

Journal : WORKAR

Article Doi : 10.1093/workar/wau005

Article Title : A Matter of Time: Why Some People Plan for Retirement and Others Do Not

## INSTRUCTIONS

- 1. Author groups:** Please check that all names have been spelled correctly and appear in the correct order. Please also check that all initials are present. Please check that the author surnames (family name) have been correctly identified by a pink background. If this is incorrect, please identify the full surname of the relevant authors. Occasionally, the distinction between surnames and forenames can be ambiguous, and this is to ensure that the authors' full surnames and forenames are tagged correctly, for accurate indexing online. Please also check all author affiliations.
- 2. Figures:** If applicable figures have been placed as close as possible to their first citation. Please check that they are complete and that the correct figure legend is present. Figures in the proof are low resolution versions that will be replaced with high resolution versions when the journal is printed.
- 3. Colour reproduction:** Please note that if you opt out of paying for colour online and in print, any figures changed to black and white should be checked carefully in your figures legends for any reference to colour. Please check the black and white versions (these may be available at the end of the paper) and contact us if you have any concerns. Please re-word the legend/text to avoid using reference to colour. Alternatively, please let us know if you wish to pay for print colour reproduction or to have both versions in black and white. Please note that there is a £350/\$600 charge for each figure reproduced in colour in print.
- 4. Missing elements:** Please check that the text is complete and that all figures, tables and their legends are included.
- 5. Funding:** Please provide a Funding statement, detailing any funding received. Remember that any funding used while completing this work should be highlighted in a separate Funding section. Please ensure that you use the full official name of the funding body, and if your paper has received funding from any institution, such as NIH, please inform us of the grant number to go into the funding section. We use the institution names to tag NIH-funded articles so they are deposited at PMC. If we already have this information, we will have tagged it and it will appear as coloured text in the funding paragraph. Please check the information is correct. [red text to be used for suppliers who are tagging the funding]
- 6. Conflict of interest:** All authors must make a formal statement indicating any potential conflict of interest that might constitute an embarrassment to any of the authors if it were not to be declared and were to emerge after publication. Such conflicts might include, but are not limited to, shareholding in or receipt of a grant or consultancy fee from a company whose product features in the submitted manuscript or which manufactures a competing product. The following statement has been added to your proof: 'Conflict of Interest: none declared'. If this is incorrect please supply the necessary text to identify the conflict of interest.
- 7. Abbreviations:** some commonly used abbreviations have been automatically expanded for clarity to readers. By using the tracked changes proof for reference, please check the expanded abbreviations have been made correctly and mark up any corrections (if required) here or by email, listing the line and page numbers your correction refers to.

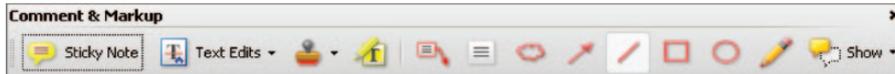
## MAKING CORRECTIONS TO YOUR PROOF

These instructions show you how to mark changes or add notes to the document using the Adobe Acrobat Professional version 7.0 (or onwards) or Adobe Reader 8 (or onwards). To check what version you are using go to **Help** then **About**. The latest version of Adobe Reader is available for free from [get.adobe.com/reader](http://get.adobe.com/reader).

For additional help please use the **Help** function or, if you have Adobe Acrobat Professional 7.0 (or onwards), go to [http://www.adobe.com/education/pdf/acrobat\\_curriculum7/acrobat7\\_lesson04.pdf](http://www.adobe.com/education/pdf/acrobat_curriculum7/acrobat7_lesson04.pdf)

### Displaying the toolbars

**Adobe Reader 8:** Select Tools, Comments & Markup, Show Comments and Markup Toolbar. **If this option is not available, please let me know so that I can enable it for you.**



