Reminiscence and Anticipation: How a Balanced Time Perspective Predicts Psychosocial Strengths

Jeffrey Dean Webster Langara College

Prior research has demonstrated the separate benefits of positive reminiscence as well as positive future anticipation. Recently, attention has been directed towards the possible additional benefits of combining both of these temporal orientations within a balanced time perspective framework. The current project investigated the relationship between a balanced time perspective and the psychosocial strengths of ego-integrity and wisdom in 144 ethnically diverse participants ranging in age from 18-58 years. Results indicated that the presence of a balanced time perspective was associated with higher levels of ego-integrity (r = .397, p < .01), wisdom (r = .448, p < .01), and attributional complexity (r = .18, p < .05). After accounting for demographic, health, and attributional complexity variables regression analyses indicated that a balanced time perspective accounted for an additional 7.1% and 12.5% of the variance in ego-integrity and wisdom, respectively. Implications for reminiscence theory and clinical application are discussed.

Key Terms: Balanced Time Perspective Scale (BTPS); Self-Assessed Wisdom Scale; Future Time Perspective; Positive Reminiscence; Wisdom

Imagine you have an important keynote address which you will deliver at a conference in a few months. As you anticipate and plan for this talk, are you also likely to remember similar talks or conferences from your past? Conversely, imagine you are reminiscing with a good friend about a wonderful trip you took together to Italy a few years ago. As you recall and savor the memories of this adventure, are you also likely to think or dream about possible future trips together? These hypothetical scenarios highlight the conceptual link between reminiscing and anticipation (or retrospection and prospection).

Reviews (e.g., Coleman, 2005; Webster, Bohlmeijer, & Westerhof, 2010; Westerhof & Bohlmeijer, 2014) and meta-analyses (e.g., Pinquart & Forstmeier, 2012) illustrate how the multiple functions of reminiscence are related to both positive and negative health outcomes. Similarly, evidence shows that prospection, or thinking about the future, can have both positive and negative psychosocial consequences (e.g., Brothers, Chui, & Diehl, 2014; Carstensen, 2006; Gellert, Ziegelmann, Lippke, & Schwarzer, 2012; Karniol & Ross, 1996;

Jeffrey Dean Webster, PhD, Psychology Department, Langara College

McKay, Andretta, Magee, & Worrell, 2014). Although there is an extensive literature on different facets of time perspective in general, it is only recently that empirical attempts to explicitly measure a balanced time perspective (BTP) have been attempted. Indeed, the work of Drake, Duncan, Sutherland, Abernethy, & Henry, (2008) is one of the first studies to do so (Stolarski, Wiberg, & Osin, 2015). The current project focuses on the relationship between a BTP and positive psychosocial outcomes.

Although traditionally studied separately, the domains of reminiscence and future time perspective have recently been investigated jointly to positive effect (Boniwell, 2009; Webster, 2013). Specifically, both theoretical and empirical efforts to link different temporal orientations within the same overarching model have produced both novel insights and new measurement tools.

Examples of the former include research conceptualized within a balanced time perspective framework (e.g., Zhang & Howell, 2011). Conceived as the ability and motivation to flexibly engage different time orientations contingent upon situational pressures (Zimbardo & Boyd, 1999), a balanced time perspective ostensibly has stronger connections to psychological functioning than any single time perspective in isolation (e.g., Boniwell & Zimbardo, 2004). Using the Zimbardo Time Perspective Inventory (ZTPI; Zimbardo & Boyd, 1999) results have found that a balanced time perspective is associated with higher levels of happiness (Boniwell, Osin, Linley, & Ivanchencko, 2010; Drake, et al., 2008),

Correspondence concerning this article should be addressed to Jeffrey Dean Webster, PhD, Psychology Department, Langara College, 100 West 49th Ave, Vancouver, British Columbia, Canada, V5Y 2Z6. Email: jwebster@langara.bc.ca. Phone: (604) 323-5865.

