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A longitudinal follow-up study of happiness and meaning-making

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The long-term outcomes associated with happiness and meaning-making were examined by following up on participants in previous studies on experiential learning an average of 2.5 years later. Measures of happiness and meaning-making were extracted by analyzing the participants’ journals using a computerized text-analysis program. Happiness as assessed by a composite measure of positive emotionality showed weak associations with the measures of adaptive functioning, and was negatively correlated with optimism, as well as positively correlated with emotion suppression. By contrast, meaning-making as assessed by composite measures of cognitive processing and self-distancing was robustly positively correlated with almost all measures of adaptive functioning. Regression analyses revealed that the two measures of meaning and their interaction term accounted for 20–24% of the variance in predicting the outcome measures. This study revealed that there may be at times a trade-off between happiness and meaning-making as well as a reversal in their patterns of long-term outcomes.

Keywords: happiness; meaning-making; self-distancing; longitudinal; text-analysis; LIWC

In recent years, there has been a great deal of interest in elucidating the similarities and differences between happiness and meaning in life (e.g. Batthyany & Russo-Netzer, 2014; Baumeister, Vohs, Aaker, & Garbinsky, 2013; Kashdan, Biswas-Diener, & King, 2008; Sheldon, Kashdan, & Steger, 2011; Wong, 2012). The general consensus is that happiness and meaning in life are both core components of a good life and often overlap considerably. There is, nevertheless, substantial disagreement as to how they are interrelated and to what extent they can be differentiated from one another. Some have argued that happiness and meaning in life are not only robustly correlated, but also reciprocally influence one another, and thus are essentially indistinguishable (e.g. Kashdan et al., 2008; King & Hicks, 2012). Others have claimed that even though there may be a substantial overlap between happiness and meaning in life, it is not only possible to differentiate between the two, but that under some circumstances, there may be some tension or even a trade-off between seeking happiness and meaning in life (e.g. Baumeister & Vohs, 2013; McGregor & Little, 1998; Wong, 2011).

Conceptual and methodological issues

A clear understanding of the similarities and differences between happiness and meaning in life has been complicated by the fact that both constructs have been conceptualized and measured in various ways. Even though some researchers have presented a broader definition of happiness, which encompasses meaning in life (Seligman, 2002), in general, when laypersons and scientists use the word happiness, they are referring to hedonic happiness or subjective well-being. Hedonic happiness is defined as the presence of frequent positive and infrequent negative emotions and can be assessed as an aggregate of how one feels across different moments. Subjective well-being is a broader construct that incorporates hedonic happiness as one of its components, but is also based on an overall cognitive assessment of the level of satisfaction with one’s life (Larsen & Eid, 2008).

Compared to the definition of happiness, the definition of meaning in life is more complex, in part because many different models have been proposed (see Batthyany & Russo-Netzer, 2014; Wong, 2012). The general consensus is that meaning in life has at least two major components (Steger, 2012; Wong, in press b). The first component is cognitive and it involves making sense of and integrating our experiences to develop a coherent understanding of ourselves, the world around us, as well as how we fit in with and relate to the world (Steger, 2012; Wong, in press, b). The second component, purpose, is the motivational component and it involves actively pursuing long-term goals that reflect core aspects of one’s identity and that also transcend one’s narrow self-interests (Steger, 2012; Wong, in press a). Because meaning in life involves the complex process of finding continuity in one’s life as well as feeling connected to something external to and larger than oneself, it has a

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longer time frame and is associated with a more self-transcendent perspective than happiness (Emmons, 2003; Peterson & Park, 2012; Steger, 2012; Wong, in press a).

Research on happiness and meaning in life has also been hampered by several methodological issues. The bulk of the extant studies have used self-report measures, which tend to be highly correlated with one another (e.g. Baumeister et al., 2013; Fredrickson et al., 2013). To differentiate between happiness and meaning in life, researchers typically examine the correlates of each of the variables, while statistically controlling for the other variable, which removes the shared variance, and makes them difficult to interpret (e.g. Coyne, 2013). Another drawback to using self-report measures is that meaning-making, or the process of making sense of and integrating one’s experiences, involves a complex interplay between conscious and nonconscious processes. Because much of the cognitive work involved in meaning-making may take place out of conscious awareness, it may be difficult for a person to report (Park, 2010; Wilson, Ndiaye, Hahn, & Gilbert, 2013).

