Positive Affect and the Experience of Meaning in Life

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Six studies examined the role of positive affect (PA) in the experience of meaning in life (MIL). Study 1 showed strong relations between measures of mood, goal appraisals, and MIL. In multivariate analyses, PA was a stronger predictor of MIL than goal appraisals. In Study 2, the most consistent predictor of the experience of meaning in a day was the PA experienced that day. Later, global MIL was predicted by average daily PA, rather than average daily MIL. Study 3 demonstrated no prospective relations between measures of MIL and PA over 2 years. In Study 4, priming positive mood concepts enhanced MIL. In Study 5, manipulated positive mood enhanced ratings of MIL for those who were not given an attributional cue for their moods. In Study 6, PA was associated with a high level of distinction between meaningful and meaningless activities. Results indicate that positive moods may predispose individuals to feel that life is meaningful. In addition, positive moods may increase sensitivity to the meaning-relevance of a situation.

Keywords: meaning in life, positive affect, mood

"There is now a critical mass of empirical evidence and a convergence of expert opinions that personal meaning is important not only for survival but also for health and well-being." (Wong & Fry, 1998, p. xvii)

The place of meaning in life in notions of the good life is unquestionable (e.g., Ryff & Singer, 1998). A variety of authors have identified finding meaning in life difficulties as a key to positive functioning (e.g., Frankl, 1963/1984; Janoff-Bulman, 1992; cf. Davis, Wortman, Lehman, & Silver, 2000). Empirical research has consistently demonstrated that perceiving life to be meaningful positively relates to well-being (Reker, Peacock, & Wong, 1987; Ryff, 1989; Zika & Chamberlain, 1987, 1992). For example, Zika and Chamberlain (1987) found that among various personality variables (locus of control, assertiveness, and meaning in life), meaning in life was the most consistent predictor of psychological well-being among college students. In fact, meaning in life has been shown to relate positively to psychological well-being at almost every stage of the life span, from adolescence to late adulthood (Reker, Peacock, & Wong, 1989; Zika & Chamberlain, 1992). Meaning in life has been found to be an essential

part of the folk concept of a "good life" (King & Napa, 1998; Scollon & King, 2004). In much of the research in this area (as the quote above attests), the implication is clear that meaning in life contributes to a happier life. While acknowledging the limitations of correlational research in demonstrating causation, Zika and Chamberlain (1992) stated that "theory would suggest that meaning has a broad and pervasive influence on well-being" (p. 142). Furthermore, they noted that this interpretation is congruent with the "predominant view . . . that meaning in life influences psychological well-being" (p. 143). Although it may well be that the experience of meaning often leads to enhanced positive feelings (e.g., Ryan & Deci, 2001), it may also be that positive feelings themselves may enhance one's subjective feeling of meaningfulness. In the present studies, we examined the relationship between positive affect (PA) and the experience of meaning—specifically examining the possibility that PA may enhance the experience of meaning in life.

THE MEANING OF "MEANING"

What do people mean when they say their lives have meaning? Often, *meaning in life* is defined as a sense of one's life having a purpose or investing time and energy into the attainment of cherished goals (e.g., Ryff & Singer, 1998). Some researchers have argued that the experience of meaning in life happens when the individual has a sense that his or her life is coherent (Reker & Wong, 1988). Frankl (1984) described meaning as occurring through personal accomplishments, encounters with others, or encounters with art and nature. Meaning can also be attained by attaching oneself or one's existence to a larger framework of meaning such as religion or a philosophy of life (Allport, 1961). Baumeister (1991) argued that the experience of meaning in life is contingent upon fulfilling four psychological needs: purpose, value, efficacy, and self-worth. Ebersole (1998) reported that when asked to write about a personally meaningful event in their lives, responses usually fall into categories such as involvement in

interpersonal relationships, self-improvement and understanding, and behaving in ways that are congruent with one's beliefs. More important, commonly used questionnaires that purport to tap meaning in life typically rely on respondents' intuitive understanding of meaning—as they use the term *meaning* in items such as "I imagine that my life in the future will be totally without meaning or purpose" (a reverse-coded item from the Sense of Coherence Scale [SOC]; Antonovsky, 1988, 1993). In general, then, we can broadly state that a life is meaningful when it is understood by the person living it to matter in some larger sense. Lives may be experienced as meaningful when they are felt to have significance beyond the trivial or momentary, to have purpose, or to have a coherence that transcends chaos. The present series of studies focused on this subjective sense of meaning.

PA AND THE EXPERIENCE OF MEANING IN LIFE

There are strong theoretical and empirical reasons to believe that PA may enhance the experience of life as meaningful. We consider these possibilities below.

The Cognitive Effects of Positive Mood

PA may influence cognition in ways that facilitate the discovery or construction of meaning. According to Fredrickson's broaden-and-build theory, positive emotions broaden people's "momentary thought-action repertoires" (Fredrickson, 1998, 2001, 2002). Empirical support for the broaden-and-build theory of positive emotions has come from a multitude of studies. For example, an impressive research program by Isen and colleagues (for review, see Isen, 1999) has shown that positive emotions facilitate creative problem solving. People experiencing positive emotions are also more open to processing new types of information and have greater cognitive flexibility (for review, see Fredrickson, 1998). Furthermore, research has shown that the attentional and cognitive processes of people experiencing positive emotions are characterized by a global rather than a local focus (Fredrickson & Branigan, 2004; Gasper & Clore, 2002; Kimchi & Palmer, 1982), suggesting that positive emotions help to broaden the scope of attention (Fredrickson, 2003).

Within this theoretical and empirical context, then, it would make sense that PA might facilitate the experience of meaning in people's lives. That is, when people think broadly, they may be more likely to see how their daily existence is connected to a larger system of meaning. The global focus afforded by PA may allow the person to see "the big picture" and enjoy a sense that on a grand scale life is comprehensible.

Mood as Goal-Relevant Feedback

Another way in which PA may relate to the experience of meaning in life is through its relation to self-regulated behavior. Adopting a systems approach to mood, Carver and Scheier (1990, 1998) have suggested that positive and negative moods serve as feedback about the person's progress in valued areas of life. Positive mood indicates that one is making satisfactory progress toward one's goals. PA may serve as a sign that one's life is purposeful in that one is making sufficient progress toward valued

goals. From this perspective, PA may relate to an enhanced feeling of meaning in life because of its relationship to goal progress.

The Association Between Meaning and Happiness

The notion that PA may enhance the experience of meaning has been ignored perhaps because, for psychologists and others, the question of meaning in life takes centerstage when meaning appears to be absent—when circumstances lead individuals to question the meaningfulness of existence and search for meaning. A large body of evidence supports the role of finding meaning in negative life experiences as a powerful coping tool (e.g., Janoff-Bulman, 1992; Janoff-Bulman & Berg, 1998; Janoff-Bulman & Frieze, 1983; McIntosh, Silver, & Wortman, 1993; though see Davis et al., 2000, for a review of the complexity of the relation of meaning making and coping). Individuals who are able to find meaning after a negative life event are better able to return to positive levels of functioning (Davis et al., 2000). Outside the context of coping, research has demonstrated that meaningful activities are often associated with enjoyment (Csikszentmihalyi, 1990; Ryan & Deci, 2001). Indeed, Reker and Wong (1988) noted that "the realization of personal meaning is always accompanied by feelings of satisfaction and fulfillment" (p. 221). If the discovery or experience of meaning routinely leads to the experience of PA, then the association between these two variables may become overlearned and create a strong association in memory. Such an association may lead the salience of one of these variables to recruit thoughts about the other. Thus, over time, PA may become linked conceptually with the idea that life is meaningful (Clore et al., 2000).

Meaning Judgments and Mood as Information

Research has shown that people sometimes use current mood as a source of information when making evaluative judgments, unless the source of their mood has been made salient (for review, see Schwarz, 2001; Schwarz & Clore, 1996). For example, in a classic study conducted by Schwarz and Clore (1983), people rated their satisfaction with life more favorably on sunny days compared with rainy days when they were not reminded of a possible source of their mood (i.e., the current weather condition). Researchers have suggested that instead of taking into account all of the declarative information relevant to the target of judgment, people sometimes (wrongly) interpret their current feelings as being relevant to the target (Schwarz & Clore, 1996); therefore, good moods may lead to more favorable evaluations of the target, and bad moods may lead to less favorable evaluations. People may be especially prone to use their mood as a primary source of information when making judgments about global life domains (for a review, see Schwarz & Strack, 1999). Additionally, people in positive moods sometimes exert less cognitive effort when making judgments and are subsequently more likely to use a simple "feelings-as-information" heuristic compared with people in negative moods (Schwarz & Clore, 1996). Therefore, because most measures of meaning in life rely on intuitive notions of what "meaning" means, it may be that meaning in life, at least when studied in the context of individuals in ordinary circumstances, is one among many good things in life susceptible to feelings-as-information effects.

This brief consideration of the ways PA may relate to the experience of meaning in life highlights the dilemma of our present understanding of the place of meaning in life in human functioning. Though there is great consensus that meaning in life is important (see, e.g., the opening quote in the present article as well as countless popular psychology books), empirical research with regard to meaning in life fails to provide answers to basic questions about the relation of meaning in life to affect. It is noteworthy that "higher level" measures of psychological health, such as subjective well-being, have been used in studies of the relationship between meaning in life and psychological health. However, the role of basic affect in these relationships has not been examined in these studies. In the present studies, we relied on mood measures only in order to examine the influence of PA and negative affect (NA) on the experience of life as meaningful. Although PA was the primary focus of this set of studies, we included NA in most of the studies presented here in order to examine more fully the relation of mood to meaning in life.

MEANING IN LIFE AS A DAILY EXPERIENCE

A secondary focus of the present studies was the possibility that meaning in life is a daily experience. The notion that everyday life is meaningful has been largely left to pop psychology (e.g., Moore, 1996). Yet, examination of measures of meaning in life reveals that these scales often contain items that assume that daily life itself may be evaluated with regard to meaning (e.g., "Facing my daily tasks is a painful and boring experience," a backward-coded item from the Purpose in Life test [PIL]; Crumbaugh & Maholick, 1964). Thus, meaning in life is not simply a global judgment made about a life as a whole but potentially a quality of everyday existence. It may be that a meaningful life is simply a sum of meaningful days. Or, the experience of daily meaning may be derivative of a global sense of meaning in life that adds a "glow" of meaning to judgments about specific life domains. In the present studies, then, we explored the notion that daily life may be considered meaningful and sought to examine the variables associated with daily meaning in life.