Parts of this study were presented at the 1st International Conference on Time Perspective, Coimbra, Portugal, September $5^{th} - 8^{th}$, 2012.

life satisfaction (Desmyter & De Raedt, 2012; Gao, 2011; Zhang & Howell, 2011), and higher levels of positive mood states such as energy and hedonic tone (Stolarski, Matthews, Postek, Zimbardo, & Bitner, 2014). These are important preliminary findings; nevertheless, possible conceptual and psychometric limitations in the ZTPI have been identified (e.g., Boniwell, 2009; Zhang, Howell, & Stolarski, 2013; McKay et al., 2014), including occasional difficulties with factor replication and reliability levels, as well as potential social desirability bias on some subscales (e.g., the ZTPI future subscale; Webster, 2011). Indeed, McKay et al., (2014) note that (a) "...concerns about the structural validity of ZTPI scores have been raised on scores in both adolescent and adult samples in several countries" (p. 1320), (b) fit indices in structural equations modeling studies were suboptimal, and (c) such results "...cast doubt on the conclusions based on ZTPI scores" (p. 1320). Moreover, Stolarski, Wiberg, and Osin (2015) state that the contribution to a balanced time perspective of the three ZTPI time orientations is unequal (i.e., both the past and present each have two factors whereas the future has only one factor) and, perhaps most importantly, the "optimal" scores used in the calculation of a BTP are "...based on the arbitrary recommendation from Zimbardo and Boyd (2008). Whether these are true optimal scores should be explicitly tested" (p. 62). For these, and other reasons, alternative means of assessing a balanced time perspective may be warranted.

An example of a new measurement tool is the Balanced Time Perspective Scale (BTPS; Webster, 2011) which assesses the degree of balance in a person's focus on both a positive past (i.e., reminiscence) and a positive future (i.e., anticipation). The term "balance" here invokes images of weight scales or perhaps a playground teeter-totter, and means that there is a high, and equal, amount of focus on both a positive past and positive future. Conceptually, this is different from the ZTPI notion of balance, which is created by combining subscales of different strengths (i.e., moderately low, high,) and calculating a person's deviation from an assumed optimal score. In this respect, perhaps the ZTPI measures a "blended" or "optimal" time perspective rather than a balance. Nevertheless, the BTPS was not created to replace the ZTPI, but rather as an alternative approach for measuring subjective perceptions of time perspective.

Preliminary results using the BTPS indicate that a balanced time perspective is associated with higher levels of happiness and self-esteem (Webster, 2011; Webster & Ma, 2013) as well as higher levels of mental health and wisdom (Webster, Bohlmeijer, & Westerhof, 2014). This initial set of studies demonstrated very promising psychometric properties of the BTPS, suggesting it is an appropriate tool for investigating the relationship of a balanced time perspective to positive psychological characteristics. For instance, Webster (2011) directly compared the positive past (PP) and future (F) subscales of the ZTPI with the positive past and positive future subscales of the BTPS. Correlations between the ZTPI and BTPS were significant (demonstrating concurrent validity), yet moderate, suggesting that the ZTPI and BTPS are measuring somewhat different elements of time perspective. Webster (2011) also found that the BTPS had a few modest advantages over the ZTPI, including higher reliability estimates (Past/Future for BTPS and ZTPI = .88 and .92 vs. .70 and .72, respectively), lack of social desirability contamination, and stronger predictive power in assessing happiness levels. Readers are referred to Webster (2011) for additional possible benefits of the BTPS.

Given that Boniwell, Osin, Linley, & Ivanchencko (2010) state "One of the unanswered questions with regard to time perspective concerns the relationship between different temporal orientation profiles with wellbeing" (p. 26), the primary focus of the current study is to examine the relationship between a balanced time perspective and two important psychosocial strengths; specifically, ego integrity and wisdom. These variables were chosen for several reasons. First, they are relatively novel (with respect to balanced time perspective research) and can therefore serve to increase the construct validation breadth of the BTPS, specifically, and provide novel findings for the time perspective field, in general. Second, they can be considered "higher-order" in the sense that each is considered an ultimate end point within certain theories (e.g., Erikson's eighth lifecycle stage) and therefore serve as over-arching concepts which subsume more specific traits or attributes (see below). Finally, Roediger (2012) clearly articulated the major importance which replication plays in the advancement of science. Inclusion of these variables allows for the replication of earlier results (e.g., correlation of wisdom with a balanced time perspective).

