Personality and Individual Differences 46 (2009) 719–724

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Positive affect, intuition and referential thinking

Laura A. King *, Joshua A. Hicks

Department of Psychological Sciences, University of Missouri, 210 McAlester Hall, MO 65201, Columbia, United States

ARTICLE INFO

Article history:
Received 24 July 2008
Received in revised form 16 January 2009
Accepted 21 January 2009
Available online 23 February 2009

Keywords:
Referential thinking
Intuition
Positive affect
Schizotypy

ABSTRACT

This study tested the prediction that individual differences in intuition would interact with positive affect (PA) to predict referential thinking, in a nonclinical sample. Participants ($N = 146$) completed questionnaires measuring PA, intuition, referential thinking, personality traits, depression, anxiety, and meaning in life. Controlling for anxiety and depression and traits, the interaction of PA and intuition predicted referential thinking. Exploratory analyses demonstrated that at high levels of PA, referential thinking was positively associated with meaning in life. The role of meaning-making processes in referential thinking is discussed.

1. Introduction

Referential thinking is generally included as a component of the positive schizotypy domain, along with magical ideation, odd beliefs, and unusual experiences (Kendler, Ochs, Gorman, Hewit, & Mirsky, 1991; Vollema & Hoijtink, 2000). Referential thinking involves finding self-relevant meaning in random events. *DSM-III-R* defined "idea of reference" as, "an idea...that events, objects, or other people in the person's immediate environment have a particular and *unusual meaning* specifically for him or her" (American Psychiatric Association, 1987, p. 399; emphasis added). Items from commonly used schizotypal personality scales often include direct or indirect reference to meaning (e.g., "Do you sometimes feel that things on the TV or read in the newspaper have a special meaning for you?" from the Schizotypal Personality Questionnaire, SPQ, Raine, 1991). Clearly, referential thinking might be thought of as a type of meaning-making, involving the perception and interpretation of random life events as personally profound and informative. Thus, variables associated with more general ascriptions of meaning to experience might serve as potential predictors of referential thinking. The present study examined whether intuitive processing style, specifically when coupled with positive affect (PA), might predict referential thinking.

Intuitive information processing is rapid, holistic, and associationistic (e.g., Epstein, 1991, 2008). Essentially, intuitive processing involves relying on vague hunches or gut feelings. Intuition is related to the use of heuristics in problem solving, stereotypical thinking as well as superstitious beliefs (Pacini & Epstein, 1999). Recent research has shown that PA facilitates the emergence of beliefs and behaviors guided by intuition. Specifically, PA interacts with individual differences in intuition to predict paranormal belief as well as susceptibility to sympathetic magic (King, Burton, Hicks, & Drigotas, 2007). For example, individuals high on intuition who were induced to experience PA were more likely to rate videos purporting to show UFOs and ghosts as believable and meaningful (King et al., 2007, Study 1). This research provides an indirect empirical inroad to positive schizotypy and referential thinking more specifically, as both of these have been shown to relate to paranormal belief (Genovese, 2005; Hergovich, Schott, & Arendasy, 2008).

Like referential thinking itself, paranormal beliefs involve ascribing a particular type of meaning to ambiguous stimuli. Two people might see the same object in the night sky. For one, it is easily discounted; for another it indicates a visitor from another planet. Similarly, two individuals might have the same fleeting idea of reference (e.g., that a movie plot bears an uncanny resemblance to one's life) but one might dismiss this as meaningless coincidence (or good filmmaking) while another might ascribe unusual meaning.

Importantly, the interaction of individual differences in intuition and PA has implications for general attributions of meaning (not simply paranormal meaning) to experiences. Emerging evidence suggests that the convergence of PA and intuitive processing relates to enhanced ascriptions of meaningfulness to ambiguous stimuli (e.g., Zen koans, life experiences; Hicks, Cicero, Burton, & King, in preparation). Intuitive processing involves relying on one's gut feelings and PA appears to bolster these feelings so that they are reflected in a sense that events are particularly, personally meaningful. Thus, the present study examined the prediction that

* Corresponding author. Tel.: +1 573 882 6389.
E-mail address: kingla@missouri.edu (L.A. King).

0191-8869/$ - see front matter © 2009 Elsevier Ltd. All rights reserved.
doi:10.1016/j.paid.2009.01.031

intuition and PA would interact to predict referential thinking. Rather than predicting a straightforward correlation between intuitive processing and referential thinking, we predicted that referential thinking would, like ascriptions of meaning in past research, be predicted by a convergence of high PA and high intuition.

