.M. (2003). Mood as information in making attributions to discrimination. *Personality and Social Psychology Bulletin, 29*, 524–531.

Steger, M.F. (2009). Meaning in life. In S.J. Lopez (Ed.), *Handbook of positive psychology* (2nd ed.). Oxford, UK: Oxford University Press.

Steger, M.F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80–93.

Steger, M.F., & Kashdan, T.B. (2007). Stability and specificity of meaning in life and life satisfaction over

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one year: Implications for outcome assessment. *Journal of Happiness Studies, 8*, 161–179.

Steger, M.F., Kashdan, T.B., Sullivan, B.A., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality, 28*, 199–228.

Stillman, T.F., Baumeister, R.F., Lambert, N.M., Crescioni, A.W., DeWall, C.N., & Fincham, F.D. (in press). Alone and without meaning: Life loses meaning following social exclusion. *Journal of Experimental Social Psychology*.

Strack, F., Martin, L.L., & Schwarz, N. (1988). Priming and communications: Social determinants of information use in judgments of life satisfaction. *European Journal of Social Psychology, 18*, 429–442.

Tice, D.M., Bratslavsky, E., & Baumeister, R.F. (2001). Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! *Journal of Personality and Social Psychology, 18*, 429–442.

Twenge, J.M., Catanese, K.R., & Baumeister, R.F. (2003). Social exclusion and the deconstructed state: Time perception, meaninglessness, lethargy, lack of emotion, and self-awareness. *Journal of Personality and Social Psychology, 85*, 409–423.

Twenge, J.M., & King, L.A. (2005). A good life is a personal life: Relationship fulfillment and work fulfillment in judgments of life quality. *Journal of Research in Personality, 39*, 336–352.

Williams, K.D. (2007). Ostracism. *Annual Review of Psychology, 58*, 425–452.

Wong, P.T. (1998). Implicit theories of meaningful life and the development of the personal meaning profile. In P.T.P. Wong, & S.P. Fry (Eds.), *The human quest for meaning: A handbook of psychological research and clinical applications* (pp. 111–140). Mahwah, NJ: Lawrence Erlbaum.

Wong, P.T.P., & Fry, S.P. (Eds.). (1998). *The human quest for meaning: A handbook of psychological research and clinical applications*. Mahwah, NJ: Lawrence Erlbaum.

Yalom, I.D. (1980). Existential psychotherapy. New York: Basic Books.

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