Another methodological limitation to the extant studies on happiness and meaning in life is that very few of them have followed participants over long periods of time. Given that pursuing meaning in life requires active engagement and involvement in activities that reflect core aspects of one’s identity, it is likely to engender stress and frustration in the short term, but may be associated with positive outcomes in the long term (McAdams, 2008; Park, 2010; Wong, 2011). Conversely, a growing body of research reveals that pursuing happiness may paradoxically be associated with decreased sense of well-being over time (e.g. Gruber, Mauss, & Tamir, 2011; Schooler, Ariely, & Lowenstein, 2003). Thus, studies with an ample and varied follow-up period are likely to better capture long-term outcomes associated with happiness and meaning-making.

Present study
The present study seeks to shed further light on the relations between happiness and meaning in life by following up on participants in previous studies on experiential learning (Abe, 2009, 2011) an average of 2.5 years later. In this study, measures of happiness and meaning-making were extracted from participants’ weekly journals, which were written over the course of the semester. The participants in this study were given a great deal of latitude in terms of the events that they focused on in their weekly journals and were also encouraged to elaborate on their thoughts and feelings associated with their practicum experiences. This study has a number of unique features that extend the existing research on happiness and meaning in life. One advantage to the design of this study is that it enabled us to obtain measures of emotions that were aggregated over a period of time. Another advantage in using narratives in research on happiness and meaning is that the very process of writing about events is likely to facilitate the processing of emotion experiences and the integration of events into a larger overarching meaning system. As Wilson and colleagues observed, even though ‘writing is a deliberate process … (it) stimulates nonconscious, generative processes, which actually might be doing the real work of meaning-making (Wilson et al., 2013, p. 438).’ Thus, the process of meaning-making is also likely to be better captured by journals that are written over a period of time, rather than a self-report measure that is administered at a single time.

The participants’ journals were analyzed using LIWC, which is a well-validated computerized text-analysis program (LIWC; Pennebaker, Chung, Ireland, Gonzales, & Booth, 2007) that has been used extensively in a wide range of research studies. In this study, happiness was assessed using positive emotion words as well as a composite measure of positive emotionality. Previous research has shown that the LIWC emotion dimensions accurately assess affective states in personal narratives (for recent review see Tausczik & Pennebaker, 2010).

Given that meaning in life is a more complex construct than happiness and many different models have been proposed, it is more difficult to capture and assess all of its domains. This study focused on two distinguishing characteristics associated with seeking situational-meaning, namely, meaning-making and self-transcendence (Wong, in press a). In this study, the process of meaning-making was assessed using insight and causation words. An impressive body of research reveals that these cognitive processing words are powerful markers of efforts to make sense of and integrate one’s emotional experiences and are also associated with salutary outcomes (for recent review see, Pennebaker & Chung, 2011). For example, studies have shown that individuals who show increases in insight and causation words over the course of writing about an emotional upheaval show improved health (Pennebaker, 1997) as well as increases in working memory and decreases in intrusive thinking about negative events (Boals & Klein, 2005; Klein & Boals, 2001). LIWC cognitive processing words have also been associated with the positive reframing subscale of the Brief COPE as well as judges’ ratings of the meaning-making process (Boals, Banks, Hathaway, & Schuettler, 2011). Other studies have found that insight and causation words generally precede the development of narrative coherence and reflect the active search for meaning (e.g. Klein & Boals, 2010).