**Acrobat Professional 7:** Select Tools, Commenting, Show Commenting Toolbar.

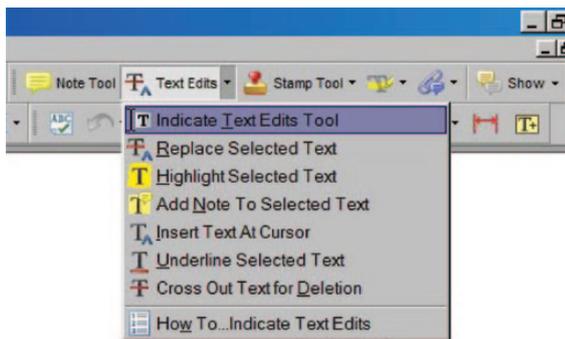


**Adobe Reader 10:** To edit the galley proofs, use the Comment Toolbar (Sticky Note and Highlight Text).



### Using Text Edits

This is the quickest, simplest and easiest method both to make corrections, and for your corrections to be transferred and checked.



1. Click **Text Edits**
2. Select the text to be annotated or place your cursor at the insertion point.
3. Click the **Text Edits** drop down arrow and select the required action.

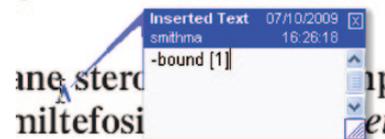
*You can also right click on selected text for a range of commenting options.*

### SAVING COMMENTS

In order to save your comments and notes, you need to save the file (**File, Save**) when you close the document. A full list of the comments and edits you have made can be viewed by clicking on the Comments tab in the bottom-left-hand corner of the PDF.

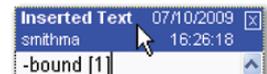
### Pop up Notes

With *Text Edits* and other markup, it is possible to add notes. In some cases (e.g. inserting or replacing text), a pop-up note is displayed automatically.



To **display** the pop-up note for other markup, right click on the annotation on the document and selecting **Open Pop-Up Note**.

To **move** a note, click and drag on the title area.



To **resize** of the note, click and drag on the bottom right corner.



To **close** the note, click on the cross in the top right hand corner.



To **delete** an edit, right click on it and select **Delete**. The edit and associated note will be removed.

## AUTHOR QUERY FORM

Journal : WORKAR

Article Doi : 10.1093/workar/wau005

Article Title : A Matter of Time: Why Some People Plan for Retirement and Others Do Not

First Author : Joanne K. Earl

Corr. Author : Joanne K. Earl

### **AUTHOR QUERIES - TO BE ANSWERED BY THE CORRESPONDING AUTHOR**

The following queries have arisen during the typesetting of your manuscript. Please answer these queries by marking the required corrections at the appropriate point in the text. Failure to do so could result in delayed publication.

AQ1	Please check that all names have been spelled correctly and appear in the correct order. Please also check that all initials are present. Please check that the author surnames (family name) have been correctly identified by a pink background. If this is incorrect, please identify the full surname of the relevant authors. Occasionally, the distinction between surnames and forenames can be ambiguous, and this is to ensure that the authors' full surnames and forenames are tagged correctly, for accurate indexing online. Please also check all author affiliations.
AQ2	Please provide the city, province, and country name in affiliation 2.
AQ3	Please check the order of section headings.
AQ4	Please note that the reference citation Nuttin (1985) has been changed to Nuttin and Lens (1985) as per the reference list. Please check and correct if necessary.
AQ5	Please note that the reference Muratore and Earl (2009) is not listed in the reference list. Please add it to the list or delete the citation.
AQ6	Please note that the reference Donaldson et al. (2009) is not listed in the reference list. Please add it to the list or delete the citation.
AQ7	Please note that the reference de Vaus et al. (2007) is not listed in the reference list. Please add it to the list or delete the citation.
AQ8	Please provide the footnote for *, **, and *** in Table 3.
AQ9	Please note that the reference Seligman et al. (2005) is not listed in the reference list. Please add it to the list or delete the citation.
AQ10	Please note that the reference Seligman and Csikszentmihalyi (2009) is not listed in the reference list. Please add it to the list or delete the citation.
AQ11	Please update the reference "Donzuso et al. (in press)."
AQ12	Please update the reference "Sirios (in press)."