Ego integrity (Erikson, 1963) is the belief that one's life has had meaning, direction, and purpose. Persons who score high on ego-integrity take responsibility for the choices they have made in life, have a coherent sense of self, and can approach death with a certain degree of calmness. To achieve ego integrity it is necessary to reflect upon and evaluate one's life as it has been lived so far, as well as to see how this constructed life story might play out in the future. Indeed, ego integrity, although not often talked about in these terms, has a strong temporal element. According to Erikson, the ego strength which arises from this stage is wisdom.

Wisdom is considered to be the acme of personal development (Karelitz, Jarvin, & Sternberg, 2010; Staudinger & Gluck, 2011) and a higher-order state associated with eudaimonic well-being (i.e., personal happiness derived from combinations of meaning, purpose, and flow which go beyond mere hedonic pursuits) (Ardelt, 1997; Kunzmann & Baltes, 2003; Webster, 2010). Wisdom has intimate links to time perspective as both reflecting on past experiences and planning for the future are considered integral components of this complex concept. Nevertheless, direct tests of the time perspectivewisdom link are lacking, with the recent exception of Webster, Bohlmeijer, and Westerhof (2014) who found that, indeed, a balanced time perspective predicted higher levels of wisdom in a Dutch lifespan sample.

In addition to these psychosocial strengths, Webster (2011) suggested that the mental facility to adaptively switch from a past to a future orientation, and back again as demanded by contextual pressures, is a cognitive skill enabling complex understanding of multiple perspectives. This supposition is consistent with Zimbardo and Boyd's (1999) definition of a balanced time perspective as the ability to switch flexibly among time perspectives. Both reminiscence and future thinking involve identifying and choosing among alternative sources (e.g., self, other) and types (e.g., emotional, cognitive, motivational) of information. Such processes entail identification, selection, and evaluation of information in order to achieve a particular end (i.e., accurately remember an event, make effective future plans). Therefore, it seems plausible that persons who characteristically maintain a balanced time perspective should be relatively high in cognitively complex thinking. I investigate this assumption by measuring attributional complexity, the degree to which persons identify and assimilate multiple sources of information when making judgments concerning the behaviour of others. Persons scoring higher on attributional complexity have a high need for cognition and select more complex causal attributions for behavioral events (e.g., Fletcher, Danilovics, Fernandez, Peterson, & Reeder, 1986). Attributional complexity also predicts higher levels of wisdom (e.g., Webster, 2010), and so including attributional complexity serves the further purpose of replicating this earlier finding.

In summary, both reminiscing about our past and anticipating our future can, separately, be associated with aspects of positive well-being such as happiness (e.g., Bryant, Smart, & King, 2005). The first hypothesis of the current study, therefore, is that a balanced time perspective will be positively correlated with attributional complexity, ego-integrity, and wisdom. The second hypothesis is that a balanced time perspective will explain unique variance in both ego-integrity and wisdom above variance accounted for by demographic, health, and attributional complexity variables.

Method

Participants

Participants included 144 adults ranging in age from 18-58 (M = 21.43; SD = 5.25) who were primarily healthy (M = 4.91; SD = 1.05), as assessed by a single-item, 7-point scale where "1" = poor and "7" = excellent physical health. Participants were volunteers recruited from first year psychology classes at a demographically diverse college in Vancouver, Canada. Participants, 66.7% of whom were women, received nominal course credit for participating and had an average of 13.46 (SD = 1.47) years of education. In terms of ethnicity, 38.9%, 25.7%, and 6.9% of participants were Caucasian, Chinese, and

Indo-Canadian, respectively. Japanese, Black, and First Nations participants constituted 0.7% of the sample each, and 25.7% of participants identified their ethnicity as other.

Measures

Attributional Complexity, Attributional complexity, a measure of the attributional schemata that people use to explain human behavior, was assessed with the Attributional Complexity Scale (ACS: Fletcher, Danilovics, Fernandez, Peterson, & Reeder, 1986). The scale measures seven attributional constructs: (1) a motivation component, (2) preference for complex rather than simple explanations, (3) metacognition concerning explanations, (4) awareness of the extent to which people's behavior is a function of interaction with others, (5) a tendency to infer abstract or causally complex internal attributions, (6) a tendency to infer abstract, contemporary, external causal attributions, and (7) a tendency to infer external causes operating from the past. Fourteen items are reverse scored before summing across all items. Higher scores indicate higher levels of attributional complexity. Cronbach's alpha for the current study is .89.