The relation of positive schizotypy to intuition has been addressed in only one study. Results showed intuitive processing to be unrelated to the cognitive/perceptual factor (that factor most similar to referential thinking) and the interpersonal factor, and negatively related to disorganized schizotypy (Genovese, 2005). Previous research has provided mixed evidence for relations among referential thinking and other personality characteristics. Kerns (2006) found positive schizotypy (including magical ideation, odd beliefs, and unusual experience; those variables conceptually closest to referential thinking) to be largely unrelated to the Five Factor Model (FFM) traits, cognitive control, and emotional clarity. Chmielewski and Watson (2008) found no significant associations between big five dimensions and unusual beliefs and experiences (again, that factor most relevant to referential thinking). In contrast, Kwapil, Barrantes-Vidal, and Silvia (2008) found positive schizotypy to relate positively to neuroticism and openness to experience and negatively to agreeableness and conscientiousness. Interestingly, intuition is related to a very different profile of traits, sharing positive associations with extraversion and agreeableness (Pacini & Epstein, 1999). Clearly, further exploration of analogues to referential thinking in normative personality characteristics remains a goal for research. Notably, few of the traits considered in past research have been particularly germane to the potential meaning-relevant function of referential thinking.

1.1. Overview

To test the main prediction that referential thinking would be predicted by the interaction of intuitive processing style and PA, participants completed measures of PA, intuition, and referential thinking. In addition, participants completed a measure of the FFM to explore the relations between these traits and referential thinking (and to provide control variables for analyses). Because referential thinking (Lenzenweger, Bennett, & Lilenfeld, 1997) and positive schizotypy more generally (Kwapil et al., 2008; Lewandoski et al., 2006) relate to anxiety and depression, measures of these variables were included as control variables as well.

By definition, referential thinking represents the ascription of personal meaning to various life events. As such, this type of thinking might relate to the experience of meaning in life, more generally. To explore this provocative notion, participants completed a measure of meaning in life. Analyses explored the potential relationship of referential thinking to the experience of meaning in life as a function of PA and intuition.[1]

2. Method

2.1. Participants and procedures

One hundred forty-six undergraduates (106 women, 40 men) from a personality psychology class completed a take-home questionnaire packet for extra credit. Participants were instructed to complete the measure in a quiet setting at their own pace and to return the packet in two weeks. When packets were returned (100% were returned) all identifying information was removed. Ages ranged from 18 to 37 years old (M = 20.52, SD = 2.21). Represented ethnicities were 93% White/European American, 5% African American, 1% Asian, and 1% "other."

3. Materials

3.1. Intuition

Individual differences in intuitive processing style were measured using the 20-item Faith in Intuition subscale from the Rational Experiential Inventory (Pacini & Epstein, 1999). A sample item includes, "I believe in trusting my hunches." This measure is related to the use of heuristics in problem solving, stereotypical thinking, superstitious beliefs, extraversion, agreeableness and interpersonal trust (Pacini & Epstein, 1999).

3.2. Positive affect

Participants completed the Positive affect scale from the Positive and Negative affect schedule (Watson, Clark, & Tellegen, 1988) with instructions to rate each descriptor for how much they generally feel that way.

3.3. Traits

The NEO-Five Factor Inventory (Costa, Jr., & McCrae, 1992) has five 12-item scales, measuring neuroticism, extraversion, and openness to experience, agreeableness, and conscientiousness.

3.4. Mental health

The anxiety and depression scales from the Personality Assessment Inventory (Morey, 1991) are each composed of three 8-item subscales, including cognitive, affective, and physiological aspects of depression and anxiety. Subscales are summed to create total scores.

3.5. Meaning in life

Participants completed 4 items drawn from the Purpose In Life test (Crumbaugh & Maholick, 1964), including, "In life, I have very clear goals and aims," "My personal existence is very purposeful and meaningful," "I have clear goals and a satisfying purpose in life," and "I regard my ability to find a meaning, purpose, or mission in life to be very great." Factor analytic work (McGregor & Little, 1998) suggests these items are particularly relevant to the experience of meaning in life and not simply PA. These items have been used in past research on meaning in life (e.g., Hicks & King, 2008).