Self-transcendence refers to the ability to distance ourselves from our narrow self-interests and to view ourselves from a broader self-detached third-person perspective (Wong, 2014, in press a). According to Wong (in
press a): ‘Self-detachment and self-distancing not only enables us to have a more accurate observation of our experience, but also allows us spaciousness to access our spiritual values such as conscience, compassion, will to meaning, and responsibility.’ Previous research using the LIWC reveals that pronouns can serve as a powerful marker of attentional allocation (Tausczik & Pennebaker, 2010). Thus, following the procedure used in previous studies (e.g. Abe, 2012), participants’ use of first-person and third-person pronouns were used as indices of internal and external focus, respectively. These measures of internal and external focus were, in turn, used to derive a composite measure of self-distancing. Previous research has found that meaning-making and asking ‘Why?’ are likely to be particularly productive and associated with positive outcomes if the person adopts a self-detached third-person perspective (Kross & Ayduk, 2011; Kross, Ayduk, & Mischel, 2005; Park, 2010). Thus, this study also examined whether the interaction between the measures of cognitive processing and self-distancing would account for additional variance over and above these two measures of meaning in predicting the outcome measures.

The original studies on experiential learning (Abe, 2009, 2011) found that students’ use of positive emotion words were robustly associated with site supervisors’ concurrent ratings of their performance in various domains.1 These findings were broadly consistent with the ‘broaden-and-build’ theory that positive emotions not only index happiness, but may also be associated with cognitive and behavioral flexibility (Fredrickson, 1998). By contrast, cognitive processing words, in particular causation words, showed weak and inconsistent relations with supervisors’ ratings of students’ performance. These findings ran somewhat counter to the predictions derived from the literature on experiential learning, which has long stated that reflection is ‘one of the core process variables’ (Eyler & Giles, 1999, p. xii) involved in successful experiential learning.

Based on theory and research, this study predicted that there may be a reversal in the patterns of outcomes associated with happiness and meaning-making at follow-up. As stated earlier, a growing body of research reveals that even though meaning-making may generate negative affect in the short term, it may contribute to resilience and well-being in the long term (McCormick, 2008; Park, 2010; Wong, 2011). With respect to happiness, this study had competing hypotheses. An impressive body of research has found that hedonic happiness is not only robustly associated with positive outcomes in multiple domains, but also predicts these outcomes (Lyubomirsky, King, & Diener, 2005). However, a number of recent studies have also found that pursuing happiness is associated with an increased sense of loneliness and a decreased sense of well-being (Mauss, Savino, et al., 2011; Mauss, Tamir, Anderson, & Savino, 2011). In particular, extremely high levels of positive emotionality have been associated with negative outcomes (Grant & Schwartz, 2011; Gruber et al., 2011). Thus, this study predicted that happiness may be associated with a mixed pattern of outcomes at follow-up.

Method
Participants
The participants in this study (N = 79; 96% female; mean age = 25) were recruited by sending an email announcement of the follow-up study to students who participated in one of the two previous studies on experiential learning (Abe, 2009, 2011). At the time they participated in the original studies, they were enrolled in an undergraduate field practicum course and completed a 150-h practicum at a mental health setting. All of the students were required to submit weekly journals of their practicum experiences to their faculty supervisor. In their journals, students were encouraged to not only describe their practicum experiences, but to also elaborate on their thoughts and feelings associated with their experiences. Only students with complete journals were included in the previous studies. In the current follow-up sample, the mean number of words that the students wrote over the course of the semester was 8820 words (SD = 3715).

Due to the limited enrollment in the practicum classes, the data for the previous studies were collected over the course of several years; thus, the time frame for the follow-up ranged from .5 years to 7 years (average number of years = 2.5). Approximately 60% of the participants in the previous studies participated in the follow-up study and received a $15 Barnes and Noble gift certificate. A comparison of those who participated and did not participate revealed that the two groups did not systematically differ in terms of their site supervisors’ global assessment of their performance or their scores on the linguistic dimensions.