Ego-integrity. The Northwestern Ego-Integrity Scale (NEIS: L. B. Janis et al., unpublished manuscript) is a 15item questionnaire reflecting Erikson's (1963) conception of the eighth and final developmental crisis in the human lifespan; namely, the conflict between ego-integrity and despair. Respondents are asked to indicate their agreement concerning their general attitude to statements such as "I have reached a point where I can accept the events in my life as having been necessary," "I have done exactly what I wanted to with my life," and "I wish I had more time to take a different path in life" (reverse scored), on a scale from "1" = strongly disagree to "6" = strongly agree. The NEIS was correlated with theoretically relevant variables such as generativity, death anxiety, and psychological well-being, supporting its construct validity, and the measure had a reported Cronbach's alpha of .90. In the current study, Cronbach's alpha equaled .76.

Wisdom. Wisdom was measured with the Self-Assessed Wisdom Scale (SAWS: Webster, 2010; Webster, Westerhof, & Bohlmeijer, 2014) a 40-item questionnaire reflecting the following five components of wisdom (sample items are italicized): Critical life experiences: "I have experienced many painful events in my life"; Reminiscence/reflectiveness: "Reviewing my past helps me gain perspective on current concerns"; Openness to experience: "I like to read books which challenge me to think differently about issues"; Emotional regulation: "I am very good about reading my emotional states"; and Humor: "Now I find that I can really appreciate life's little ironies." Participants respond to each question using a Likert-type scale where "1" = strongly disagree to "6" = strongly agree. Cronbach's alpha for the total SAWS in this study was .86.

Time Perspective. Time perspective was measured with the Balanced Time Perspective Scale (BTPS: Webster, 2011; Webster & Ma, 2013). The BTPS is a 28-item scale containing two 14-item subscales, one reflecting a positive past orientation and one reflecting a

Table 1

positive future orientation. Participants respond to each item on a 6-point Likert-type scale where "1" = stronglydisagree and "6" = strongly agree. Sample items of the former include, "Reviewing events from my past helps give my life meaning," "Seeing how the pieces of my past come together gives me a sense of identity," and "Tapping into my past is a source of comfort to me." Sample items of the latter include, "I look forward to my future," "Creating a positive future is something I associated with a balanced time perspective. Given this pattern of correlations, it is important to determine whether the hypothesized relationships hold after accounting for these variables. I conducted two separate hierarchical multiple regression analyses to test this possibility.

Descriptive	Statistics an	d Zero-Ori	er Correlation	ns Amono Main	n Study Variables

Variable	Mean S	SD	1	2	3	4	5	6	7	8
1. Age	21.43	5.25	-	127	.373**	007	.168*	100	097	091
2. Sex	1.67	0.47		-	034	170*	.134	.036	.079	.229**
3. Edu	13.46	1.47			-	.137	.094	.152	.125	.076
4. Health	4.91	1.05				-	127	.383**	.067	.182
5. ACS	36.54	19.86					-	.159	.529**	.180*
6. NEIS	56.48	8.66						-	.353**	.397**
7. SAWS	178.77	17.20							-	.448**
8. BTPS	125.65	17.09								_

Note. Sex (Male = 1; Female = 2); Educ = Education Level; ACS = Attributional Complexity Scale; NEIS = Northwestern Ego-Integrity Scale; SAWS = Self-Assessed Wisdom Scale; BTPS = Balanced Time Perspective Scale. * = p < .05, ** = p < .01.

often think about," and "Looking ahead really gets me energized." Cronbach's alpha for the past subscale of the BTPS in this study was .90 and for the future subscale it was .93, which are highly consistent with those reported by Webster (2011) for past and future subscales of .88 and .92, respectively.

A Balanced Time Perspective (BTP) score is calculated by summing over the past and future subscale scores and then adding these two sub-scores into a total BTP score. Categorical scores can also be calculated by creating a median-split for the past and future subscale scores: those individuals falling below the median on both the past and future subscales are termed time restrictive; those scoring about the median on the past subscale but below the median on the future subscale are termed reminiscers; those scoring above the median on the future subscale but below the median on the past subscale are termed futurists; and those persons scoring above the median on both the past and future subscales are termed time expansive (i.e., balanced). Readers are referred to Webster and Ma (2013) for a more extensive discussion of scoring issues and alternatives.