3.6. Referential thinking

The Referential Thinking Scale (REF; Lenzenweger et al., 1997) was introduced to detect relatively unusual and severe referential thought, likely to be of clinical significance. Items tap non-psychotic ideas of reference, with no mention of paranormal beliefs or explicit reference to meaning. Lenzenweger et al. (1997) reported a test–retest correlation of .86 over four weeks. Although correlated with anxiety and depression, factor analytic work has demonstrated discriminant validity from these variables (along with self-monitoring and self-consciousness) and convergent validity with measures of perceptual aberration, magical ideation (Lenzenweger et al., 1997) and poor performance on a fine motor task (Lenzenweger & Maher, 2002).

[1] Only two studies have directly addressed the potential relationship between schizotypy and meaning in life. Goulding (2004, 2005) found that schizotypy was unrelated to Sense of Coherence (e.g., Antonovsky, 1993) in undergraduates but negatively related to SOC in a sample of paranormal believers and experiencers. However, SOC is very strongly related to PA (r = .80, King et al., 2006) rendering it a less than optimal measure of meaning in life.

Table 1
Correlations and descriptive statistics for measures.

Measure	1	2	3	4	5	6	7	8	9	10	11
1. Referential thinking	*.84*										
2. Faith in intuition	.06	*.90*									
3. Positive affect	−.06	.16	*.80*								
FFM											
4. Neuroticism	.37*	−.09	−.43*	*.80*							
5. Extraversion	.01	.21*	.35*	−.38*	*.75*						
6. Openness	−.09	.06	.12	−.15	.18	*.74*					
7. Agreeableness	−.33*	.19	.19	−.29*	.32*	.08	*.75*				
8. Conscientiousness	−.13	.06	.34*	−.32*	.10	.03	.19	*.80*			
Mental health											
9. Depression	.35*	.02	−.54*	.70*	−.45*	−.13	−.26*	−.36*	*.79*		
10. Anxiety	.35*	−.15	−.42*	.76*	−.45*	−.02	−.30*	−.22*	.75	*.87*	
11. Meaning in life	.02	.18	.42*	−.35*	.30*	.16	.08	.40*	−.44*	−.23	*.79*
Mean	5.02	4.69	5.02	3.56	4.90	4.62	5.08	4.87	13.7	19.5	5.32
SD	4.32	.76	.70	1.00	.78	.78	.69	.73	8.89	10.6	.94

$N = 146$. Coefficients on the diagonal are Cronbach's α's. Referential thinking is a sum of 34 true–false items (observed range = 0–16). PA, FI, FFM traits, and meaning in life were rated on scales from 1 (not at all) to 7 (extremely much). Depression and anxiety scores are sums from 3 8-item subscales rated from 1 (false, not at all true) to 4 (very true).
* $p < .01$.

The REF contains 34 items such as, "Films often seem to be very similar to my life story." Items are rated true (1) or false (0) and summed to create a total score. In keeping with the unusual and severe nature of the items, scores were positively skewed (modal scores of 0 and 1 accounted for 19 cases each). Analyses in which the REF served as criterion were conducted on both raw and log transformed scores. As results were essentially identical, we report analyses with the raw scores.

4. Results

4.1. Preliminary analyses

Table 1 shows correlations, descriptive statistics, and reliabilities for all measures. Similar to previous research on positive schizotypy, referential thinking was negatively related to agreeableness and positively related to neuroticism, although no relationship with openness to experience emerged. Also in keeping with past research, referential thinking was positively associated with depression and anxiety. Referential thinking was unrelated to intuition, PA, or meaning in life.

4.2. Intuition, PA, and referential thinking

To examine the prediction that intuition and PA would interact to predict referential thinking, intuition and PA were first converted to mean deviation scores to represent the main effects. The product of these scores was used as the interaction term (Aiken & West, 1991). In the first equation, in the absence of main effects (entered on the first step, R^2 *change* = .01, n.s.), the interaction (entered on the second step; R^2 *change* = .033, $p < .03$) significantly predicted referential thinking ($\beta = .18$, $p < .03$). Generated regression lines for individuals +1 *SD* from the mean on the predictors are shown in Fig. 1. As predicted, at high levels of PA, intuition was positively related to referential thinking.