OVERVIEW OF STUDIES

In the present investigation, we examined the relations of PA, NA, and meaning in life using a variety of methods. The relation of self-report measures of mood and meaning in life was examined concurrently in Study 1. Study 2 was a daily diary study in which the daily experiences associated with the experience of a day as meaningful were examined. The relations of mood and meaning in life prospectively, over 2 years, were examined in Study 3. Mood priming and mood induction experiments were used in Studies 4 and 5 to address whether positive mood increases the experience of life as meaningful and whether this effect is explainable by mood concepts or by mood-as-information effects. Finally, the question of whether naturally occurring mood plays a role in the experience of an activity as meaningful when that activity has been manipulated to be either meaningful or meaningless was examined in Study 6. Additionally, in Studies 1 and 2, mood was pitted against another strong candidate for the promotion of the experience of meaning—goal-directed activity. Meaning in life is often portrayed as emerging out of motivation. Indeed, the experience of

life as purposeful is often treated as synonymous with the experience of meaning (Baumeister, 1991). It is likely that when people are actively engaged in a goal-relevant activity, they ought to experience that activity as meaningful. In Studies 1 and 2, we examined the relative contribution of goal-directed behavior and thought and mood to the experience of meaning in life.

Overview and Predictions for Study 1

In Study 1, we examined how PA, NA, positive emotionality, and daily goal appraisals related to the experience of meaning in life. If PA is associated with enhanced meaning in life, then it makes sense that dispositions associated with enhanced PA may also relate to enhanced meaning in life. Larsen and Ketelaar (1991) provided empirical support for the notion that extraversion can be thought of as a susceptibility to the experience of PA. Diener and Lucas (1999) presented evidence demonstrating a very strong relationship between extraversion and positive mood (see also DeNeve & Cooper, 1998). Thus, extraversion is a stable trait that is associated with enhanced PA, in general. Including extraversion in this study allowed us an initial opportunity to examine whether those who experience a great deal of PA may also experience heightened meaning in life. The construct of daily meaning in life was explored by having participants rate not only their general meaning in life but also the amount of meaning they had experienced in the past 2 days. We included measures of goal investment to examine whether these measures related to meaning in life over and above their relation to PA. We predicted that PA as well as positive emotional traits would relate to enhanced feelings of life as meaningful, both in the past 2 days and for life in general. In addition, goal appraisals were expected to relate to these measures of meaning. Multivariate analyses allowed us to test the unique contributions of goal appraisals and PA in predicting meaning in life.

Method

Participants

Five hundred sixty-eight undergraduate psychology students (275 men, 290 women, 3 not reporting) at the University of Missouri—Columbia completed a questionnaire packet in order to fulfill requirements for research participation in introductory psychology. Ages ranged from 19 to 43 years, with a mean age of 20.91 years ($SD = 2.00$). The vast majority of participants were single (542), although 12 were married, and 12 were divorced. Of the participants, 87% were European American, 3% were Asian American, 6% were African American, 1% was Hispanic American, and 3% identified as "other."

Materials and Procedure

Meaning in life measures. The SOC (Antonovsky, 1988, 1993) measures the degree to which the person feels confident that the world is a predictable, explainable, and structured place and that challenges that present themselves are within the individual's ability to resolve. Twenty-nine items are rated on a 7-point scale ranging from 1 (*strongly agree*) to 7 (*strongly disagree*). The three components tapped by the SOC are comprehensibility, manageability, and meaningfulness; however, Antonovsky (1988, 1993) recommended using only the total score. Sample items include "I imagine that my life in the future will be totally without meaning or purpose" and "Everyday activities are a source of deep pleasure and satisfaction to me" ($M = 5.03$, $SD = 0.85$).

The PIL (Crumbaugh & Maholick, 1964) is a 20-item scale assessing the degree to which a person experiences a sense of meaning and purpose in life. The PIL was factor analyzed by McGregor and Little (1998), and the items that pertained specifically to the experience of meaning in life (and not happiness or general well-being) were identified. These items were used in the present study. Items were rated on a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*). These items included "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 as be very great " ($M = 5.23$, $SD = 0.87$). The two measures of meaning were highly correlated ($r = .79$), and therefore a composite measure of global meaning in life was created by averaging the standard scores on these scales.[1]

A daily meaning in life measure was created by modifying items from the two meaning in life measures so that they were suited to everyday life. Participants were instructed to respond to these items as they related to their lives "in the last two days." Items included "In the last two days, my life had very clear goals and aims," "In the last two days, I had a sense that I see a reason for me being here," and "In the last two days, I have had clear-cut goals and a satisfying purpose in life" ($M = 4.96$, $SD = 0.84$). For 54% of the participants, the general meaning in life measures were completed first, and for the remaining participants, the 2-day assessment was completed first. Not surprisingly, this measure of meaning in life in the past 2 days was strongly related to general meaning in life ($r = .75$, $p < .001$).

Affect measures. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was administered to provide measures of PA and NA. For the PANAS, participants rate how much they generally experience a particular positive or negative emotion. Participants rated each mood item on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). In the present study, participants completed one version in which they were asked how they generally feel (M for general PA = 3.46, $SD = 0.73$; M for general NA = 1.92, $SD = 0.62$) and another asking to rate their moods right now (M for current PA = 2.98, $SD = 0.78$; M for current NA = 1.67, $SD = 0.67$).

Next, participants completed the Extraversion scale from the NEO Personality Inventory–Revised (Costa & McCrae, 1992). The Extraversion scale includes the following facets: warmth ($M = 41.31$, $SD = 8.52$), gregariousness ($M = 37.01$, $SD = 8.55$), assertiveness ($M = 33.81$, $SD = 7.84$), excitement seeking ($M = 39.80$, $SD = 7.64$), activity ($M = 34.94$, $SD = 6.36$), and positive emotions ($M = 40.13$, $SD = 8.93$).

Goal appraisal measures. Participants completed an abbreviated version of the Personal Striving Assessment Packet (PSAP; Emmons, 1986). Participants generated a list of 10 personal strivings in response to the stem "I typically try to. . . ." The PSAP provides participants with a set of instructions specifying the appropriate level of abstraction for the lists. They were also given examples of daily goals such as "to be physically attractive to others," "to make lots of friends," and "to avoid feeling inferior to others." Strivings were then rated on the following dimensions on 5-point scales ranging from 0 (*not at all*) to 5 (*extremely*): goal progress, confusion/uncertainty/ambivalence, importance, clarity/detail, difficulty, and conflict. Instructions describing each dimension, respectively, included, "How satisfied are you with the amount of progress [toward this goal]?" "Are you confused about what your goal is?" "How highly do you value this goal?" "Do you have a clear sense of what it would feel like [to achieve this goal]?" "Rate how difficult or challenging this goal is for you," and "Does this goal conflict with other goals in your life?"

On the basis of factor analyses of these data (as well as on past research on goal constructs, cf. Emmons, 1986; Little, 1998), two composite variables were created, goal valuing and goal difficulty. The goal valuing variable was created by aggregating ratings of the value, clarity, and progress dimensions over all the personal strivings ($\alpha = .58$). The goal difficulty variable was created by aggregating ratings of the difficulty, conflict, and confusion dimensions over all personal strivings ($\alpha = .62$).[2]

Table 1

Correlations of Meaning in Life (in the Past 2 Days and in General) With Personality and Mood in Study 1

Variable	2-day MIL	General MIL
Mood measure		
Positive affect, right now	.38	.45
Negative affect, right now	−.35	−.42
General positive affect	.45	.53
General negative affect	−.47	−.45
Extraversion and facet score		
Extraversion (total)	.41	.62
Warmth	.43	.49
Gregariousness	.30	.41
Assertiveness	.38	.53
Active	.35	.48
Excitement	.18	.28
Positive Emotionality	.47	.55
Goal measure		
Goal value	.28	.36
Goal difficulty	−.19	−.18

Note. $N = 568$. All coefficients are significant at $p < .001$. MIL = meaning in life, a composite of the Sense of Coherence Scale and the Purpose in Life test.

Results and Discussion

As an initial examination of the predicted relations, correlations were computed among the affect measures, the goal measures, and the measures of meaning in life, and these are shown in Table 1. Results showed mood, positive emotional traits, and goal appraisal dimensions were significantly related to meaning in life, both in general and in the past 2 days.[3] The high correlation ($r = .62$) between extraversion and general meaning in life is particularly notable.

In order to examine the relative contributions of mood and goal progress to meaning in life judgments, multivariate analyses sought to predict meaning in life from these variables. First, as

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[1] Results for this study using the two scales separately were parallel to those reported here, as were analyses using only the Meaning subscale of the SOC. As the composite is the most reliable measure of meaning in life we report those results here.

[2] Although these reliabilities may seem somewhat low for self-report data, it is worth noting that the composites included rather different ratings by participants on their various goals. Reliability analyses suggested that these were the maximum alphas (removing dimensions would not improve the internal consistencies). Furthermore, analyses examining any one of the components were essentially parallel to those reported here. Because the composites are the most reliable measures we have, we use them in these analyses.

[3] Tests for gender differences on the variables of interest revealed a few mean differences. Women were higher than men on 2-day meaning in life and lower than men on current NA, current PA, and goal difficulty. These differences were uniformly small, though significant. However, because the focus of this study was on relationships rather than on mean levels, correlations and regression equations were computed for men and women separately. These results were essentially parallel to those for the sample as whole, so those findings are reported in the *Results* section.

shown at the top of Table 2, a regression equation was computed predicting global meaning in life from the general mood measures only. Standardized beta weights showed significant contributions by both PA and NA. Second, a similar equation, shown in the center of Table 2, was computed predicting global meaning in life from goal value and goal difficulty, demonstrating that both goal value and goal difficulty significantly contributed to the prediction of global meaning in life.