Results

Correlations Among Study Variables

As can be seen in Table 1, the first prediction, that a balanced time perspective would be positively correlated with ego-integrity, wisdom, and attributional complexity was confirmed, albeit weakly for the latter variable. A balanced time perspective was significantly related to neither age nor education levels. In contrast, gender (women higher) and self-rated health were both positively

Regression Analyses Examining Unique Contributions of BTPS Scores in Predicting Scores for Wisdom and Ego-Integrity

The first regression analysis (see Table 2) tested whether the positive association between a balanced time perspective and the psychosocial strength of ego-integrity would hold after accounting for demographic and attributional complexity variables. In Model 1, the demographic variables of age, gender, education, and health were entered as the first block. Overall, the model was significant and accounted for 18.4% of the variance in ego-integrity. Only health was a significant predictor. In Model 2, attributional complexity was entered as a second block. Overall, the model was significant with attributional complexity accounting for an additional 4.2% of the variance in ego-integrity $[F_{change} (1, 136) = 7.42, p =$.007]. Finally, in model 3, a balanced time perspective was entered as a block. Overall, the model was significant with a balanced time perspective accounting for an additional 7.1% of the variance in ego-integrity [F_{change} (1, 135) = 13.69, p < .001].

The second regression analysis (see Table 3) tested whether the positive association between a balanced time perspective and the psychosocial strength of wisdom would hold after accounting for demographic and attributional complexity variables. In Model 1, the demographic variables of age, gender, education, and health were entered as the first block. Overall, the model was not significant and accounted for only 5.8% of the variance in wisdom. In Model 2, attributional complexity was entered as a second block. Overall, the model was significant and accounted for an additional 25.1% of the variance in wisdom [F_{change} (1, 136) = 49.44, p < .001].

merarchica Regression Analyses I reacting Scores for Ego-integrity										
Variable		Model 1			Model 2			Model 3		
	Beta	t	Sig.	Beta	t	Sig.	Beta	t	Sig.	
Age	141	-1.682	.095	176	-2.121	.036	141	-1.764	.080	
Sex	.086	1.090	.278	.057	0.736	.463	009	-0.124	.902	
Education	.156	1.856	.066	.145	1.760	.081	.123	1.551	.123	
Health	.376	4.736	.000	.399	5.117	.000	.331	4.310	.000	
ACS				.212	2.724	.007	.156	2.043	.043	
BTPS							.289	3.700	.000	
Measures of Model Fit		Model 1		Model 2				Model 3		
R		.429		.476		.546				
R ²		.184		.227		.298				
R ² Change		.184		.042			.071			
F Change		7.75**			7.42*			13.69**		

Table 2
Hierarchical Regression Analyses Predicting Scores for Ego-Integrity

Note. * = p < .01; ** = p < .001; Sex (Male = 1; Female = 2); Educ = Education Level; ACS = Attributional Complexity Scale; NEIS = Northwestern Ego-Integrity Scale; SAWS = Self-Assessed Wisdom Scale; BTP = Balanced Time Perspective.

Finally, in Model 3, a balanced time perspective was entered as a third block. Overall, the model was significant with a balanced time perspective accounting for an additional 12.5% of the variance in wisdom [F_{change} (1, 135) = 29.76, p < .001].

Effects of Time Perspective Group on Wisdom and Ego-Integrity

Wisdom. A one-way ANOVA was used to investigate the effect of time perspective group (i.e., time restrictive, reminiscer, futurist, time expansive) on wisdom. Consistent with prior research (Webster et al., 2014) a significant overall effect of time perspective group on total wisdom scores was observed, F(3, 140) = 14.88, p <

Table 3

.001, partial $eta^2 = .24$. Post hoc tests (Tukey's HSD) revealed, as can be seen in Figure 1, that the time expansive category was significantly higher on wisdom than the other three categories. The reminiscer category was higher than the time restrictive category. No other groups differed significantly. This pattern of relationships held even when wisdom scores were calculated excluding the reminiscence/reflectiveness subscale of the SAWS. As suggested by a reviewer, eliminating the potential overlap between the SAWS reminiscence/reflectiveness subscale and the BTPS past subscale, while still obtaining virtually the same result, strengthens this particular finding.