# A Matter of Time: Why Some People Plan for Retirement and Others Do Not

Joanne K. Earl<sup>1</sup>, Timothy C. Bednall<sup>2</sup>, and Alexa M. Muratore<sup>1</sup>

1. School of Psychology, University of New South Wales, Sydney, New South Wales, Australia  
2. Swinburne Business School

Correspondence concerning this article should be addressed to Joanne K. Earl, School of Psychology, University of New South Wales, Sydney 2052, New South Wales, Australia. E-mail: j.earl@unsw.edu.au



AQ1

AQ2



## ABSTRACT

This study explored time perspective (TP) as a predictor of retirement antecedents (retirement planning) and consequences (adjustment, well-being, and life satisfaction). Utilizing a 3-wave longitudinal study with 367 retirees, the stability of TP was explored to determine whether it is best represented as a state or trait. Between 79% and 93% of the variance in TP can be explained by trait rather than state. Present hedonistic, past negative, and future oriented predicted retirement planning. Outcomes of retirement were positively predicted by retirement planning, and past positive TP, and negatively predicted by past negative, present fatalistic, and present hedonistic TP. Implications for the design of retirement interventions were explored acknowledging the stability of TP and the influence of different TPs on planning and adjustment.



AQ3

## TIME PERSPECTIVE, RETIREMENT

### PLANNING, AND ADJUSTMENT ACROSS TIME

Studies consistently report the positive impact of retirement planning and preparation on retirement adjustment and satisfaction (e.g., Denton et al., 2004; Donaldson, Earl, & Muratore, 2010; Elder & Rudolph, 1999; Meon, Sweet, & Swisher, 2005; Shultz & Wang, 2011; Spiegel & Shultz, 2003; Topa, Moriano, Depolo, Alcover, & Morales, 2009). How much or little planning takes place may depend upon individuals' views of time, and whether their focus is on the positive or negative past, the present (hedonistic or fatalistic) or the future. Individual differences in planning may be explained in terms of one or more of these time perspectives (TPs). Compared to the wealth of research on planning and adjustment, there are far fewer studies exploring TP and retirement planning. Limited evidence (e.g., Petkoska & Earl, 2009; Zacher, 2013) exists to suggest that TPs can predict outcomes and that some TPs are better at predicting than others. It is essential to understand the relationship between variables if we want to identify the underlying mechanisms driving retirement planning in order to change behavior. Also yet to be determined is whether TP is stable over time (behaving more like personality) and if so, how easy is it to modify? For example, if we determine that future focused people plan more, is it feasible to get someone with a focus on the past to change their perspective? We explore the TPs, retirement planning and retirement outcomes of a group of 367 Australian seniors over 18 months with three waves of data collection. The study has three main aims:

Firstly to examine changes in TP over time; secondly to examine the relationship between TP and retirement planning and thirdly to determine the role of TP in promoting retirement adjustment. Answers to these important questions will help to inform the design of future retirement planning interventions.

## TIME PERSPECTIVE AND ITS INFLUENCE ON BEHAVIOR

Originally defined by Lewin (1951), TP has been described as "the totality of the individual's views of his psychological future and psychological past existing at a given time" (p. 75). In support of this definition, Nuttin and Lens (1985) argues that perceptions of future and past events have the potential to influence present behavior.

Zimbardo and Boyd (1999) asserted that past, present, and future TPs play an important role in most behavior, including, "encoding, storing, and recalling experienced events, as well as in forming expectations, goals, contingencies, and imaginative scenarios" (p. 1271). TP is described in terms of five different perspectives: past positive, past negative, present fatalistic, present hedonistic, and future oriented. According to Zimbardo and Boyd (2008) people scoring highly on the future TP scale of the Zimbardo Time Perspective Inventory (ZTPI) are concerned with working toward future goals and rewards, often at the expense of present enjoyment. They are extremely sensitive to the fact that present behavior will have future consequences. In contrast, people who score highly on the present hedonistic TP scale live in



AQ4

the moment and seek excitement and instant gratification, with little consideration of the future consequences of any actions. People who score highly on the present fatalistic TP scale, while also focused on the “here and now,” take a negative attitude toward the present and believe outside forces control one’s life. They do not believe that there is a contingent relationship between present actions and future consequences. Finally, high scorers on the past positive and past negative TP scales tend to focus on the past. However, while high past positive people are characterized by a nostalgic, warm, and positive construction of the past, those high on the past negatives scale place a strong emphasis on past experiences that were aversive or unpleasant (Zimbardo & Boyd, 2008).