Two additional equations were computed, to examine whether this interaction would emerge controlling for, first, anxiety and depression and, second, personality traits. In both equations, covariates were entered on the first step, followed by the main effects, and finally the interaction term. Results are shown in Table 2. As shown in the top of Table 2, controlling for anxiety and depression, the intuition X PA interaction contributed significantly. In a final equation, shown at the bottom of Table 2, neuroticism and extra-

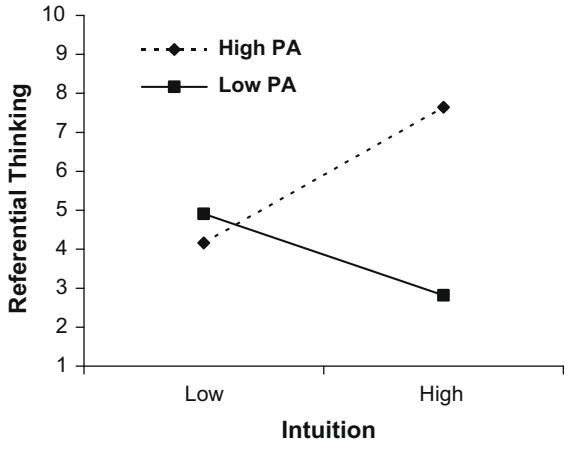

Fig. 1. Referential thinking as a function of PA and intuition.

Table 2
Multiple regression equations predicting referential thinking from PA X intuition and control variables.

	Step R^2 *change*	β
Covariates	.14*	
Depression		.24
Anxiety		.25*
Main effects	.02	
Positive affect		.16
Intuition		.07
Interaction	.03*	
Intuition X positive affect		.17*
Multiple $R^2 = .19$, $F_{(5, 140)} = 6.70$, $p < .001$		
Covariates	.24*	
Neuroticism		.37*
Extraversion		.47*
Openness to experience		−.07
Agreeableness		−.49*
Conscientiousness		−.05
Main effects	.02	
Positive affect		.12
Intuition		.09
Interaction	.03*	
Intuition X positive affect		.62*
Multiple $R^2 = .283$; $F_{(8, 137)} = 6.75$, $p < .001$		

Predictors were entered hierarchically.
* $p < .05$.

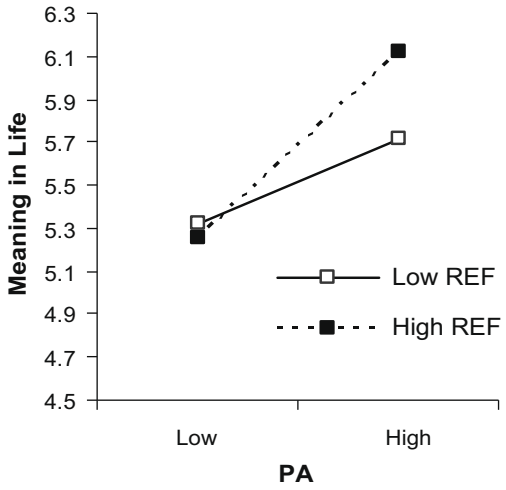

Fig. 2. Meaning in life as a function of PA and referential thinking. REF = Referential thinking. High REF = those scoring ⩾ 10 on REF (n = 27). Low REF = those scoring less than 10 (n = 119).

version (positively), and agreeableness (negatively) contributed to the prediction of referential thinking. However, even controlling for these traits, the interaction term contributed significantly to the prediction of referential thinking. Supplemental analyses suggested these results are specific to intuition and PA. Neither variable interacted with any of the FFM traits to predict referential thinking.

4.3. Exploratory analyses: referential thinking and meaning in life

Finally, analyses explored whether intuition, PA, or both might play a role in the relationship between referential thinking and meaning in life. Because the distribution of the REF was not normal, rather than converting this variable to mean deviation scores, two dummy variables were computed based on natural breaks in the distribution. The first dummy variable represented individuals scoring 10 or higher (coded 1; otherwise 0; 19% of the sample). The second dummy variable represented individuals scoring between 5 and 10 (coded 1; otherwise 0; 26%). The baseline (0–0) group included those scoring below 5 (55%).