In order to test the unique contribution of mood and goal variables, a combined model, regressing general meaning in life on the mood and goal variables simultaneously, was computed. Results are shown at the bottom of Table 2. Examination of the beta weights, once again, revealed that the general PA predicted higher levels of meaning in life, whereas general NA predicted lower levels. Goal value predicted higher levels of meaning in life, and goal difficulty predicted lower levels of meaning in life. The overall R^2 for this model was .50, with mood uniquely accounting for 31% of the variance, and goal appraisal dimensions accounting for just 4% of the variability in global meaning. Tests for differences among the absolute values of regression coefficients in the combined model showed that the regression coefficient for general PA was significantly greater than both the value dimension of goal appraisal, $t(552) = 3.64, p < .001$, and the difficulty dimension of goal appraisal, $t(552) = 10.73, p < .0001$. Tests also revealed that the absolute values of the regression coefficient for general NA was significantly greater than both the value dimension, $t(552) = -12.73, p < .0001$, and the difficulty dimension of goal appraisal, $t(552) = -4.97, p < .0001$.

In order to examine these same variables as predictors of meaning in life in the past 2 days, analogous equations were computed, with 2-day meaning in life as the criterion. For the mood-only model and goal dimensions-only models, the results were similar to those reported in Table 2 ($R^2 = .31$ for mood only and .14 for goal measures only, both $ps < .001$; all beta weights were significant and in the same direction as for global meaning in life). For the combined model, the 2-day meaning in life measure was regressed on the current mood measures and the goal appraisal dimensions, providing an overall R^2 of .35. Current NA predicted lowered daily meaning in life ($\beta = -.36, p < .001$), and current PA predicted higher daily meaning in life ($\beta = .31, p < .001$). The value dimension of goal appraisals predicted higher levels of daily meaning in life ($\beta = .15, p < .001$), whereas the difficulty dimension predicted lowered daily meaning in life ($\beta = -.15, p < .001$). Thus, with regard to meaning in life in the past 2 days, we can calculate that mood uniquely accounts for 21% of the variability in 2-day meaning. In comparison, goal measures uniquely account for only 4% of the variability in 2-day meaning in life. Tests for differences among the absolute values of the regression coefficients showed that the regression coefficient for current PA was significantly greater than the difficulty dimension of goal appraisal, $t(553) = 8.05, p < .0001$. Tests also revealed that the absolute value of the regression coefficient for current NA was significantly different from both the value dimension, $t(553) = -10.21, p < .0001$, and the difficulty dimension of goal appraisal, $t(553) = -4.46, p < .0001$.

In order to examine whether daily meaning in life shared a relationship with mood and goal measures, independent of general meaning in life, partial correlations were computed between 2-day meaning in life, mood, and goal measures, controlling for general meaning in life. Results showed that controlling for general meaning in life, the 2-day measure was no longer related to extraversion or any of its facets (mean $pr = .02$) or to goal value ($pr = .05$). However, 2-day meaning in life continued to share small but significant relations to PA (general PA $pr = .15$; current PA $pr = .11; p < .009$), NA (general NA $pr = -.25$; current NA $pr = -.26, p < .001$), and goal difficulty ($pr = -.10, p < .03$).

In summary, the findings of Study 1 indicate that mood has a strong relation to the experience of meaning in life, even relative to a more theoretically derived correlate of meaning, daily goal value and difficulty. The results of this study indicate that meaning in life was more strongly related to mood than to goal appraisals and that the strongest correlate of claiming a meaningful life was extraversion.[4] These results provide strong initial support for the potential role of positive emotion in the experience of meaning in life. The results for general meaning in life and meaning in life in the past 2 days were essentially parallel. Controlling for general meaning in life left very little variance to explain, though the relation between mood and daily meaning in life remained significant. Clearly, asking about the past 2 days may not fully capture the notion of daily meaning in life. In Study 2, we sought to continue to examine the relations of mood and goal processes to meaning in life using a daily diary methodology.

Overview and Predictions for Study 2

The experience of meaning as a daily phenomenon, with a focus on two potential predictors of daily life as meaningful: mood and goal-directed activity and thought, was examined in Study 2. In this study, participants completed ratings of meaningfulness each day for 5 days. Additionally, twice each day, participants reported on their behavior and thoughts and made mood ratings. Daily reports of behaviors included the questions, "What have you spent time working on today?" and "What were you doing just prior to completing this form?" Thoughts were assessed through the ques-

Table 2

Regression Equations Predicting General Meaning in Life From Mood and Goal Value and Difficulty, Separately and Together, in Study 1

Model	Predictor	β	R^2
Mood	General positive affect	.46	.41
	General negative affect	−.36	
Goal dimension	Goal value	.37	.17
	Goal difficulty	−.18	
Combined model	General positive affect	.39	.44
	General negative affect	−.34	
	Goal value	.18	
	Goal difficulty	−.08	

Note. $N = 554$. All R^2 values are significant at $p < .001$. All beta weights are significant at $p < .03$.

[4] Although the strong relationship between extraversion and PA prompted its inclusion in this study, it is important to note that there are clearly other ways by which extraversion may relate to meaning in life— via its relation to activity level, sociability, approach motivation, etc.

tion, "What are the main things on your mind right now?" Responses to these questions were reliably content analyzed for relevance to the personal goals participants reported currently pursuing (prior to the diary study), and the coded data provided measures of working on, doing, and thinking about goals for each form. Random coefficient multilevel modeling was used to examine the predictors of the experience of a day as meaningful. In keeping with the results of Study 1, we predicted that mood would strongly relate to the experience of daily meaning, even controlling for goal-related behavior and thought.

Method

Participants

Participants were 86 (59 women and 27 men) University of Missouri—Columbia students, ranging in age from 19 to 32 years ($M = 21.38$ years, $SD = 2.05$, mode $= 21$). Represented ethnic groups included 88% White/European American, 5% African American, 3% Asian, 1% Hispanic, and the remainder identified as "other." Participants were all enrolled in a personality psychology class and received extra credit for their participation.

Materials

Initial packet. Participants were given a packet of questionnaires to complete at their own pace and were asked to return the packet in 1 week. The packet included the same goal assessment packet as in Study 1. When this packet was returned, participants were given the mood forms for the daily mood and meaning study.

Daily mood forms. Participants completed two mood forms (one in the middle of their day and one at the end of their day) for 5 days. Daily mood forms contained a mood adjective rating list that included eight positive (happy, pleased, self-confident, enjoyment/fun, joyful, excited, sociable/friendly, satisfied) and five negative (depressed/blue, worried, frustrated, unhappy, angry/hostile) mood adjectives, identified in factor analytic work by Larsen and Diener (1985). Responses were made on a scale ranging from 0 (*not at all*) to 6 (*extremely*). In addition to the mood adjective measure, participants responded to open-ended questions, including "What have you worked on today?" "What were you doing right before completing this form?" and "What are the main things on your mind right now?"

The "middle of the day" forms were composed of the mood adjective rating list and the five open-ended questions. The "end of the day" form included those items as well as four additional items from the PIL that were modified to address their feelings *that day*. These items included the PIL items determined by McGregor and Little (1998) to assess meaning in life: "Today, my life had very clear goals and aims"; "Today, my personal existence was very purposeful and meaningful"; "Today, I had a sense that I see a reason for me being here"; and "Today, I have had clear-cut goals and a satisfying purpose in life." Items were rates on a 6-point scale ranging from 0 (*not at all*) to 6 (*extremely*).

Middle-of-the-day and end-of-the-day mood ratings were averaged to provide a single measure of PA and NA for each participant each day of the study.

Procedures

Participants were given a packet of 10 mood forms to complete twice a day for 5 days. Of the participants, 6% initiated the study on a Tuesday, 10% the following Wednesday, and nearly half (48%) the following Thursday. Approximately equal numbers of the remaining participants began the study on Saturday, Sunday, and Monday. Reports were returned each day in a box located in the academic buildings where they attended classes. Any participant who missed more than two reports consecutively

was telephoned by a research assistant to ensure proper completion and return of the form.

Content analyses of activities and thoughts. Two raters independently coded all of the listed events, thoughts, and activities on the daily forms for relevance to the participants' daily goals (from the initial packet). Essentially, this coding entailed using each participant's strivings as the categories for which the various aspects of their daily lives may be relevant (see Emmons & King, 1988; and King, Richards, & Stemmerich, 1998, for similar coding procedures). Relevance was coded 0 (*not relevant*) or 1 (*relevant*). For instance, if a participant who had the goal "to do well in my classes" listed "studied for my psych exam," then the behavior was coded as relevant to that goal. Similarly, if a participant who had the goal "to explore different careers" listed "thought about what job I might want in the future" as a thought, then that thought was coded as relevant to that goal. Coding was completed on all listed behaviors and thoughts for 86 participants, across 10 reports and over 10 goals. Participants listed, on average, 1.63 "working on" behaviors ($SD = 1.09$), 1.16 things they were doing just before completing the form ($SD = 0.40$), and 1.64 thoughts ($SD = 0.84$) on each form—resulting in approximately 7,000 judgments by each coder. Intraclass correlations for goal relevance were .78 for what participants were doing just before completing the form, .86 for what participants worked on that day, and .92 for what participants spent time thinking about. From this coding, we were able to compute for each day the degree to which participants reported working on goal-relevant tasks, engaging in goal-relevant activity, and thinking goal-relevant thoughts on that day.

Follow-up Packet

Approximately 2 weeks after completing the mood study, participants were given a packet of questionnaires to complete. This packet included the PIL meaning items as a general measure of meaning in life.

Results and Discussion

Daily Mood, Goal Engagement, and the Experience of a Day as Meaningful

Multilevel modeling was used to examine the prediction of daily meaning in life. The data produced by the diary methodology consists of up to 10 observations of daily mood, goal activity, and meaning in life ratings for each individual participant. Because the repeated observations from a given participant share a degree of similarity, an appropriate analysis must be able to accommodate this sort of dependency. The multilevel model provides estimates of error variances (random effects) at each level of the data (here, within- and between individuals) and is thus able to model the dependent nature of the data, producing unbiased estimates of model coefficients (fixed effects). These fixed coefficients may be interpreted in a manner similar to that of coefficients in a multiple regression.

Table 3 shows the unstandardized coefficients from four multilevel models predicting daily meaning ratings. The first model (in the second column of Table 3) is a base model in which daily meaning ratings were predicted by a set of six dummy variables representing day of the week (with Sunday as the comparison group). Though none of the dummy vectors achieved conventional levels of significance, they are retained as covariates in all subsequent multilevel models. This covariates-only base model shows that about 18% of the variance in daily meaning ratings is between individuals, and about 82% is within-individual variability across the repeated measurements of meaning in life.