It is important to recognize that Zimbardo and Boyd (2008) recommend a balanced TP for good psychological health. They recommend that each person maintain a high level of past positive TP, moderate-high levels of future and present hedonistic TP and low levels of past negative and present fatalistic TP. Achieving this ideal mix would be a realistic objective if TP were amenable to change. If so, then it may then be possible to implement the guidelines provided by the authors to “reset your psychological clock” (Zimbardo & Boyd, 2008, p. 297). On the other hand, if TPs operate more like traits and were relatively stable over time, then this may be less possible. In this case TPs, as per personality, would more likely be consistent across time and circumstances, making them less malleable.

Many links have been established to demonstrate ways in which TP operates as an important individual difference influencing performance. Evidence from a variety of studies shows that Future TP has a significant impact on achievement (Harber, Zimbardo, & Boyd, 2003; Oyserman & Markus, 1990). Even in the research context, future-oriented students were observed to initiate and complete research participation sooner than present-oriented students (Harber et al., 2003). Epel, Bandura, and Zimbardo (1999) found that individuals biased toward a future TP spent less time being homeless individuals and had a greater tendency to enroll in school, whereas those with a high present orientation responded by avoiding their predicament. Zimbardo, Keough, and Boyd (1997) examined the influence of present TP in risky driving behavior and concluded that present TP was a strong predictor of driving risks. People who scored high on the present TP measure of the ZTPI reported more frequent use of tobacco, alcohol, and drugs (even after controlling for other personality traits; Keough, Zimbardo, & Boyd, 1999). Time Perspective has also been linked to other planned and purposeful activities such as energy conservation (Corral-Verdugo, Fraijo-Sing, & Pinheiro, 2006; Milfont & Gouveia, 2006), preventative health behaviors (Livneh & Martz, 2007; Rothspan & Read, 1996) and career planning (Savickas, Silling, & Schwartz, 1984). More generally, Goldberg and Maslach (1996) reported that high scores on past TP were significantly related to setting future goals. Participants who indicated specific goals across 1- and 5-year timeframes had higher past positive TP than those who did not. As acknowledged by Hershey, Jacobs-Lawson, and Neukham (2002) goals are important to the promotion of life satisfaction and adjustment.

## THE RELATIONSHIP BETWEEN TP AND RETIREMENT PLANNING

TP has been found to predict retirement planning behaviors, in particular financial planning (Hershey & Mowen, 2000; Jacobs-Lawson

& Hershey, 2005; Petkoska & Earl, 2009) and interpersonal/leisure planning (Petkoska & Earl, 2009). While some studies (Adams & Rau, 2011; Parker, Carvalho, & Rohwedder, 2013; Zacher, 2013 2014) have explored the relationship between TP and retirement planning, these have largely focused on Future TP. However, it may be possible to also promote behavioral change through the other TPs identified by Zimbardo and Boyd (2008) but largely ignored by researchers. Understanding how past and present as well as future temporal orientation influence the desire to plan for retirement and the relationship to retirement outcomes may provide the key to designing person-centered retirement counseling interventions.