Measures
LIWC (Pennebaker et al., 2007)

Measures of emotion words, cognitive processing words, and pronouns were obtained by analyzing students’ journals using the LIWC. The program searches for target words or word stems from an extensive dictionary, categorizes them into linguistic dimensions, and then converts the raw counts to percentages of total words. The LIWC composite scores were computed following the procedure outlined in previous studies (Abe, 2012; Cohn, Mehl, & Pennebaker, 2004).
Life orientation test-revised (LOT-R; Scheier, Carver, & Bridges, 1994)
The LOT-R ($\alpha = .75$) consists of 10 items (4 filler) and assesses individual differences in generalized optimism and pessimism. LOT has been associated with adaptive coping styles and subjective well-being.

Gratitude questionnaire (GQ-6; McCullough, Emmons, & Tsang, 2002)
The GQ scale ($\alpha = .79$) consists of six items and assesses the disposition to experience gratitude. GQ has been found to be positively correlated with empathy and prosocial behaviors.

Emotion regulation questionnaire (ERQ; Gross & John, 2003)
The ERQ consists of 10 items and assesses individual differences in the habitual use of 2 emotion regulation strategies. Cognitive reappraisal ($\alpha = .73$) is an antecedent-focused strategy that involves reframing events early in the emotion-generation process, whereas emotion suppression ($\alpha = .80$) is a response-focused strategy that involves coping with stressful situations by inhibiting and masking negative feelings.

Psychological well-being scale (PWB; Ryff & Keyes, 1995)
The PWB is a theoretically based measure of well-being that is designed to yield scores on six dimensions. The 18-item version of the PWB was used in this study. According to McGregor and Little (1998), self-acceptance and environmental mastery correlate highly with traditional measures of happiness, whereas the remaining subscales load on the meaning factor. Given that the reliabilities for some of the PWB subscales were extremely low in this study, the subscale items for self-acceptance and environmental mastery were aggregated to create a Happiness subscale ($\alpha = .74$) and the remaining items for the growth, purpose, relationships, and autonomy subscales were aggregated to create a Meaning subscale ($\alpha = .71$).

Grit (Duckworth, Peterson, Matthews, & Kelly, 2007)
The Grit questionnaire ($\alpha = .76$) consists of 12 items and assesses individual differences in consistency of interest and perseverance of effort for long-term goals. High scores on this scale have been associated with successful achievement outcomes in a wide range of domains.

Results
Main analyses
The correlations between the LIWC variables with the outcome measures are shown in Table 1. In general, the emotion variables showed weak associations with the measures of adaptive functioning. Somewhat unexpectedly, positive emotion words as well as the composite measure of positive emotionality, which were used to index happiness, were negatively correlated with optimism and positively correlated with emotion suppression at follow-up. By contrast, cognitive processing words, which were used to index meaning-making, were positively correlated with almost all of the measures of adaptive functioning, with the exception of cognitive reappraisal. Third-person pronouns, which were used as an index of external focus, were positively correlated with most measures of adaptive functioning, whereas first-person pronouns, which were used as an index of internal focus, showed the exact opposite patterns of relations with the outcome measures. The composite measure of self-distancing, which was used to index self-transcendence, was robustly positively correlated with most measures of adaptation.

In this study, the time frame for the follow-up varied across the participants. To examine whether number of years to follow-up and/or the age of participants should be used as a covariate in the regression analyses, the correlations between number of years to follow-up as well as age at follow-up and the outcome variables were computed. Age at follow-up was not associated with any of the outcome variables, but number of years to follow-up was positively correlated with LOT-R and Grit. Thus, number of years to follow-up was used as a covariate in the regression analyses for these two outcome measures.