Table 3
Daily Mood, Goal Activity, and Daily Meaning in Life in Study 2

Variable	Covariates only	Covariates + Affect	Covariates + Goal activity	Covariates + Affect and goal activity
Fixed Effect				
Negative affect		−.1142***		−.1155***
Positive affect		.2413***		.2431***
Working			−.0684	−.0618
Doing			−.0176	.0273
Thinking			.1841*	.1893**
Random Effect				
Between individual	.1102***	.0250*	.1175***	.0232*
Within individual	.5138***	.4393***	.5134***	.4385***

Note. Each column presents the unstandardized regression coefficients for a separate model predicting daily meaning in life. Covariates are day-of-the-week effects.
* $p < .05$.   ** $p < .01$.   *** $p < .001$.

The third column of Table 3 shows the coefficients for a model predicting daily meaning in life from PA and NA (and the covariates). Both NA and PA uniquely predict daily meaning in life; indeed, together, NA and PA account for about 77% of the between-individual variance and about 14.5% of the within-individual variance in the outcome measure. The fourth column of Table 3 shows the coefficients for a model including goal activity variables and the covariates. In contrast to the mood model in which both variables were significant unique predictors of the outcome, only the "thinking about goals" variable uniquely predicted meaning in life in the goal activity model. Moreover, the addition of the goal activity variables to the base model did not result in an appreciable decrease in residual variability at either the between-individual or the within-individual level of the model. Finally, the last column of Table 3 shows the coefficients of a combined model including mood, goal activity and thoughts, and covariate measures. Once again, the strong NA and PA effects maintain even when goal activity measures are simultaneously included in the model.

Daily Mood, Daily Meaning in Life, and the Global Experience of Meaning

Next, the prediction of global meaning in life was examined through analyses 2 weeks after the daily meaning study. First, daily meaning in life ratings, daily mood ratings, and daily goal activity variables were averaged over the course of the mood study. Correlations between these aggregates and global PIL scores demonstrated that none of the goal variables related to global meaning in life (all $rs \leq .18$). However, average daily meaning in life was related to overall meaning in life ($r = .34$, $p < .003$), as was average daily PA ($r = .54$, $p < .001$) and average daily NA ($r = -.29$, $p < .01$). A regression equation predicting global meaning in life from average daily PA, NA, goal activity variables, and average daily meaning ($R^2 = .37$, $p < .001$) demonstrated that only daily positive mood significantly uniquely predicted general meaning in life ($\beta = .50$, $p < .001$). In summary, in terms of global meaning in life after the mood study, overall estimates of meaning in life were predicted by how much average

PA the person experienced a few weeks prior to the general assessment.

Study 2 showed that daily meaning in life is related to current mood and that retrospective global estimates of meaning are predicted by average daily PA. These results lead to the question of whether there is a prospective relation between mood and meaning in life. This question was examined in Study 3.

Overview and Predictions for Study 3

As in Study 1, we relied on self-report questionnaires in Study 3. However, in this study, data were collected in two waves, separated by 2 years. These data allowed us to examine the prospective relations of mood and meaning in life. Three predictions are possible. If meaning in life contributes to happiness, then we would expect Time 1 meaning in life to predict enhanced PA, overtime. Conversely, if PA is a predictor of the experience of meaning, then Time 1 PA should predict gains in meaning in life over 2 years. Finally, it may be that mood and meaning relate in solely concurrent ways—that at any given moment, one's happiness and meaning will relate but that no prospective relation exists.

Method

Participants

Participants in this study were 266 community adults (175 women, 88 men, and 3 not reporting; mean age = 43.20, SD = 12) who were originally recruited to take part in a series of studies of life transitions. All participants were recruited through newspaper advertisements, and questionnaires were administered in a mail-in format. Subsamples included women who had experienced divorce after having been married for more than 20 years ($n = 73$; King & Raspin, 2004), parents of children with Down's syndrome ($n = 86$; King, Scollon, Ramsey, & Williams, 2000), and a sample of gay men and lesbians ($n = 107$; King & Smith, 2004; King & Noelle, 2005). Specific descriptions of each subsample and recruitment methods can be found in prior publications using these samples.

Procedures

All participants completed the PANAS and the SOC as measures of affect and meaning in life in the initial packet. Two years later, participants

were recontacted and readministered the PANAS and SOC. At Time 2, 145 participants (approximately 55%) returned the completed packets. There were no differences between completers and noncompleters of the follow-up packet (see original publications using each sample for details on these analyses). All participants were paid $20 for completing each phase of the study. The follow-up sample consisted of 108 women, 37 men, 130 Anglo Americans, 6 African Americans, 4 Hispanic Americans, 3 Asian Americans, 1 "other," and 1 not reporting.

Results and Discussion

Because there were mean differences among the three samples (with the parents of children with Down's syndrome reporting higher levels of meaning in life and PA than the other two samples), all variables were standardized within groups prior to analyses. Examination of the relations of the variables within each sample revealed no inconsistencies, so the results here are for the pooled data. Table 4 presents the correlations for mood and meaning in life within each wave and across waves. In general, mood and meaning in life were strongly correlated within and across waves. Especially notable is the very high correlation at Time 1 between PA and SOC ($r = .80$). The bottom left panel of Table 4 shows the cross-time correlations of PA, NA, and SOC over 2 years. These correlations show significant bivariate relations across time—with SOC at Time 1 relating to higher PA and lower NA at Time 2. Similarly, PA and NA at Time 1 related in expected ways to SOC at Time 2.

Next, we examined whether people who experienced a great deal of meaning in life were more likely to increase in PA over time through analyses. A multiple regression equation was computed, regressing Time 2 PA on Time 1 PA and Time 1 and Time 2 SOC (multiple $R^2 = .48$, $p < .0001$). Time 1 SOC did not predict enhanced PA at Time 2, controlling for Time 1 PA and Time 2 SOC ($\beta = .09$ for Time 1 SOC; $\beta = .25$, $p < .02$ for Time 1 PA; and $\beta = .45$ for Time 2 SOC, $p < .001$). A similar equation was computed predicting SOC at Time 2 from PA at both time periods and SOC at Time 1 (multiple $R^2 = .45$, $p < .0001$). Time 1 SOC predicted enhanced SOC at Time 2 ($\beta = .26$, $p < .02$), as did Time 2 PA ($\beta = .47$, $p < .0001$).

These analyses represent a fairly conservative test of the prospective relations proposed here because concurrent measures of predictors at Time 2 were included in the equations. However, subsequent analyses excluding these Time 2 predictors (i.e., predicting Time 2 SOC from Time 1 SOC and Time 1 PA and predicting Time 2 PA from Time 1 SOC and Time 1 PA) showed no prospective relations.

As mentioned previously, the SOC has three subscales, one of which is Meaning. The analyses of Study 3 were repeated using only those items specifically described by Antonovsky (1988) as falling on the Meaning subscale (though Antonovsky, 1988, himself warned vigorously against the use of subscales to measure each component separate from the others, p. 88). Representative items from the Meaning subscale include "Until now, your life has had clear goals and purpose" and "You anticipate that your life in the future will be full of meaning and purpose." Results are presented parenthetically in Table 4. Clearly, results were parallel to those using the whole scale. Not surprisingly, regression analyses using only the Meaning subscale also showed no prospective relations between meaning and PA over time.

In summary, though (as with any finding of null results) it is possible that failure to detect an effect may be the result of statistical power issues, these analyses suggest that there is no prospective relationship between the experience of meaning in life and PA over 2 years. The relationship between PA and meaning appears to be a strong but concurrent one—at any given moment, these two variables are likely to be strongly related. This study provides no evidence of PA promoting the experience of meaning, nor of the experience of meaning promoting enhanced PA over time. Rather, the strong time-limited relation between PA and meaning in life suggests that mood influences meaning in life judgments as it does other global evaluations. Clearly, studies examining the effects of induced mood on meaning in life would help to illuminate this possibility.

Overview and Predictions for Study 4

Studies 1 through 3 provide correlational support for the notion that PA is strongly related to the experience of meaning—more

Table 4
Correlations Among Mood and Meaning in Life, Over Time, in Study 3

Variable	Time 1			Time 2		
	1	2	3	1	2	3
Time 1						
1. PA	—					
2. NA	−.55	—				
3. SOC	−.80 (.71)	−.54 (−.55)	—			
Time 2						
1. PA	**.58**	**−.46**	**.56 (.50)**	—		
2. NA	**−.42**	*.70*	**−.48 (−.45)**	−.59	—	
3. SOC	**.44 (.47)**	**−.56 (−.42)**	**.56 (.46)**	.59 (.67)	−.75 (−.54)	—

Note. Time 1, $N = 266$. Time 2, $N = 145$. All correlations are significant at $p < .001$. Coefficients in bold are cross-time correlations, over 2 years. Coefficients in parentheses are those for which the meaning subscale of the Sense of Coherence Scale (SOC) was used. Coefficients in bold italics are 2-year test–retest correlations. PA = positive affect; NA = negative affect.

strongly even than the experience of goal engagement. The relationship between PA and meaning in life may be because of the cognitive effects of PA (e.g., broadening of awareness) or they may be wholly explained by a spreading of activation of positive concepts, in which meaning in life and positive mood states may be closely linked. In order to examine this possibility, we used both a mood induction and a priming of mood concepts in a 2 (mood induction vs. priming) × 2 (positive vs. neutral valence) completely between-participants design in Study 4. Once again, the outcome of interest was the amount of meaning in life participants reported following these procedures. With regard to the mood induction, we predicted that manipulated positive mood would relate to heightened reports of meaning in life. With regard to the priming condition, predictions do not depend on the effects of mood. Rather, if meaning in life and positive emotion are closely linked in a cognitive network, then simply priming positive emotional concepts should lead to heightened reports of meaning in life, even in the absence of positive mood itself.

Method

Participants

Seventy-six undergraduate students (48 women and 28 men) at the University of Missouri—Columbia participated in return for extra credit. Represented ethnicities were 85% White/European American, 7% African American, 4% Hispanic, 2% Asian, and 2% "other."

Procedure

Participants were escorted into a private cubicle that contained a computer and told to follow the instructions displayed on the computer screen. They were asked to complete a short packet of questionnaires once the computerized portion of the experiment was finished. For the computerized portion, a computer, using DirectRT precision timing software (v2004.1.0.37) and MediaLab v2004 software, both written by Blair Jarvis, and a 17-in. (43-cm) Dell color CRT monitor were used.