Ego-integrity. For the dependent variable of egointegrity, a one-way ANOVA examining the effect of

Variable	Model		Model	2		Model 3				
	Beta t	Sig.	Beta	t	Sig.	Beta	t	Sig.		
Age	.194 2.146	.034	.109	1.381	.170	.155	2.156	.033		
Sex	.119 1.405	.162	.049	0.667	.506	.039	- 0.572	.568		
Education	.046 0.503	.615	.018	0.232	.817	.012	-0.164	.870		
Health	.082 0.965	.336	.139	1.892	.061	.049	0.717	.475		
ACS			.518	7.031	.000	.443	6.480	.000		
BTPS						.383	5.455	.000		
Measures of Model Fit Model 1				Model 2			Model 3			
R	.242	.242			.556			.659		
R ²	.058	.058			.309			.434		
R ² Change	.058			.251			.125			
F Change	2.13	2.13			49.44**			29.76**		

Hierarchical Regression Analyses Predicting Scores for Wisdom

Note. * = p < .01; ** = p < .001; Sex (Male = 1; Female = 2); Educ = Education Level; ACS = Attributional Complexity Scale; NEIS = Northwestern Ego-Integrity Scale; SAWS = Self-Assessed Wisdom Scale; BTP = Balanced Time Perspective.



Figure 1. Mean Wisdom scores as a function of BTPS category. Error bars represent 95% confidence intervals.

time perspective group also achieved statistical significance, F(3, 140) = 8.83, p < .001, partial $eta^2 = .16$. Post hoc tests (Tukey's HSD) revealed, as can be seen in Figure 2, that both the futurist and the time expansive categories were significantly higher on ego-integrity than the time restrictive category. No other group differences achieved statistical significance.

Discussion

The current project investigated the assumption that a high level of positive reminiscence, combined with a high level of positive anticipation (i.e., a balanced time perspective) would predict the positive psychosocial strengths of ego-integrity and wisdom. Results support this contention. Specifically, episodic recall of positive experiences, in conjunction with positive prospective projections serve as one potential pathway to achieve a sense of purpose and direction in life (i.e., ego-integrity). Moreover, a balanced time perspective may provide a potential means of achieving wisdom, a complex, multidimensional construct which requires the ability to both learn from our past and prepare for our future. The standard caveat about limitations in causal statements based upon correlation data is relevant here. These results hold even after accounting for demographic, health, and cognitive (i.e., attributional complexity) variables and are, therefore, consistent with and partially replicate earlier findings using the BTPS (Webster, 2011; Webster, Bohlmeijer, & Westerhof, 2014; Webster & Ma, 2013) as well as recent findings using a modified BTPS which includes a positive present subscale (Vowinckel, Westerhof, Bohlmeijer, & Webster, 2015).

The results have interesting implications for both reminiscence theory and clinical applications. For instance, Webster (2013) recently noted several communalities between reminiscence and future orientation, including integrated neurophysiological circuits, affective qualities, and temporal distributions. Indeed, much work in the related domain of *mental time travel* (e.g., Blix &



Figure 2. Mean Ego Integrity scores as a function of BTPS category. Error bars represent 95% confidence intervals.

Brennen, 2011; Klein, 2013; Suddendorff & Corballis, 2007) strongly supports this assertion. Given such conceptual/neuroanatomical overlaps, Webster (2013) speculated that reminiscing might spontaneously trigger future anticipation, and vice versa. If so, might the benefits we observe in reminiscence therapy be due, at least in part, to positive thoughts of the future? Certainly, one of the stronger associations with a positive future time perspective is a sense of optimism, a state of mind incompatible with feelings of anxiety and depression, which are frequently the very targets of reminiscence or life review therapy.

