Do time perspectives predict unique variance in life satisfaction beyond personality traits?

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ABSTRACT

In this study we compared the relationships between time perspectives, the Big Five personality traits, and life satisfaction. Our results replicated past work in that personality traits and time perspectives were both associated with life satisfaction. Individuals high on extraversion and those having a past positive and a present hedonism time perspective were more satisfied with their lives; individuals high on neuroticism and those having a past negative time perspective were less satisfied with their lives. Further, hierarchical regression analyses demonstrated that time perspectives accounted for an additional 13.7% of the variance in life satisfaction beyond personality traits; whereas, personality traits accounted for an additional 4.4% of the variance in life satisfaction beyond time perspectives. Mediation models demonstrated that time perspectives partially accounted for the personality and life satisfaction relationship. We discuss the possibility that most of the association between personality traits and life satisfaction may be due to individual differences in cognitive time frames.

1. Introduction

The relations between personality traits and life satisfaction are well documented (Diener & Lucas, 1999; Schimmack, Oishi, Furr, & Funder, 2004). For example, there are robust associations between the Big Five personality traits and life satisfaction with extraversion and neuroticism as the most consistent predictors (DeNeve & Cooper, 1998; Steel, Schmidt, & Schultz, 2008). However, the mechanisms to explain these relations are not fully understood. Traditionally, two theoretical approaches have been proposed to explain the strong correlations between personality traits and subjective well-being (see McCrae & Costa, 1991, for a review). The top-down (or temperament) approach emphasizes direct associations between personality traits and life satisfaction. The bottom-up (or instrumental) approach suggests that the relations are indirect and different situations, circumstances, and events in people's lives lead to differences in well-being (Lucas & Baird, 2004).

However, though only about 10% of the variance in life satisfaction is accounted for by objective life circumstances and relevant events (Diener, Suh, Lucas, & Smith, 1999), it appears that when people judge their life satisfaction they reflect on their feelings about these life circumstances and events (Schimmack, Diener, & Oishi, 2002). This would suggest that the emotional experiences associated with life circumstances are likely better predictors of subjective well-being (SWB) than merely the experiences of the circumstances themselves. Thus, it is possible, and even likely, that the cognitive processes by which individuals remember, experience, and anticipate the circumstances in their life explain important variance in life satisfaction (Lyubomirsky, 2001). Also, individual differences in the cognitive evaluation of one's past, present, and anticipated future may be the mechanisms by which personality traits lead to increased life satisfaction. For example, chronically accessible information, such as past emotional experiences, strongly predicts life satisfaction (Ross, Eyman, & Kishchuck, 1986). Thus, an extension of the bottom-up approach would be to examine the emotional experiences and cognitive evaluations of one's life circumstances as mediators of the robust link between personality traits and SWB.

1.1. Constructing life satisfaction through mental evaluations of life circumstances

The sustainable happiness model (Lyubomirsky, Sheldon, & Schkade, 2005) proposes that intentional activities (i.e., behavioral decisions and mental evaluations) may increase one's happiness. For example, two of the strategies that individuals use to increase their SWB are: (a) savoring the positive life experiences from their past (Liberman & Trope, 2008) and (b) reinterpreting negative events in a more positive light (Lyubomirsky & Tucker, 1998). Specifically, reframing a negative situation and counting one's blessings leads to increased SWB because these activities promotes

savoring of positive events (Lyubomirsky et al., 2005). To assess individual differences in the judgment of events across temporal distances (i.e., mental evaluations of life circumstances), Zimbardo and Boyd (1999) suggested that time perspectives be measured. Time perspectives represent an individual's relation with time and are a subjective process whereby individuals parcel their personal and social experiences into temporal categories (Boyd & Zimbardo, 2005). It is theorized that how individuals utilize their temporal thinking styles is closely associated with their personality (Fortunato & Furey, 2009) and when such cognitive time frames develop into a tendency they become part of the individual's disposition. For these reasons we suggest that time perspectives may assess the individual differences in typical mental evaluations of life circumstances.