Meaning in life was hierarchically regressed on these dummy variables, PA, intuition, and their two- and three-way interactions. Main effects were entered on the first step (R^2 *change* = .18, $p < .001$), with PA predicting meaning in life ($\beta = .33$, $p < .01$). The two-way interactions, entered on the second step, contributed significantly (R^2 *change* = .06, $p < .04$). Interestingly, the dummy variable for the highest group on the REF interacted with PA to predict meaning in life ($\beta = .26$, $p < .02$).[2] This interaction was decomposed, regressing meaning in life on PA within each group of the relevant dummy variable. For those high on REF, PA was quite strongly related to meaning in life ($\beta = .75$, $p < .001$), while for the rest of the sample, PA was less strongly related to meaning in life ($\beta = .29$, $p < .05$). Fig. 2 shows the slopes of the lines generated by these equations. At low levels of PA, the groups reported essentially the same levels of meaning in life. At high levels of PA, the high REF group reported higher meaning in life.

To "flip" Fig. 2 for readers interested in the prediction of meaning in life from REF across levels of PA, we returned to the raw REF scores. In the sample as a whole, among individuals reporting low PA (⩽1 *SD* below the mean), REF was negatively related to meaning in life ($\beta = -.36$), however, among those reporting high PA (>1 *SD* above the mean) REF was *positively* related to meaning in life ($\beta = .26$). Intuition did not contribute significantly to the equation and the three-way interaction was not significant.

5. Discussion

Results support the prediction that the convergence of intuitive processing and PA predicts referential thinking. Individuals who characteristically follow their gut feelings and whose moods are generally positive may be susceptible to the kind of meaning-making that is indicated in referential thinking. The contribution of intuitive processing and PA to referential thought was found even controlling for depression and anxiety and FFM traits. These results provide support for the notion that referential thinking might be considered an expression of normative meaning-making processes. In addition, exploratory analyses indicated that, as might be expected from its very definition, referential thinking may have some relevance to the experience of meaning in life. PA moderated the relationship between referential thinking and meaning in life such that referential thinking was positively related to meaning in life at high levels of PA but negatively related to meaning in life at low levels of PA. These two sets of results have implications for our continuing understanding of schizotypal thinking processes and suggest potential avenues for future research.

Turning first to the central prediction of this study, it is intriguing that referential thinking should be predicted by the same processes that have been shown in past research to predict paranormal beliefs, sympathetic magic, and ascriptions of meaning, more generally. As noted previously, momentary referential thought (e.g., having the feeling that traffic lights turn red *because* one is in a hurry, a REF item) might be considered as part of the natural flow of normal human activities. The question is whether such passing fancies become part of a system of meaning or are readily dismissed as fanciful. Clearly, for individuals who are prone to intuitive processing, PA may play a role in susceptibility to invalid meaning. Intuitive individuals in a good mood tend to trust their hunches, regardless of the potentially non-rational content of those hunches.

These results suggest that the role of PA might be an important area for research on referential thinking. One direction for such research might be to explore the underlying neurochemical substrates of PA, the experience of meaning, and aberrant thought, particularly dopamine. Dopamine is associated not only with disturbed thought but positive emotionality (Depue, 2006) and appetitive motivation (Pickering & Smillie, 2008). Kapur (2003) addressed the potential role of dopamine dysregulation in the sense-making functions of delusions, implicating such dysregulation in "aberrant assignment of salience to external objects and internal representations" (p. 15). Examining psychotic thought specifically, Kapur noted that aberrant explanations can provide powerful relief from confusion and motivate a search for confirmatory evidence supporting such unusual explanatory schemes or sources of meaning. It is interesting to note that antipsychotic medications that act on dopamine reduce not only aberrant thought but also pleasurable drives (e.g., King, Burke, & Lucas, 1995). Just as dopamine serves to label neutral stimuli in terms of their meanings for reward vs. aversion, it may underlie the convergence of the subtle hunch, PA, referential thinking, and the experience of meaning.

Interestingly, Woodward, Buchy, Moritz, and Liotti (2007) found bias against disconfirming evidence to be uniquely related to schizotypy compared to other cognitive ability measures. Such a bias also resonates with the relations between intuition and heu-

[2] In analyses converting the REF scores to mean deviation scores, similar results emerged. Main effects (R^2 *change* = .18, $p < .01$) contributed significantly to meaning in life (for PA, $\beta = .17$, $p < .001$). The two-way interactions, entered on the second step contributed significantly, R^2 *change* = .03, $p < .04$), with PA and REF interacting to predict meaning in life ($\beta = .17$, $p < .04$).

ristic processing as well as between PA and top-down processing (Bless, 2001). Referential thinking might be thought of as the imposition of a cognitive scheme to experience that draws increasing explanatory power through the search for confirming evidence that, in turn, enhances the feeling of meaningfulness.