While the current findings are encouraging, several study limitations should be noted. First, all measures consisted of questionnaires, some of which assessed conceptually related topics; here the issue involves common method variance which may inflate the strength of associations. This is particularly true for the association between the BTPS and the measure of wisdom, as the SAWS explicitly includes reminiscence/reflection as a core element. However, mitigating this concern was the finding that eliminating the Reminiscence/Reflectiveness subscale of the SAWS had no appreciable effect on the outcome. Additionally, the correlation between the ACS and the BTPS, although statistically significant and in the hypothesized direction, is relatively weak. This may be due, in part, to the fact that the ACS measures a person's ability to think complexly about the behaviors of others rather than oneself. Perhaps a more relevant measure assessing intellectual flexibility or cognitive complexity would produce a stronger association. Finally, although I included additional variables in the regression analyses in the tests for incremental validity, other alternatives are certainly important. Personality traits, for instance, might account for the observed relationship between a balanced time perspective and ego-integrity and wisdom. However, mitigating this concern, Webster, Bohlmeijer, and Westerhof (2014) found that the BTPS-wisdom relationship held after accounting for neuroticism, extraversion, and openness to experience variables.

Recalling past successes in love, life, and work imbues us with a sense of meaning, confidence, and satisfaction; imagining future adventures, goals, and personal projects instill a sense of purpose, direction, and energy. The results of the current project suggest that persons who can combine both of these time perspectives in a balanced manner might reap important psychosocial benefits related to psychological well-being and important psychosocial strengths.

References

- Ardelt, M. (1997). Wisdom and life satisfaction in old age. Journal of Gerontology: Psychological Sciences, 52B, 15–27.
- Blix, I., & Brennen, T. (2011). Mental time travel after trauma: The specificity and temporal distribution of autobiographical memories and future-directed thoughts. *Memory*, 19(8), 956–967.
- Boniwell, I. (2009). Perspectives on time. In S. Lopez (Ed.), Handbook of positive psychology (2nd ed., pp. 295–302). New York: Oxford University Press.
- Boniwell, I., Osin, E., Linley, P. A., & Ivanchencko, G. V. (2010). A question of balance: Time perspective and well-being in British and Russian samples. *The Journal of Positive Psychology*, 5(1), 24–40.
- Boniwell, I., & Zimbardo, P. G. (2004). Balancing time perspective in pursuit of optimal functioning. In P. A. Linley and S. Joseph (Eds.), *Positive Psychology in Practice* (pp. 165–178). Hoboken, N. J.: John Wiley & Sons, Inc.
- Brothers, A., Chui, H., & Diehl, M. (2014). Measuring future time perspective across adulthood: Development and evaluation of a brief multidimensional questionnaire. *The Gerontologist*, 54(6), 1075–1088.
- Bryant, F. B., Smart, C. M., & King, S. P. (2005). Using the past to enhance the present: Boosting happiness through positive reminiscence. *Journal of Happiness Studies*, 6, 227–260.
- Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science*, 312, 1913–1915.
- Coleman, P. G. (2005). Uses of reminiscence: Functions and benefits. Aging and Mental Health, 9, 291–294.
- Costa, R. V., & Pakenham, K. I. (2012). Associations between benefit finding and adjustment outcomes in thyroid cancer. *Psycho-Oncology*, 21(7), 734–744.
- Desmyter, F., & De Raedt, R. (2012). The relationship between time perspective and subjective well-being of older adults. *Psychologica Belgica*, 52(1), 19–38.
- Drake, L., Duncan, E., Sutherland, F., Abernethy, C., & Henry, C. (2008). Time perspective and correlates of well-being. *Time & Society*, 17(1), 47–61.
- Erikson, E. (1963). Childhood and society (2nd ed.). New York: W. W. Norton.
- Fletcher, G. J. O., Danilovics, P., Fernandez, G., Peterson, D., & Reeder, G. D. (1986). Attributional complexity: An individual differences measure. *Journal of Personality and Social Psych*ology, 51, 875–884.
- Gao, Y. J. (2011). Time perspective and life satisfaction among young adults in Taiwan. Social Behavior and Personality, 39(6), 729– 736.
- Gellert, P., Ziegelmann, J. P., Lippke, S., & Schwarzer, R. (2012). Future time perspective and health behaviors: Temporal framing of self-regulatory processes in physical exercise and dietary behaviors. Annals of Behavioral Medicine, 43, 208–218.
- Karelitz, T. M., Jarvin, L., & Sternberg, R. J. (2010). The meaning of wisdom and its development throughout life. In R. M. Lerner & W. F. Overton (Eds.), *The handbook of life-span development* (pp.)