For the priming conditions, participants were instructed that a + would appear in the middle of the computer screen, followed by a stimulus presented either on the right or the left side of the screen, and their task would be to indicate on which side of the screen the stimulus appeared by pressing either a red circle, located on the ";" key, if the stimulus appeared on the right, or a green circle, located on the "*a*" key, if the stimulus appeared on the left. They were instructed to focus only on the + throughout the duration of task. Fifty words were displayed randomly on either the right or the left side of the screen. Primes were presented in the parafoveal region of vision: 2°–6° of visual angle (Bargh & Chartrand, 2000). Each word was displayed for 20 ms and immediately masked by a string of Xs. Each trial lasted 2 s and timed out if no response was made within 2 s (all responses were made within 2 s). In the positive-emotional-word-priming condition, all primed words referred to positive emotions (e.g., *happy*, *jovial*, *elated*, *content*, *pleased*). In the neutral-priming condition, none of the primed words made any explicit emotional reference (e.g., *hubcap*, *ripple*, *violin*, *binder*, *table*).

A modified Velten (1968) procedure was used to induce mood. Participants were instructed that there would be various sentences displayed on the screen and that their task was to take time and reflect on each sentence for a moment. In the positive-mood condition, each sentence became progressively more positive (e.g., "I feel very lighthearted," "I feel so vivacious and efficient"). In the neutral-mood condition, sentences included "There is a large rose garden center near Tyler, Texas" and "The word was discolored as if it were set on fire." There were a total of 40 sentences in each condition, and each sentence was displayed for 8 s.

After the experimental manipulation was completed, participants were instructed to complete a short packet of questionnaires. Mood and meaning in life items were embedded in a 32-item questionnaire. Positive mood words were *joyful*, *happy*, and *pleased* ($\alpha = .87$; $M = 2.97$; $SD = 0.92$; on a 5-point scale ranging from 1 [*not at all*] to 5 [*extremely*]). Negative mood words included *depressed/blue*, *unhappy*, *worried*, *distressed*, *nervous*, and *sad* ($\alpha = .76$; $M = 2.20$; $SD = 0.86$).

Three meaning-relevant items from the PIL assessed current perceptions of meaning in life. Items used included "My personal existence is very purposeful and meaningful"; "In thinking of my life, I always see a reason for my being here"; and "I have clear goals and a satisfying purpose in life" ($\alpha = .82$). Participants rated each item on a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*).

Results and Discussion

Manipulation Check for Mood Effects

To test for mood effects, a 2 (priming vs. mood induction) × 2 (positive vs. neutral) analysis of variance (ANOVA) was conducted. Results revealed that there were no significant main effects for type of experimental condition, $F(1, 72) = 0.13$, $p = .72$, or valence of condition, $F(1, 72) = 0.00$, $p = .95$. Results also revealed that there was no two-way interaction, $F(1, 72) = 0.07$, $p = .79$. Thus, our attempts to induce mood in this study were not successful. Also, it is notable that, as expected, the positive-mood-concepts priming did not influence mood.

Main Analysis

Although we could not examine the effects of mood on meaning in life judgments with these data, analyses were conducted to examine whether activating concepts of PA influenced meaning in life ratings. Because the mood induction failed, these analyses were conducted only on the participants in the priming condition. A *t* test for mean differences between the positive- versus neutral-priming groups indicated that priming positive mood concepts did lead to increased meaning in life ratings (Ms = 14.25, SD = 3.76 vs. Ms 11.34, SD = 5.31), $t(40) = 1.98$, $p < .03$, one-tailed. These results suggest that simply activating positive mood concepts did enhance perceptions of meaning in life. To ensure that these results were not driven by mood, an analysis of covariance, controlling for PA and NA, was performed. Controlling for mood, $F(2, 38) = 2.98$, $p < .06$, the main effect of priming valence remained significant, $F(1, 38) = 4.70$, $p < .04$, $\eta^2 = .09$. The results of Study 4 indicate that priming of positive mood concepts (regardless of one's mood) enhanced reports of meaning in life. It should not be surprising that meaning in life is associated with positive feelings, given the evidence for the role of the experience of meaning in successful coping as well as the place of meaning in life in folk concepts of the good, desirable life. However, it is surprising that being primed with these positive emotion words led to enhanced reports of the experience of meaning. Because the mood induction in Study 4 was not successful, we cannot evaluate whether manipulated mood would have enhanced meaning in life judgments. We sought to address this issue in Study 5.

Overview and Predictions for Study 5

The role of mood-as-information effects in meaning in life judgments using a mood induction paradigm was examined in

Study 5 . It is important to note that the relation between PA and meaning in life need not be assumed to be a meaningless one, even if manipulated mood leads to enhanced reports of meaning in life. On the basis of the cognitive effects of PA, we might expect that individuals in a positive mood may experience life as more meaningful because of the broadened mindset or unusual connections PA affords them. In order to address this issue, a study in which the potential misattribution of mood information is examined is required. Reminding individuals of the source of their moods should not detract from the meaning-related cognitive benefits provided by positive mood. In this study, positive, negative, and neutral moods were induced, and then the experience of meaning in life was assessed. A cue was presented to half the participants in the study, calling their attention to the potential effects of mood on their meaning in life judgments. Thus, this study consisted of a 3 (positive, negative, neutral mood) $\times$ 2 (cue vs. no cue) between-participants design. Though positive mood was expected to enhance reports of meaning, a two-way interaction, such that particular individuals in the no-cue condition show enhanced meaning in life after positive mood induction, would support the idea that meaning in life judgments are influenced by mood as information.

Method

Participants

One hundred ninety-four (140 women and 54 men) first-year students at the University of Missouri—Columbia participated in return for a $20 payment. Represented ethnicities were 88% White/European American, 6% African American, and 2% Hispanic, Asian, and "other." Participants were recruited through flyers and e-mail announcements throughout campus.

Materials and Procedure

Participants came into the lab and were run individually in interactive computer sessions. Participants read one of three mood induction conditions on the screen. In the positive-mood induction condition ($n = 64$), participants read about finding a lost child in a park, helping reunite the child with her parents, and being hailed as a hero (adapted from Tice, Bratslavsky, & Baumeister, 2001). In the negative-mood induction condition ($n = 64$), participants read about being in a hurry for a job interview and running a yellow light, only to crash into another car, killing a baby (adapted from Wenzlaff, Wegner, & Roper, 1988). In the neutral condition ($n = 66$), participants read about a student's plans for the day.[5] After reading the mood inductions, participants were asked to write for 3 min on the computer about their thoughts and feelings regarding what they had just read. After 3 min, participants were prompted by the computer to rate themselves on 20 adjectives (e.g., intuitive, alert, a deep thinker) on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). The mood adjectives embedded in this list were the same as those in Study 4. For PA, $\alpha = .86$, $M = 4.00$, $SD = 0.74$; for NA, $\alpha = .76$, $M = 2.26$, $SD = 0.84$.

Next, all participants were asked to rate their lives as accurately as possible on the basis of a variety of general questions. For half the participants, these instructions included the following cue to mood attribution: "Please note that sometimes our moods affect how we think about our life in general—and the scenario you read may have influenced your current mood." Participants then made ratings on three items drawn from the PIL and SOC on a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*). Items included "My personal existence is very purposeful and meaningful"; "In thinking of my life, I always see a reason for my being here"; and "I imagine that my life in the future will be totally without
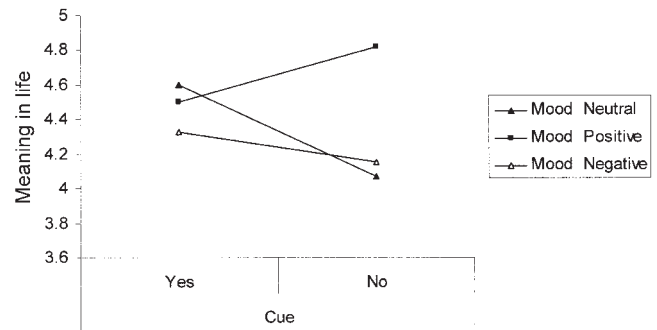

Figure 1. Meaning in life judgments as a function of induced mood and attributional cue. Positive mood without a cue leads to higher reported meaning in life, in Study 5.

meaning or purpose" (reverse coded), from the SOC ($\alpha = .70$, $M = 4.43$, $SD = 0.96$).

Results and Discussion

Manipulation Check

In order to examine whether our mood manipulations worked, one-way ANOVAs were calculated on positive and negative mood adjectives. ANOVAs on PA and NA demonstrated that the mood manipulations were indeed effective. The main effects of condition were significant for PA, $F(2, 191) = 4.90$, $p < .009$, and NA, $F(2, 191) = 2.85$, $p < .02$. Post hoc Scheffé tests demonstrated that the positive-mood condition was higher in PA than both the neutral and negative-mood conditions. Although the conservative post hoc test did not show differences on negative mood for the negative-mood condition, the positive-mood condition was also significantly lower in NA than either the neutral or the negative-mood conditions.

Meaning in Life and Mood

Next, we examined whether manipulated mood would influence the report of meaning in life through analyses. A 3 (neutral, negative-, or positive-mood condition) $\times$ 2 (cue vs. no cue) ANOVA was performed on meaning in life ratings. The significant main effect for mood, $F(2, 188) = 2.73$, $p < .04$, $\eta^2 = .03$, was qualified by the predicted Mood $\times$ Cue interaction, $F(2, 188) = 3.31$, $p < .03$, one-tailed, $\eta^2 = .037$. The means for this interaction are shown in Figure 1. Fisher's protected t tests demonstrated that those in the positive-mood/no-cue cell were significantly higher in meaning in life than those in all other cells, except the neutral-mood/cue condition. Overall, the results of Study 5 indicate that meaning in life judgments are enhanced by positive mood at least partially because individuals use their positive feelings as information when evaluating the meaning of their lives.

Results thus far demonstrate that PA does increase the experience of meaning in life. These results are certainly provocative and lead to a number of considerations. First, it may be that PA simply

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[5] The full texts of the three mood induction instructions are available from Laura A. King upon request.

causes people to somewhat mindlessly report themselves as having a meaningful life. This conclusion would fit with previous work on mood as information. We may wonder whether PA, then, renders reports of experienced meaning suspect, in general, because people who are in a positive mood find everything meaningful—would these people experience any situation as meaningful, even a patently meaningless one? Study 6 was designed to examine this very question.