Further, there are consistent relations between time perspectives and SWB (Boniwell, Osin, Linley, & Ivanchenko, 2010; Zhang, Howell, & Maciej, 2010). Past research has demonstrated lower life satisfaction for those with a past negative time perspective as well as a higher life satisfaction for those with a past positive time perspective (Boniwell et al. 2010; Drake, Duncan, Sutherland, Abernethy, & Henry 2008). The pleasure seeking nature of the present hedonistic time perspective has been found to be positively associated with positive affect (Zimbardo & Boyd, 1999). Also, Dunkel and Weber (2010) showed that there may be links from personality traits to time perspectives; for example, extraversion was positively correlated to the past positive and present hedonistic time perspectives while being negatively correlated to the past negative time perspective. Also, Dunkel and Weber demonstrated that neuroticism was positively correlated with having a past negative time perspective and negatively correlated to having a past positive time perspective. Therefore, given that personality traits are strongly related to life satisfaction (Diener & Lucas, 1999), different time perspectives are related to life satisfaction (Boniwell et al., 2010; Drake et al., 2008; Zhang et al., 2010), and personality traits and time perspectives are correlated (Dunkel & Weber, 2010), the relations between personality traits and life satisfaction as well as time perspectives and life satisfaction may not be independent.

Finally, despite the widely replicated relations between extraversion and neuroticism with life satisfaction, the mechanisms linking these personality traits and life satisfaction have not been fully verified. Given that to the extent that life can be judged in the past, present, and future (Ehrhardt, Saris, & Veenhoven, 2000), individuals may form life satisfaction judgments based on the ratio of remembered, experienced, or anticipated pleasant and unpleasant events. Also, given that extraversion has been linked to having a past positive time perspective, and neuroticism has been linked to having a past negative time perspective (again see Dunkel & Weber, 2010), and having a past positive time perspective is linked with increased life satisfaction while having a past negative time perspective is linked with decreased life satisfaction (again see Boniwell et al. 2010; Drake et al., 2008), it may be that time perspectives mediate the relations between personality traits and life satisfaction. For these reasons, the aims of this study are to: (a) predict life satisfaction from both personality traits and time perspectives and (b) test time perspectives as the mediators of the robust relations between personality traits and life satisfaction.

2. Method

2.1. Participants & procedures

A sample of 754 undergraduate students participated in the study. There were 530 females and 194 males (30 students did

not report their gender) of typical college age ($M = 25.02.42$, $SD = 9.16$). Thirty percent of participants indicated that they were Caucasian. Participants were enrolled in multiple sections of undergraduate psychology courses and participated for extra credit. After providing informed consent, participants completed the online questionnaire, which contained measures assessing their personality traits, time perspectives, satisfaction with life, and basic demographic information.

2.2. Measures

See Table 1 for the means, standard deviations, reliability coefficients, and inter-correlations of all the variables in the study.

2.3. Life satisfaction

The Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) assessed participants' perceived satisfaction with life. It is a five-item measure rated on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). An example of a question is "in most ways my life is close to my ideal." High scores on the SWLS indicate greater satisfaction with one's life.

2.4. The Big Five

Saucier's (1994) 40-item mini-markers was used to measure the personality dimensions of the Five Factor Model of personality. The dimension of Extraversion is made up of specific traits such as being talkative, bold, and energetic. The dimension of Agreeableness includes being sympathetic, warm, and cooperative. Conscientiousness includes being organized, efficient, and practical. Neuroticism encompasses traits such as being moody, temperamental, and fretful. Openness, which is sometimes referred to as Intellect, includes traits such as being creative, philosophical, and imaginative. Saucier's (1994) instrument provides a list of 40 adjectives (eight for each personality dimension) such as those traits described above and asks the respondent to rate how accurately each trait describes him- or herself on nine-point Likert-type scale (1 = extremely inaccurate, 9 = extremely accurate). Some of these items are presented in reverse form (e.g., shy is a reverse item for Extraversion). For the present study, responses for traits associated with each of the personality factors were averaged, with reversed items being reverse-scored, to produce an aggregate score for each participant on each factor.

2.5. Zimbardo time perspective inventory

We measured time perspectives using the ZTPI developed by Zimbardo and Boyd (1999). This measure has been validated by multiple studies across domains and cultures (D'Alessio et al., 2003; Milfont, Andrade, Pessoa, & Belo, 2008; Worrell & Zeno, 2007). The ZTPI is a 56-item questionnaire and each time perspective is assessed using a 5-point scale (1 = very untrue of me, 5 = very true of me). Nine items measured the past positive perspective ("On balance, there is much more good to recall than bad in my past"). Ten items measured the past negative perspective ("I often think of what I should have done differently in my life"). Fifteen items measure the present hedonistic perspective ("I believe that getting together with one's friend to party is one of life's important pleasures"). Nine items measured the present fatalistic perspective ("Fate determines much in my life"). Thirteen items measured the future perspective ("I believe a person's day should be planned ahead each morning").