837-881). New York: John Wiley and Sons.

- Karniol, R., & Ross, M. (1996). The motivational impact of temporal focus: Thinking about the future and the past. Annual Review of Psychology, 47, 593–620.
- Klein, S. B. (2013). Future mental time travel: Types of memory, types of selves, and types of temporality. *Social Cognition*, 31(3), 417– 426.
- Kunzmann, U., & Baltes, P. B. (2003). Wisdom-related knowledge: Affective, motivational, and interpersonal correlates. *Personality* and Social Psychology Bulletin, 29, 1104–1119.
- McKay, M. T., Andretta, J. R., Magee, J., & Worrell, F. C. (2014). What do temporal profiles tell us about adolescent alcohol use? Results from a large sample in the United Kingdom. *Journal of Adolescence*, 37, 1319–1328.
- Pinquart, M., & Forstmeier, S. (2012). Effects of reminiscence interventions on psychosocial outcomes: A meta-analysis. Aging & Mental Health, 16(5), 541–558.
- Roediger, H. I. (2012). Psychology's woes and a partial cure: The value of replication. *Observer*, 25(2), 346–357.
- Staudinger, U. M., & Gluck, J. (2011). Psychological wisdom research: Commonalities and differences in a growing field. *Annual Review* of Psychology, 62, 215–241
- Stolarski, M., Matthews, G., Postek, S., Zimbardo, P. G., & Bitner, J. (2014). How we feel is a matter of time: Relationships between time perspectives and mood. *Journal of Happiness Studies*, 15(4), 809–827.
- Stolarski, M., Wiberg, B., & Osin, E. (2015). Assessing temporal harmony: The issue of a balanced time perspective. In M. Stolarski, N. Fieulaine, and W. van Beek (Eds.), *Time perspective* theory: Review, research and application. Essays in honor of Philip G. Zimbardo (pp. 57–71). New York: Springer.
- Suddendorf, T., & Corballis, M. C. (2007). The evolution of foresight: What is mental time travel, and is it unique to humans? *Behavioral* and Brain Sciences, 30, 299–351.
- Vowinckel, J. C., Westerhof, G. J., Bohlmeijer, E. T., & Webster, J. D. (In Press). Flourishing in the now: Initial validation of a presenteudaimonic time perspective scale. *Time & Society*. Retrieved from http://tas.sagepub.com/content/early/recent. DOI: 10.1177/09 61463X15577277
- Webster, J. D. (2013). Is it time to reminisce about the future? The International Journal of Reminiscence and Life Review, (1)1, 51– 54.
- Webster, J. D. (2011). A new measure of time perspective: Initial psychometric findings for the Balanced Time Perspective Scale (BTPS). *Canadian Journal of Behavioural Science*, 43(2), 111–118.
- Webster, J. D. (2010). Wisdom and positive psychosocial values in young adulthood. *Journal of Adult Development*, 17, 70–80.
- Webster, J. D., Bohlmeijer, E. T., & Westerhof, G. J. (2014). Time to flourish: The relationship of temporal perspective to well-being and wisdom across adulthood. *Aging and Mental Health*, (18)8, 1046–1056.
- Webster, J. D., Bohlmeijer, E. T., & Westerhof, G. J. (2010). Mapping the future of reminiscence: A conceptual guide for research and practice. *Research on Aging*, 32(4), 527–564.
- Webster, J. D., & Ma, X. (2013). A balanced time perspective in adulthood: Well-being and developmental effects. *Canadian Journal on Aging*, 32(4), 433–442.
- Zhang, J. W., & Howell, R. T. (2011). Do time perspectives predict unique variance in life satisfaction beyond personality traits? *Personality and Individual Differences*, 50(8), 1261–1266.
- Zhang, J. W., Howell, R. T., & Stolarski, M. (2013). Comparing three methods to measure a balanced time perspective: The relationship between a balanced time perspective and subjective well-being. *Journal of Happiness Studies*, 14, 169–184.
- Zimbardo , P. G., & Boyd , J. N. (1999). Putting time in perspective: A valid, reliable individual differences metric. *Journal of Personality* and Social Psychology, 77 (6), 1271–1288.