Overview and Predictions for Study 6

Study 6 was conducted to examine whether the effects of positive and negative mood on the experience of meaning would generalize to any situation. In Study 6, meaningfulness was manipulated by having participants (who had previously rated their moods) engage in an activity that was meaningless versus one that was meaningful. In this study, participants either read meaningful texts or simply interacted with these texts in a relatively meaningless way (counting the letter *e*). Aristotle (1962) distinguished between hedonism and the truly "good life" through the notion of eudaimonism—the actualization of human potentials. Stimulus materials for Study 6 were selected specifically because they were thought to be highly meaningful, in the eudaimonistic sense. Thus, in this study, we were interested in examining whether hedonic experience may play a role in the meaning experienced in an encounter with a meaningful text.

On the basis of our results thus far, one possible prediction is that PA would relate to finding meaning in both the meaningful and meaningless task. Such a prediction would be in keeping with the idea that PA allows a person to see the big picture no matter what the circumstances. The overlearned association between positive emotion and meaning may help to explain the dangers of hedonism in its extreme form. It may be that individuals who experience PA during a pleasurable but meaningless activity misperceive the activity as meaningful.

However, another pattern of results is also possible. Of most interest, this possibility also relies on the strong association between PA and the experience of meaning. It may be the case that PA leads to the experience of meaning only when meaning is there to be found. Martin and colleagues (cf. Martin, 2001) suggested that mood serves as input about whether a task has effectively fulfilled its role of producing a certain mood. A horror movie, for example, would fulfill its role requirement if the individual felt scared after watching the movie. Conversely, a task would not fulfill its role requirement if the individual's current mood was incongruent with the mood the task was expected to produce such as feeling happy after reading a sad story (Martin, Abend, Sedikides, & Green, 1997). Given the strong association between PA and meaning, individuals may expect PA to be associated with completing meaningful tasks and not expect it to be present when the task is meaningless. Therefore, contrary to the idea that PA leads to the experience of meaning in every situation, individuals experiencing higher PA may be less apt to evaluate a relatively meaningless task as being meaningful. This line of reasoning would suggest that an interaction between mood and task meaningfulness should emerge such that PA should result in enhanced meaning in the meaningful condition but lowered perceptions of meaning in a relatively meaningless activity. Such a result could be taken to indicate that PA may be thought of as a readiness or preparedness for meaningful experience.

Method

Participants

Ninety-nine undergraduate students participated in this study (37 men) to earn research credit in a psychology class at the University of Missouri—Columbia. Ages ranged from 18 to 23 years ($M = 19.6$, $SD = 1.23$). Represented ethnicities were 85% White/European American, 9% African American, and 2% Hispanic, Asian, and "other."

Materials and Procedures

Participants were run in groups of approximately 10. They were seated in a conference room around a table and were given a packet of questionnaires to complete. The packet included a measure of mood, the task meaningfulness manipulation, and a measure of the meaningfulness of the task.

Mood measure. At the beginning of the packet, participants rated themselves on a variety of variables.[6] Embedded in the list were the same positive and negative mood descriptors as those in Studies 4 and 5, again rated on a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*). For PA, $\alpha = .83$, $M = 5.02$, $SD = 0.94$; for NA, $\alpha = .86$, $M = 2.76$, $SD = 1.08$.

Meaningfulness manipulation. All participants saw one of three essays. The essays were sections from *The Power of Now: A Guide to Spiritual Enlightenment* (Tolle, 1999), *The Four Agreements: A Practical Guide to Personal Freedom* (Ruiz, 1997), and *Ethics for a New Millennium* (Dalai Lama, the 14th, 1999). The full content of the passages is shown in Appendix A. The essays were about the connectedness of all human beings, the importance of striving to do one's best, and the concept of surrender and were selected specifically because they seemed reasonably likely to be considered meaningful by a reader. Indeed, the essays were rated as generally somewhat meaningful by the students who read them (*M*s range from 3.95 to 4.72, on a scale ranging from 1 to 7, see below).

In the meaningless condition, participants were asked to count the number of *e*s in each passage and to enter subtotals on the margins after each paragraph. In order to ensure that participants did not engage meaningfully with the text, the following instructions were used:

> . . . we would like you to count the number of "e's" in the following written selection. It is very important that your count be accurate; therefore, we ask that you circle each "e" and start at the end of the page and work your way up. This will allow you to avoid being distracted by the content of the selection.

In the meaningful condition, participants were encouraged to read the passage carefully and think about it:

> . . . we would like you to read a written selection. It is important that you read it carefully so that you may make ratings of your evaluation about its content. It may be helpful if you think about the ways that the selection you are reading relates to your own life and experience.

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[6] This study originally included a mood manipulation in which participants wrote about happy, sad, or neutral life experiences in order to induce happy, sad, or neutral moods. However, the mood manipulation was ineffective. Neither effects for PA or NA approached significance when analyzed by mood induction condition (all *p*s > .30). One possible reason for this ineffectiveness was that the room in which all participants were run was without air conditioning during a heat wave, resulting in all participants experiencing a similarly very warm setting. In any case, because of the lack of mood responses to the manipulation, this aspect of the experiment was dropped as a factor, and the simple mood measures were used instead as measured (rather than manipulated) variables.

Task meaningfulness. After completing the assigned task, all participants rated the meaningfulness of what they had just done. The meaningfulness of the task was measured using six face-valid items ($\alpha = .90$). The items were rated on a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*). Items included "It was a meaningful task"; "I will likely remember this task for awhile"; "I can see why this task would be useful or important"; "I feel like what I just did was completely meaningless" (reverse scored); "I feel that it was profound"; "I can see how this activity could relate to my life in general" (grand $M = 3.47$, $SD = 1.34$).

Results and Discussion

A t test on the ratings of meaning-by-task manipulation indicated that, indeed, counting *es* was less meaningful ($M = 2.65$, $SD = 0.93$) than actually reading the passage ($M = 4.32$, $SD = 1.16$), $t(98) = 7.96$, $p < .0001$. Collapsing across levels of the task factor, correlations between mood and rated meaningfulness indicated that neither positive nor negative mood related to rated meaningfulness (both $rs < .10$), demonstrating that mood did not have a global effect on perceptions of meaning. Thus, we turned to examining the potential interactions of mood and task meaningfulness as predictors of experienced meaning.

In order to examine the perception of meaning as a function of mood, manipulated task meaningfulness, and their interaction, a hierarchical regression equation was computed. First, mood measures were converted into mean deviation scores. The two-way interactions of positive mood and task and negative mood and task (and positive and negative mood with each other) were computed by taking the product of these mean deviation scores and the dummy code for manipulated task meaningfulness ($0 =$ counting or low meaning, $1 =$ reading or high meaning). Finally, the three-way interaction of positive and negative mood and task meaningfulness was entered into the equation on the final step (see Aiken & West, 1993). Results are shown in Table 5. Main effects were entered on the first step, contributing a significant change in

Table 5
Hierarchical Regression Predicting Experienced Meaningfulness as a Function of Mood and Manipulated Task Meaning in Study 6

Variable	B	β	ΔR^2	p
Constant	2.84			
Step 1				
Main effect			.40	<.001
Positive mood	−0.33	−.23		
Negative mood	0.09	.07		
Manipulated task meaning	1.57	.59***		
Step 2				
Two-way interaction			.07	<.02
Positive Mood × Task	0.90	.46***		
Negative Mood × Task	0.08	.05		
Positive Mood × Negative Mood	0.19	.19		
Step 3				
Three-way interaction			.01	ns
Positive Mood × Negative Mood × Task	−0.21	−.18		

Note. Multiple $R = .69$, $R^2 = .45$; $F(7, 92) = 11.84$, $p < .001$. Task $=$ manipulated task meaning ($0 =$ meaningless, $1 =$ meaningful).
*** $p < .001$.

R^2. As would be expected from the t test reported above, the main effect of task manipulation contributed significantly and positively. However, this main effect was qualified by a significant two-way interaction between positive mood and task meaning, entered on the second step. The positive beta weight indicates that positive mood was associated with enhanced meaning judgments particularly when the task was manipulated to be meaningful. No other significant effects were identified.

In order to probe the two-way interaction between positive mood and manipulated task meaning, two separate regression equations were computed, one for each level of the task meaning factor (Aiken & West, 1993). Within the low-meaning condition, positive mood was significantly negatively related to experienced meaning ($\beta = −.28$, $p = .05$). Within the high-meaning condition, positive mood was significantly positively associated with experienced meaning ($\beta = .36$, $p < .01$). These results indicate that, rather than lending meaning to any task, positive mood may increase one's sensitivity to meaning-relevant contexts or put one in a meaning-ready state.[7]

The "broaden-and-build" theory may have predicted blanket PA effects such that no matter what they are doing, people in a positive mood experience more meaning. However, the present results show that people in a positive mood seem to be particularly prone to perceive meaning distinctively. Previous research has suggested that motivation is particularly important to the performance of people in a positive mood in lab settings (e.g., Aspinwall, 1998). Perhaps one underlying reason for this conclusion is that people in a positive mood possess an expectation for meaning and are prone to notice meaningless situations when they find themselves in them. Though research showing a lack of motivation on the part of those in a good mood has been generally assumed to indicate those who are in a positive mood are busy maintaining that mood, the present results suggest that these findings may have more to do with the capacity of those in a good mood to detect meaninglessness when it is present.