Additional analyses
Given that the analyses for positive emotionality yielded some unexpected results, additional analyses were conducted to gain a more precise understanding of its relationship with the various outcome measures. Previous research reveals that the relations between positive emotionality and measures of adaptive functioning are often curvilinear, with extremely high levels of positive emotionality showing associations with negative outcomes (Grant & Schwartz, 2011). Thus, in the first set of follow-up analyses, curvilinear relations between positive emotionality and the outcome variables were examined. The regression curve fit analyses with positive emotionality as a predictor variable revealed a significant quadratic trend for optimism $F(2, 76) = 4.88, p = .01$, emotion suppression $F(2, 75) = 7.33, p = .001$, and gratitude, $F(2, 75) = 4.03, p < .05$, with high levels of positive emotionality showing a negative association with optimism and gratitude and a positive association with emotion suppression. The quadratic analyses accounted for a larger percentage of the variance in predicting the outcome measures than the simple linear analyses, further supporting the view that excessively levels of positive emotionality are particularly likely to be associated with undesirable outcomes (Gruber et al., 2011).
Another possible explanation for why positive emotionality was not associated with adaptive outcomes at follow-up is that it may interfere with cognitive processing as well as with self-distancing. In support of this explanation, previous research has found that positive affect is associated with an internally focused, assimilative processing style, whereas negative affect is associated with an externally focused, accommodating processing style (Forgas, 2013). Thus, the correlation between positive emotionality and the two measures of meaning were examined. Pearson's correlations revealed that positive emotionality was, in fact, negatively correlated with the composite measure of cognitive processing \((r = -.34, p < .01, \text{two-tailed})\) as well as the composite measure of self-distancing \((r = -.49, p < .001, \text{two-tailed})\).

To examine whether the weak and inconsistent relations between positive emotionality and the outcome variables were due in part to its shared variance with the two measures of meaning, a series of partial correlations were computed. The partial correlations revealed that controlling for cognitive processing did not change relations between positive emotionality and the outcome variables. However, the partial correlations for self-distancing revealed that positive emotionality was no longer significantly correlated with emotion suppression \((r = .12, \text{ns})\) or optimism \((r = -.12, \text{ns})\) and became positively correlated with the self-report measure of meaning \((r = .21, p < .05)\) as well as marginally positively correlated with the self-report measure of happiness \((r = .17, p = .08)\), once self-distancing was factored out.

**Regression analyses**

A series of regression analyses were conducted to gain a more precise understanding of the relative contribution of cognitive processing and self-distancing in predicting the outcome measures. As stated earlier, previous research suggests that meaning-making is likely to interact with a self-detached third-person perspective in predicting outcomes; thus, the interaction term between the two variables was also entered in the analyses. Given that the number of years to follow-up was associated with two of the criterion variables — LOT and Grit — it was included as a covariate in these regression analyses. To minimize the potential for multicollinearity, positive emotionality was not used as a predictor variable in the regression analyses.

The results of the regression analyses are displayed in Table 2. Quite impressively, in most of the analyses, cognitive processing, self-distancing, and their interaction term made an independent contribution in predicting most of the outcome variables and accounted for 20–24% of the total variance. The significant interaction between cognitive processing and self-distancing provided further support for the view that meaning-making is likely to be particularly productive if the person adopts a self-detached third-person perspective. The only exception to the foregoing pattern of findings was the regression equation for Grit, where adding self-distancing and the interaction term between cognitive processing and self-distancing did not improve the fit of the model. Similar results were obtained when number of years was removed as a covariate in the analysis.

**Discussion**

This study revealed some striking difference in the long-term outcomes associated with happiness and meaning-making. The first major set of findings to emerge from this study was that happiness as assessed by both
positive emotion words and the composite measure of positive emotionality showed weak associations with the measures of adaptive functioning and were, quite unexpectedly, negatively correlated with optimism and positively correlated with emotion suppression at follow-up. The follow-up analyses revealed a significant quadratic trend for the relations between positive emotionality with optimism and emotion suppression, which lends further support for the view that excessively high levels of positive emotionality may be particularly likely to be associated with negative outcomes (Grant & Schwartz, 2011; Gruber et al., 2011). The patterns of findings from this study are consistent with a growing body of research, which reveals is that ‘more is not always better’ in the realm of positive emotionality (Oishi & Kurtz, 2011).