Although hardly definitive, exploratory analyses provide preliminary support for the provocative notion that, in the context of high PA, referential thinking may relate positively to the experience of meaning in life. Fully dimensional models of personality disorder would suggest that features of these disorders might have functional aspects. To the extent that referential thinking enhances meaning in life it may be serving the chronic human need for meaning. These results provide a way to understand the persistence of referential thinking, suggesting that, particularly when things are going well, this type of thought process may play a role in affirming a sense that life, itself, is meaningful.

In contrast, for individuals who are low on PA, referential thinking was negatively associated with meaning in life. This pattern of results might indicate that, in the absence of pleasurable feelings, referential thinking may erode a sense of overarching purpose in life. Such a pattern may be more representative of the typical schizotypic profile, given the comorbidity of schizotypy with depression (Kwapil et al., 2008; Lewandoski et al., 2006). Research that incorporates full measures of the schizotypy domain might help to clarify if the association between high referential thinking, low PA, and lower levels of meaning in life might be explained by other aspects of schizotypy (such as anhedonia). Because of the correlational nature of these data, it is also possible that individuals for whom meaning in life is low, and who lack positive affective experiences, referential thinking represents a search for indicators that life is meaningful. Basing one's sense of meaning on random events does not appear to be an especially adaptive strategy, particularly for those low on PA.

As an initial investigation of meaning-making processes in referential thinking, the present results are provocative but limited. Future research should examine these variables in clinically relevant samples. The gender imbalance of the sample precluded analyses for gender. Additionally, as already noted, incorporating a broader set of measures of the positive schizotypy domain would allow for a deeper understanding of the implications of schizotypy for meaning in life. Finally, whether these results generalize to state (rather than general) PA is an important ambiguity to be clarified. Past research has shown that induced PA interacts with intuition to predict paranormal beliefs (King et al., 2007). One direction for future research that is suggested by this study is the possibility that referential thinking might be studied experimentally since PA and intuitive processing are amenable to laboratory manipulations.

As dimensional approaches to personality psychopathology gain in attention and empirical support (e.g., Clark, 2005; Trull & Widiger, 2008), it may be necessary to expand the individual differences considered beyond the FFM and to move beyond main effect models to examine the interactive relationships between personality and affective characteristics as predictive of potential psychopathology, particularly schizotypal features. One path to pursue might be to consider a wider breadth of established personality variables that might have relevance to the meaning-related functions of referential thought. The results of the present study indicate that aberrant ideas of reference may emerge from relatively normative meaning-related processes.

6. Ethical statement

This research was conducted in accord with the APA ethical principles and was approved by the IRB at the University of Missouri.

Acknowledgements

We thank John Kerns, David Watson, and the anonymous reviewers for helpful comments on earlier versions of this paper. Joshua Hicks' work on this project was supported by NIAAA T32 AA13526.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

American Psychiatric Association (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., rev.). Washington, DC: Author.

Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science and Medicine, 36*, 725–733.

Bless, H. (2001). Mood and the use of general knowledge structures. In L. L. Martin & G. L. Clore (Eds.), *Theories of mood and cognition: A user's guidebook* (pp. 9–26). Mahwah, NJ, US: Lawrence Erlbaum Associates.

Chmielewski, M., & Watson, D. (2008). The heterogeneous structure of schizotypal personality disorder: Item-level factors of the Schizotypal Personality Questionnaire and their associations with obsessive-compulsive disorder, dissociative tendencies, and normal personality. *Journal of Abnormal Psychology, 117*, 364–376.

Clark, L. A. (2005). Temperament as a unifying basis for personality and psychopathology. *Journal of Abnormal Psychology, 114*, 505–521.

Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO PI-R professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.

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

Depue, R. A. (2006). Dopamine in agentic and opiates in affiliative forms of extraversion. In T. Canli (Ed.), *Biology of personality*. NY: Guilford Press.

Epstein, S. (1991). Cognitive-experiential self-theory: An integrative theory of personality. In R. C. Curtis (Ed.), *The relational self: Theoretical convergences in psychoanalysis and social psychology* (pp. 111–137). New York: Guilford.