General Discussion

These six studies present evidence for the strong relation of mood to the experience of meaning in life. First, Study 1 showed that reports of meaning in life are strongly positively related to the experience of positive mood and negatively related to negative mood. These relations dwarfed those of goal-pursuit measures to

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[7] There was a marginal trend in the reading group to find one essay more meaningful than the others, $F(2, 46) = 2.56$, $p > .08$. Because there was no interaction between specific essay and the meaningfulness manipulation, the passage condition was collapsed for all analyses. In order to ensure the wisdom of this tack, an additional regression equation was computed, entering the particular passage that had been read as two dummy variables on the first step of the equation and testing the interactions of these dummy variables with the other predictors. Although there was a significant main effect for dummy variables contrasting Essay 1 with Essay 2 ($\beta = −.28$, $p < .02$), there were no significant interaction effects for these dummy variables. The results of the subsequent regression analyses were parallel to those reported in the main text, with the main effects for the meaning manipulation and essay being qualified by a two-way interaction between positive mood and task meaning manipulation ($\beta = .41$, $p < .006$).

meaning in life. Study 2 demonstrated that the strongest predictor of a day being experienced as meaningful was the amount of PA experienced that day. In addition, retrospective reports of meaning in life were best predicted not by daily meaning reports or goal-related activity or thought but by the average PA experienced in the preceding weeks. In Study 3, the link between mood and meaning in life was only observed in concurrent measures—no prospective relations were found, suggesting that current mood may play a large role in reports of the experience of meaning in life. Studies 4 and 5 showed that meaning in life increased when individuals were primed with positive-mood concepts or when positive mood was induced (and no attributional cue was provided). The experimental data show that positive mood, as a concept and a feeling, enhances the feeling that life is meaningful. When people are in a positive mood, they are more apt to feel life is meaningful. Finally, Study 6 indicated that rather than find any situation meaningful, PA was associated with discriminative responding such that those in a good mood found a meaningful task quite meaningful but a meaningless task less meaningful.

We began this article by describing a number of potential substantive reasons why PA may enhance meaning in life. The studies reported speak directly to some of these assertions. The results of Studies 1 and 2 do not suggest that PA is related to enhanced meaning in life via its relation to goal progress. Instead, the results of these studies indicate that PA relates to meaning in life over and above its relation to goal processes. Study 2 also demonstrated that mood predicted the meaningfulness of a day, even controlling for goal-directed behavior. We suggested that the cognitive effects of PA may also account for its relation to meaning in life. These cognitive mediators were not directly tested in the present studies. However, Studies 4 and 5 present particularly important information about the potential role of cognitive biases in judgments of meaning in life. Study 4 indicated that simply priming positive concepts enhanced reports of meaning in life. Study 5 demonstrated the tendency of those in a positive mood to use this mood to claim a more meaningful life. The results of a single study demonstrating the tendency to use mood as information in judgments of meaning in life obviously does not rule out the possibility that the cognitive or behavioral effects of PA may account for some of the relation between PA and meaning in life. Future research might incorporate measures of the cognitive consequences of PA (beyond mood as information) to address whether the robust relation between PA and meaning in life is attributable to processes such as those described in the broaden-and-build theory of positive emotion (Fredrickson, 1998). Study 6 extended these findings to the perception of meaning in an activity. Though we may have expected PA to relate to an overall "meaningfulness bias," in contrast, results demonstrated that positive mood related to a tendency to perceive meaning when it was present but to notice the meaninglessness of a meaningless activity. We suggest that the strong relation of PA to meaning (demonstrated most dramatically in Study 4) may lead individuals to be ready for meaning when in a good mood.

The Place of Pleasure in the Meaningful Life

The partitioning of pleasure away from notions of the good life occurs in a variety of contexts. As mentioned, Aristotle (1962) contrasted hedonism with eudaimonism, suggesting that the latter was the hallmark of the good life. Waterman (1993) has argued that eudaimonism can be contrasted with simple pleasure in that eudaimonism emerges from activities that are expressions of one's essential self. Ryan and Deci (2001) described the field of well-being research as falling into two camps: that which focuses on hedonism (pleasure) and that which focuses on eudaimonism (fulfillment via actualization of one's potential). Even in psychological circles in which positive human qualities are explicitly embraced, basic human pleasure has not been viewed as a particularly useful experience. Seligman (2002) termed minor pleasurable experiences as "shortcuts to happiness" (p. 8) and declared hedonic experience to fall short of the greater accomplishment of a life of virtue.

Our results suggest that the lines between hedonic pleasure and more "meaningful pursuits" should not be drawn too rigidly. Adaptive human behavior is frequently accompanied by pleasure—this is evolution's way of ensuring that these behaviors will occur (e.g., de Waal, 1992). Hedonism in its extreme form has a well-earned bad reputation (e.g., the Marquis de Sade). But pleasure, itself, need not be viewed as inconsequential or routinely destructive in the larger context of human life. On the basis of the present studies, we suggest that hedonic aspects of experience have a role to play in higher experiences such as meaning in life. In these studies, PA was shown to enhance the feeling of meaningfulness. Furthermore, individuals in a positive mood were more receptive to meaning when it was presented to them and more dismissive of a relatively meaningless endeavor. The experience of pleasure leads to an enhanced sense of the meaningfulness of existence as well as a readiness to perceive and experience the truly meaningful. If experiences of meaning are important to well-being, then, clearly, pleasure has a place in the meaningful life.

The intertwining of the experience of PA and meaning were anticipated nearly half a century ago by Gordon Allport (1961) in his description of the healthy, mature person. Allport discussed the importance of both humor and a unifying philosophy of life (often via intrinsic religious commitment) to the attainment of healthy maturity. Allport viewed both humor and religion as ways through which individuals are afforded insights about their life experiences, and, he argued, presciently, that both humor and religious faith could take an individual "out of the routine frame . . . smashing the context of literal-mindedness" (p. 301). Allport eloquently contrasted the religious person with the cynic through "the conviction that at bottom something is more important than laughter, namely the fact that he, the laugher, and the laughter, itself, have a place in the scheme of things" (p. 301). Our results suggest a connection that eluded even Allport—namely, that laughter, itself, plays a role in the person's sense of his or her place in a larger scheme.

The results of these studies lead us to propose a tentative model of PA and the experience of meaning in life. The cognitive effects of PA are well documented. PA leads to a global focus, to a broadened mindset, and a capacity to make unusual and creative connections between elements. Most research has concerned itself with documenting these effects without considering their implications for other aspects of the person's life, such as the experience of meaning. It may be that PA leads individual's personal meaning systems (thought to be fairly high in a hierarchy of motivation) to become available, allowing the person to experience the relevance

of their personal meaning systems to current life experience. This idea is congruent with research that suggests PA facilitates top-down cognitive processing strategies, such as the use of general knowledge structures (Bless, 2001), which may help individuals make inferences beyond their external circumstances (cf. Fielder & Bless, 2000). With regard to finding or experiencing meaning in life, a positive mood may make salient general meaning structures such as one's preexisting religious beliefs (e.g., "God's will") or personal philosophy of life (e.g., "People are basically good"). That is, the contents of the person's broadened mind may include higher level schemas that serve as chronic sources of meaning. Furthermore, through its relation to creative problem solving, PA may allow individuals to recognize the relevance of such systems of meaning to situations that may have seemed, previously, to be contradictory or paradoxical. The capacity to assimilate experiences into these structures may result in a heightened sense of meaning in life. If the subjective sense of meaning emerges from a connection between one's existence and a broader framework of meaning, then it is not difficult to imagine that PA opens the person's perspective so that the meaning-relevant aspects of existence become central. The results of Study 6 suggest that PA may lead to an enhanced sensitivity to meaning when it is present or a readiness for a meaningful experience. Perhaps the broadened mind of the person in a positive mood is well suited to high-level, abstract answers to the question: What makes life meaningful?

We have relied primarily on the cognitive consequences of affect to guide our thinking with regard to the relations of PA and meaning in life. There may be motivational considerations as well. For instance, if the search for meaning is a chronic human motive (e.g., Frankl, 1963/1984), then PA may serve dual functions. On the one hand, the cognitive broadening that follows from PA may allow the person to "solve" the problem of meaning. On the other hand, affect itself may serve as a sign to stop one's search for meaning because meaning has been found (in line with work by Martin, Ward, Achee, & Wyer, 1993). The research presented here represents merely the beginning of the evaluation of a model of the relations of positive mood to meaning in life.

The Experience of Meaning Versus the Search for Meaning

The present results are limited to the experience of meaning and do not directly implicate the domain of meaning making itself. Much research has supported the notion that those who are able to find meaning in traumatic life events are better off than those who cannot (McIntosh et al., 1993). Our results suggest that research might address the extent to which the reinstatement of positive feelings may precede the experience of life as meaningful. Folkman and Moskowitz (2000a, 2000b) have highlighted the role of positive emotional experiences in the context of negative life experiences. Positive emotional experiences have been shown to aid coping in a variety of ways (e.g., by speeding recovery from negative emotions or providing a respite from negative emotional times). Our results indicate that another way positive emotional experiences facilitate coping is by enhancing the feeling of meaningfulness. Along the lines suggested in work by Fredrickson and colleagues (e.g., Fredrickson, 1998, 2001, 2002), positive emotions may foster a cognitive broadening that facilitates the forming of meaningful connections between elements of experience—al-

lowing the person to more readily connect his or her life to a larger meaning framework. Future research on coping and meaning making should incorporate measures of mood not only as outcomes but also as contributors to the coping process.[8]

The Role of NA

Although our primary focus in these studies was on PA, results also have implications for our understanding of negative mood and meaning in life. In the correlational studies, NA shared a robust relationship with lowered levels of meaning in life, suggesting that NA shares a strong negative relation with the experience of meaning. However, experimentally induced NA did not cause lowered levels of meaning in life. Interpretation of these results must be tempered because our manipulation of NA was not sufficiently strong to produce reliable differences in NA. We offer some thoughts here merely as suggestions for future work on mood and meaning in life. In contrast to PA, the cognitive effects of NA include the narrowing of attention and analytical focus (Clore, 1994). These effects may reduce the global subject sense of meaningfulness (as shown in Studies 1–3), but they may be especially useful in the search for meaning in the life experiences that foster negative mood (King & Hicks, in press). Whereas PA may facilitate more abstract, top-down answers to the question of meaning, NA may be important to the bottom-up struggle that may characterize coping with situations in which one's preexisting meaning structures cannot assimilate experience (cf. Block, 1982). This idea resonates well with theory that suggests the data-driven, bottom-up processing strategies facilitated by NA have an adaptive function (e.g., Schwarz, 2001). These considerations bring to the fore the potential complexity of the relation of mood states to the experience of meaning—and to the crucial need for specific definitions of meaning. If meaning indicates that a person has a sense for his or her place in some grand scheme, then PA may be an important factor. However, if meaning indicates that a person finds a lesson in a past experience, then NA may play a greater role.