Several explanations may be offered to account for why positivity emotionality was not associated with long-term adaptive functioning. In the original studies on experiential learning, the participants were given substantial latitude in terms of what to write about in their weekly journals. Thus, students who used a high level of positive emotion words and a low level of negative emotion words may have had a tendency to focus on positive events and to avoid processing negative experiences. In the short term, the strategy of focusing on the positive may be associated with beneficial outcomes, as evidenced by the fact that students who used a high level of positive emotion words were rated very positively by their site supervisors in the original studies on experiential learning (Abe, 2009, 2011). It should be noted that the supervisors’ ratings were made without any knowledge of the content of the students’ journals and thus these results cannot be attributed to halo effects. However, as an increasing number of researchers have emphasized, the avoidance of negative thoughts and feelings may over time interfere with personality development, which requires the ability to experience the full range of emotions (Abe, 2015; King, 2011; Park, 2011; Wong, 2011).
Another possible explanation for the findings involving positive emotionality is that individuals who used a high level of positive emotions words and low level of negative emotions words may have had a tendency to inhibit the expression of negative emotions. This explanation would incidentally account for the finding that positive emotionality was associated with expressive suppression at follow-up. As previously mentioned, an impressive body of research reveals that the very process of writing about negative life events is likely to facilitate cognitive restructuring and contribute to a sense of closure. Conversely, the inhibition or suppression of emotions has been found to not only be counterproductive, but to also come with high physiological, cognitive, and social costs (Gross & John, 2003).

Additional findings from this study also shed some light on the mechanism whereby high levels of positive emotionality may interfere with long-term adaptive functioning. In this study, positive emotionality was negatively correlated with the composite measure of cognitive processing as well as the composite measure of self-distancing. The partial correlation analyses revealed that once the shared variance with self-distancing was removed, positive emotionality was no longer significantly negatively correlated with optimism and positively correlated with emotion suppression. Furthermore, controlling for self-distancing made positive emotionality positively correlated with the two broad dimensions of Ryff’s well-being scales. These findings indicate that the weak and inconsistent relations between positive emotionality and the outcome measures were due in part to the fact that it interferes with a self-transcendent perspective, which this study revealed is associated with numerous adaptive outcomes.

In contrast to the composite measure of happiness, the two composite measures of meaning were positively correlated with most of the measures of adaptation. In particular, cognitive processing was robustly correlated with Grit, and self-distancing was robustly correlated with gratitude and well-being, as well as strongly negatively correlated with emotion suppression. In most of the regression analyses, the two measures of meaning made an independent contribution in predicting the outcome measures. Furthermore, their interaction term accounted for additional significant variance in most of the analyses, providing further support for the view that cognitively processing one’s emotion experiences and asking ‘Why?’ are likely to be the more productive and contribute to positive outcomes if the person adopts a self-detached third-person perspective (Kross & Ayduk, 2011). The combination of these three variables accounted for 20–24% of the variance in predicting most of outcome variables, which is particularly impressive when one takes into account that the time frame for the follow-up extended as far back as seven years. The findings from this study thus provide strong support for the view that a meaning mindset or orientation is associated with optimism, resilience, and well-being in the long term (Wong, 2011).

Interestingly, the only exception to the foregoing patterns of findings was the measure of Grit. Even though Grit was positively correlated with both measures of meaning, it was particularly robustly correlated with cognitive processing, and neither self-distancing nor the interaction between self-distancing and cognitive processing accounted for additional significant variance over cognitive processing in the regression analysis. Grit assesses consistency of effort and persistence and entails working strenuously toward one’s goals in spite of challenges and plateaus (Duckworth et al., 2007). Of all the outcome measures included in this study, Grit is arguably the one that is the least likely to involve interpersonal processes. Thus, one possible explanation for why self-distancing did not account for additional variance in predicting Grit is that adopting a broader and more flexible third-person perspective is less important for the single-minded pursuit of achievement.

In this study, the only measure of adaptive functioning that the two measures of meaning were not positively correlated with was cognitive reappraisal. At first glance, the negative correlation between cognitive processing words and the ERQ cognitive reappraisal subscale may seem surprising in that both of them assess efforts to reframe and reappraise events. However, the ERQ subscale assesses an antecedent-focused emotion regulation strategy that involves reframing events early in the emotion-generative process (Gross & John, 2003), whereas cognitive processing is a response-focused strategy that involves making sense of and integrating past emotional experiences.