Epstein, S. (2008). Intuition from the perspective of cognitive-experiential self-theory. In H. Plessner, C. Betsch, & T. Betsch (Eds.), *Intuition in judgment and decision making* (pp. 23–37). Mahwah, NJ: Erlbaum.

Genovese, J. E. C. (2005). Paranormal beliefs, schizotypy, and thinking styles among teachers and future teachers. *Personality and Individual Differences, 39*, 93–102.

Goulding, A. (2004). Schizotypy models in relation to subjective health and paranormal beliefs and experiences. *Personality and Individual Differences, 37*, 157–167.

Goulding, A. (2005). Healthy schizotypy in a population of paranormal believers and experients. *Personality and Individual Differences, 38*, 1069–1083.

Hergovich, A., Schott, R., & Arendasy, M. (2008). On the relationship between paranormal belief and schizotypy in adolescents. *Personality and Individual Differences, 45*, 119–125.

Hicks, J. A., Cicero, D., Burton, C. M., & King, L. A. (in preparation). *Intuition, Positive Affect, and Feelings of Meaning*. Columbia: University of Missouri.

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

Kapur, S. (2003). Psychosis as a state of aberrant salience. A framework linking biology, phenomenology, and pharmacology. *American Journal of Psychiatry, 160*, 13–23.

Kendler, K. S., Ochs, A. L., Gorman, A. M., Hewit, D. R., & Mirsky, A. F. (1991). The structure of schizotypy: A pilot multitrait twin study. *Psychiatry Research, 36*, 37–43.

Kerns, J. G. (2006). Schizotypy facets, cognitive control, and emotion. *Journal of Abnormal Psychology, 115*, 418–427.

King, D. J., Burke, M., & Lucas, R. A. (1995). Antipsychotic drug-induced dysphoria. *British Journal of Psychiatry, 167*, 480–482.

King, L. A., Burton, C. M., Hicks, J. A., & Drigotas, S. M. (2007). Ghosts, UFOs, and magic: Positive affect and the experiential system. *Journal of Personality and Social Psychology, 92*, 905–919.

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

Kwapil, T. R., Barrantes-Vidal, N., & Silvia, P. J. (2008). The dimensional structure of the Wisconsin Schizotypy Scales: Factor identification and construct validity. *Schizophrenia Bulletin, 34*, 444–457.

Lenzenweger, M. F., Bennett, M. E., & Lilenfeld, L. R. (1997). The referential thinking scale as a measure of schizotypy: Scale development and initial construct validation. *Psychological Assessment, 9*, 452–463.

Lenzenweger, M. G., & Maher, B. A. (2002). Psychometric schizotypy and motor performance. *Journal of Abnormal Psychology, 111*, 546–555.

Lewandoski, K. E., Barrantes-Vidal, N., Nelson-Gray, R. O., Clancy, C., Kepley, H. O., & Kwapil, T. R. (2006). Anxiety and depression symptoms in psychometrically defined schizotypy. *Schizophrenia Research, 83*, 225–235.

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

Morey, L. C. (1991). *The personality assessment inventory professional manual*. Odessa, FL: Psychological Assessment Resources, Inc..

Pacini, R., & Epstein, S. (1999). The relation of rational and experiential information processing styles to personality, basic beliefs, and the ratio-bias phenomenon. *Journal of Personality and Social Psychology, 76*, 972–987.

Pickering, A. D., & Smillie, L. D. (2008). The behavioral activation system: Challenges and opportunities. In P. J. Corrs (Ed.), *The reinforcement sensitivity theory of personality* (pp. 120–154). New York: Cambridge University Press.

Raine, A. (1991). The SPQ: A scale for the assessment of schizotypal personality based on *DSM-III-R* criteria. *Schizophrenia Bulletin, 17*, 555–564.

Trull, T. J., & Widiger, T. A. (2008). Geology 102: More thoughts on a shift to a dimensional model of personality disorders. *Social and Personality Psychology Compass, 2*, 949–967.

Vollema, M. G., & Hoijtink, H. (2000). The multidimensionality of self-report schizotypy in a psychiatric population: An analysis using multidimensional Rasch models. *Schizophrenia Bulletin, 26*, 565–575.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.

Woodward, T., Buchy, L., Moritz, S., & Liotti, M. (2007). A bias against disconfirmatory evidence is associated with delusion proneness in a nonclinical sample. *Schizophrenia Bulletin, 33*, 1023–1038.