Daily Meaning in Life

The present results provide an initial empirical examination of the possibility of meaning in life as a daily experience. More important, participants did not balk at rating the meaningfulness of their lives in the past 2 days (in Study 1) or on a daily basis (in Study 2). Daily meaning in life was found to be largely derivative of global meaning measures. However, and interestingly, in Study 2, daily-meaning-in-life ratings were not as strongly related to

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[8] The results of Study 6 suggest that people in a positive mood have a heightened sensitivity to meaning. This result may seem to indicate that in less than optimal situations (e.g., having an unsatisfying job, coping with the senseless death of a loved one), PA may actually lead to lowered perceptions of meaning (i.e., the accurate detection of apparent chaos). We would argue that our experimental induction of meaninglessness was quite meaningless, even artificially meaningless. Events and experiences embedded in real life may have a greater potential for meaning. Although people in a positive mood may be sensitive to the meaninglessness of a situation, they may also be more sensitive to the broad array of meaningful aspects of their lives in general, or they may be able and motivated to readily connect a current situation to a larger personal meaning system.

subsequent global judgments of meaning as was average daily PA. Furthermore, daily meaning in life was less strongly related to goal activity than to the occurrence of positive and negative mood. It may be premature to conclude that daily meaning in life may simply reflect a person's level of happiness on a given day. It may be, again, that the cognitive effects of naturally occurring PA lead individuals to "truly" experience their lives as more meaningful on "happy days." Certainly, the present data lay the groundwork for future research on potential mediators of the relationship between mood and the experience of meaning in life.

Limitations and Future Research Directions

The present studies certainly have limitations that warrant discussion. First, many theorists agree that the construct of meaning in life is more inclusive than the intuitive ideas of life's meaningfulness that were the focus of the present studies. For example, Reker and Wong (1988) suggested that personal meaning (i.e., meaning in life) consists of at least three related components: a cognitive component that involves having a clear understanding of one's experiences, a motivational component that is determined by the system of values one has created, and an affective component in which satisfaction and fulfillment emerge out of meaningful experiences. Clearly, in these studies, we focused solely on the subjective feeling of meaningfulness. It remains for future research to address the relations of mood to the other theorized aspects of meaning in life.

Second, our work also relied wholly on self-report measures of meaning in life. *Meaning* has been defined broadly as "shared mental representations of possible relationships among things, events, and relationships" (Baumeister, 1991). From a philosophical perspective, Kraut (1979) has suggested that eudaimonism can be evaluated objectively, in contrast to the purely subjective experience of hedonic pleasure. Thus, it may be possible for outsiders to objectively rate whether a person's life meets some shared standard of meaningfulness. However, and importantly, mood may still play a role in these judgments. Observers may use a person's happiness as their best cue to the person's meaning in life, or the PA of an observer may influence judgments of the meaning present in another's life.

Future research might also incorporate narrative methodology in order to gain a sense of the process by which meaning is created from life experiences. Narratives have been portrayed as instantiations of meaning making (e.g., McAdams, 1993). An examination of the creation of meaning-in-life events via story may allow for a better understanding of what people do when they find something meaningful. Presently, we are examining the ways in which the meaning-making strategies used in stories about positive and negative life events relate to the experience of meaning in life and well-being (Hicks, King, & Dauve, 2006).

Another limitation of the present studies was in our measurement of goal processes. In Studies 1 and 2, we used personal goals as a context of comparison for the relations of mood and meaning in life. It is important to keep in mind that although goal appraisal and goal activity and thought tended to have much smaller relations to meaning in life than measures of mood, these relations did indeed emerge. One explanation for the weaker relations between goal processes and meaning in life is that the goal data were less direct than the mood measures because they depended on an outside rater's interpretation of the goal relevance and did not take into account the individual's new goals, important goals that were not listed during the initial assessments, and so forth.

Furthermore, in Study 2, our measurement of goal-related thoughts was assessed by comparing participants' descriptions of what they were currently thinking about with the goals they listed on the initial questionnaire packet. It is possible that this assessment of goal-related thoughts led to the weaker prediction of meaning in life compared with PA because the thought assessment only took into account what the individual was thinking about at that moment (i.e., it did not take into account whether the individual was thinking about his or her goals 20 min before the assessment), whereas the mood measures may have assessed the individual's mood for most (or all) of the time between assessments.

Finally, the goals we examined were simply those generic goals people generated in response to stems. Research has demonstrated that the relation of a person's goals to his or her higher level needs mediates the relations of goal progress to well-being. For instance, Sheldon and Elliot (1999) found that progress on goals that are "self-concordant" was most closely tied to well-being (see also Sheldon & Kasser, 1998). Because we did not measure the relation of goals to more intrinsic needs, our results likely underestimate the role of goal processes in the experience of meaning.

In Study 3, we concluded that there was no prospective relationship between PA and meaning in life. That is, the study did not provide any evidence that PA leads to the experience of meaning, nor that the experience of meaning leads to enhanced PA over time. It is important to note, however, that the 2-year time interval between assessments may have been too long to capture the prospective relation between PA and meaning. This may be especially true given the fact that people may experience many significant events over the course of 2 years (e.g., getting involved in a long-term romantic relationship, graduating college, death of a close family member, and so forth). It is possible that a prospective relationship between PA and meaning in life would emerge if the variables were assessed over a shorter time span or took into account intervening events and the meaning experienced or created out of them.

A final limitation of the present studies is that the samples studies were typically composed of homogeneous undergraduates (with the exception of Study 3). It remains for future research to examine whether our findings are generalizable to more diverse samples in a variety of settings. We venture to suggest that they may be. Recent research on positive experiences in the midst of difficult life events (e.g., Folkman & Moskowitz, 2000) supports the adaptive role of pleasure even in dire circumstances. Individuals facing discrimination, poverty, and severe circumstances clearly maintain the capacity to experience positive states and engage in meaningful behavior. The capacity to find joy in very difficult or even horrific circumstances is recognized as a remarkable human quality (e.g., Frankl, 1963/1984; King & Miner, 2000). It may be that the relationship between positive emotional experience and feelings of meaning allow individuals to rise above circumstances and to embrace the concept of hope despite apparent chaos.

Conclusions

The construct of meaning in life has a long history in psychology and is widely viewed as an important component of the good

life. There is ample reason to believe that the experience of meaning enhances a person's positive feelings. The results of this set of studies lead to the conclusion that PA also enhances the experience of meaning in life. PA was strongly related to meaning in life, and primed and induced PA led to enhanced meaning-in-life judgments. Furthermore, naturally occurring PA interacted with manipulated task meaning to predict experienced meaningfulness, suggesting that positive mood may serve as a readiness for the experience of meaning. More important, we examined meaning in life outside of the context of coping in the present studies. In contrast to the struggle to find meaning that may characterize successful coping with life difficulties, meaning in life during unexceptional times may be less problematic. We suggest that, for a broad array of reasons, happiness may be experienced as the natural habitat of meaning, perhaps partially because of the facilitation of meaningful experience provided by positive mood and partially because of the response biases instilled by that mood. The program of studies reported here lays a strong foundation for research exploring affect and meaning and applying the considerable research literature on mood and cognitive processing to the important human problem of the experience and creation of meaning in life.

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(*Appendix follows*)

Appendix A

Materials Used in Study 6

Passage 1

To some people, surrender may have negative connotations, implying defeat, giving up, failing to rise to the challenges of life, becoming lethargic, and so on. True surrender, however, is something entirely different. It does not mean to passively put up with whatever situation you find yourself in and to do nothing about it. Nor does it mean to cease making plans or initiating positive action.

Surrender is the simple but profound wisdom of yielding to rather than opposing the flow of life. The only way that you can experience the flow of life is by living in the present, so to surrender is to accept the present moment unconditionally and without reservation. It is to relinquish inner resistance to what is. Inner resistance is to say "no" to what is, through mental judgment and emotional negativity. It becomes particularly pronounced when things "go "wrong," which means that there is a gap between the demands or rigid expectations of your mind and what is. That is the pain gap. If you have lived long enough, you will know that things "go wrong" quite often. It is precisely at those times that surrender needs to be practiced if you want to eliminate pain and sorrow from your life. Acceptance of what is immediately frees you from mind identification and thus reconnects you with Being. Resistance is the mind.

Passage 2

Consider the following. We humans are social beings. We come into the world as the result of others' actions. We survive here in dependence on others. Whether we like it or not, there is hardly a moment of our lives when we do not benefit from others' activities. For this reason, it is hardly surprising that most of our happiness arises in the context of our relationships with others. Nor is it so remarkable that our greatest joy should come when we are motivated by concern for others. But that is not all. We find that not only do altruistic actions bring about happiness but they also lessen our experience of suffering. Here, I am not suggesting that the individual whose actions are motivated by the wish to bring others' happiness necessarily meets with less misfortune than the one who does not. Sickness, old age, mishaps of one sort or another are the same for us all. In our concern for others, however, we worry less about ourselves. When we worry less about ourselves, an experience of our own suffering is less intense.

What does this tell us? Firstly, because our every action has a universal dimension, a potential impact on others' happiness, ethics are necessary as a means to ensure that we do not harm others. Secondly, it tells us that genuine happiness consists in those spiritual qualities of love, compassion, patience, tolerance and forgiveness and so on. For it is these which provide both for our happiness and others' happiness.

Passage 3

Under any circumstances, always do your best, no more and no less. But keep in mind that your best is never going to be the same from one moment to the next. Everything is alive and changing all the time, so your best will sometimes be high quality, and other times it will not be as good. When you wake up refreshed and energized in the morning, your best will be better than when you are tired at night. Your best will be different when you are healthy as opposed to sick, or sober as opposed to drunk. Your best will depend on whether you are feeling wonderful and happy, or upset, angry, or jealous.

In your everyday moods, your best can change from one moment to another, from one hour to the next, from one day to another. Your best will also change over time. Regardless of the quality, keep doing your best—no more and no less. If you try too hard to do more than your best, you will spend more energy than is needed, and in the end your best will not be enough. When you overdo, you deplete your body and go against yourself, and it will take you longer to accomplish your goal. But if you do less than your best, you subject yourself to frustrations, self-judgment, guilt, and regrets.

Just do your best—in any circumstance in your life. It doesn't matter if you are sick or tired, if you always do your best, there is no way you can judge yourself. And if you don't judge yourself, there is no way you are going to suffer from guilt, blame, and self-punishment. By always doing your best, you will break a big spell that you have been under.