The robust associations between meaning-making and the outcome measures in the follow-up study are particularly noteworthy in that the cognitive processing words showed weak and inconsistent relations with supervisors’ concurrent ratings of students’ performance in the original studies. In the current sample, the supervisors’ ratings were only weakly correlated with insight words and showed no associations with causation words. Taken together, the findings related to the cognitive processing words add to the growing body of research which indicates that even though efforts towards meaning-making may not translate into short-term tangible benefits or efficacy, it may be associated with long-term adaptive outcomes (Park, 2010; Wong, 2014). These findings have important implications for faculty supervisors and educators in that they underscore that there may be a great deal of learning that takes place that is not immediately captured by objective measures and that the benefits that accrue through reflection may not in some cases become evident until many years later.
In summary, this study sheds fascinating new light on the relations between happiness and meaning in life. The findings from this study add to a growing body of research which suggests that there may be at times a trade-off between seeking happiness and meaning in life as well as a reversal in the outcomes associated with happiness and meaning-making over the long term. However, given that different outcomes measures were used in the original experiential learning studies and the follow-up study, it is difficult to tease apart the extent to which the discrepancy in findings reflect an actual reversal in outcomes or are attributable to the fact that distinct domains of adaptive functioning were assessed. Thus, an important follow-up study would be to examine the long-term outcomes associated with happiness and meaning-making using the same set of pre- and post-outcome measures.

Another important avenue for extending the research on happiness and meaning in life is to use a multi-method approach to assess both constructs. As stated at the outset of this study, one of the limitations of the extant research on happiness and meaning has been the overreliance on self-report measures, which are typically administered on a single occasion. This study revealed that content analysis of journals as well as longitudinal research can shed additional light on some of the controversial issues in the field. Other recent studies have incorporated peer-ratings (Stillman, Lambert, Fincham, & Baumeister, 2011) as well as genomic analyses (Fredrickson et al., 2013) to extend our understanding of happiness and meaning in life. Research on subjective well-being has found that even though different types of assessment methods typically do not converge, the differences in patterns of outcomes associated with each of the assessment methods can themselves yield valuable information (Larsen & Eid, 2008) and may thereby help us to reconcile some of the conflicting findings in the field. Another advantage in utilizing multi-method assessment procedures is that it is likely to enable us to more fully capture and assess both of the constructs. For example, the measure of happiness used in this study focused on hedonic happiness, but did not include a measure of satisfaction with life, which is considered to be an integral part of the broader construct of subjective well-being. Similarly, the measure of cognitive processing used in this study may not have captured the entire domain of ‘Why?’ questions (c.f., Wong & Weiner, 1981). In particular, to fully capture the breadth, depth, and dynamic processes associated with meaning in life (Park, 2011; Wong, 2011, 2014) will require a diversity of measures. Such research promises to further illuminate Frankl’s (1974, 1986) profound insights on meaning-seeking, as well as contribute to the maturation of the field of positive psychology (e.g. Batthyany & Russo-Netzer, 2014; Sheldon et al., 2011; Wong, 2011).

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Note
1. Given that the participants in this study consisted of a subset of the participants in two previous studies on experiential learning, the correlations between the emotion and cognitive variables with the supervisors’ ratings were recomputed for this sample. Positive emotion words were positively correlated with professional behavior/demeanor, use of supervision and feedback, organizational ability, and overall impression of student (rs = .33 to .25, ps < .04–.04, one-tailed) and insight words were positively correlated with overall impression of student (r = .19, p < .05). Negative emotion words and causation words were not correlated with any of the supervisors’ rating items. Furthermore, the composite measures of positive emotionality and cognitive processing also were not correlated with any of the supervisor ratings items. The site supervisors’ ratings of the students’ performance were made without any knowledge of the content of students’ journals, thus these results could not be attributed to ‘halo effects.’

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