## MEASURING RETIREMENT PLANNING

There have been two significant challenges for researchers working in the field of retirement research. One of these has been the lack of tools to measure retirement planning and resource acquisition and the other has been the emphasis on preretirement planning at the expense of planning during retirement. While most retirement planning has focused on accumulating wealth, the symbiotic relationships between finances, health, work, social activity, and leisure activity underscores the need for more holistic planning across these domains (Denton et al., 2004; Petkoska & Earl, 2009). New developments (Muratore & Earl, 2010) in retirement planning measurement now enable this research. One such planning model, the reflexive life planning model (Denton et al., 2004) informs the measure designed by Muratore and Earl (2009). According to Denton and colleagues (2004) planning exists across three domains: (a) *self-insurance*, which refers to financial plans to optimize one’s future wealth (e.g., savings accounts, investments, contributions to personal pension, and private insurance policies for assets and health care), (b) *self-protection*, which refers to nonfinancial plans to maintain one’s health and well-being during retirement, and (c) *public protection*, which refers to engaging benefits provided by the Government, in order to promote one’s health, wealth, and well-being.

There is evidence to support the value of on-going planning during retirement rather than limiting it to the period of preretirement. Donaldson and colleagues (2009) points to the importance of on-going planning throughout retirement as a predictor of retirement adjustment. The danger in focusing only on preplanning before workforce exit is that: (a) periods vary depending on when the planning process begins, and (b) the average amount of time spent in retirement in Australia is likely to be far greater than the preretirement planning phase. For example, the average age of retirement for males in Australia is 58.5 years (Australian Bureau of Statistics [ABS], 2013a) and the duration of retirement is 24.1 years (ABS, 2013b). Women on average retire at 50.0 years of age (ABS, 2013a) and spend 35.6 years (ABS, 2013b) in retirement. Our study surveys retirees and uses retirement planning measures focusing on current plans and not retrospective planning prior to retirement.

This study explores the relationship between TP, retirement planning, and outcomes across three waves of data collection over an 18-month period. In line with our first aim exploring TP across time, we expect to find that TP operates more like a state than a trait and therefore is amenable to change. As part of our second aim exploring TP and retirement planning we expect to replicate previously reported relationships between future TP and retirement planning. Similarly,



AQ5



AQ6

present TP (both fatalistic and hedonistic) are expected to negatively predict planning. Past positive TP will positively predict planning due to documented relationships with goal setting, while negative TP will negatively predict planning. Consistent with our third aim, exploring TP and retirement adjustment, a relationship will exist between future TP, past positive TP, and retirement adjustment. Understanding the stability of TP and the relationship between variables longitudinally will inform the future design and choice of retirement planning interventions based on TPs.

## METHOD

### Participants

National Seniors Australia (NSA) members aged 45 years and over and retired were invited via an e-newsletter to participate in a study on retirement planning and adjustment. At the end of this survey, interested individuals were asked to identify themselves for follow-up surveys. Data were collected over 18-month period at 9 monthly intervals. The first round was distributed in May (Time 1) followed in January of the following year (Time 2), and later during September of the same year (Time 3). All data were collected under similar global economic circumstances and after the global financial crisis. The final sample resulted in complete data with all three time points for 367 individuals.

With regard to participant demographics, 54% of the sample was male. The mean age for males was 65.5 ( $SD = 5.9$ ) and for females was 64.3 ( $SD = 5.9$ ). Participants reported they had been retired for an average of 6.1 years ( $SD = 6.1$ ). In terms of their highest level of education, 0.9% reported they had completed elementary school, 19.9% high school, 21.4% a vocational certificate or diploma, 36.3% an undergraduate university degree, 18.5% a postgraduate degree, and 3% “other.”

### Materials

We used scales from the literature that have shown to be reliable. For each scale, Cronbach's alpha reliability coefficient is shown in the diagonal of Table 1.

#### Time perspective

TP was assessed using a shortened version of the Zimbardo Time Perspective Inventory (for more details, see Zimbardo & Boyd, 1999) consisting of 22 items. The ZPTI yields five sub-scales (past-negative, past-positive, present-fatalistic, present-hedonistic, and future) each representing an orientation toward a temporal and the attitude related to it. Items include “Painful past experiences keep being replayed in my mind” (past negative), “Happy memories of good times spring readily to mind” (past positive) “Since whatever will be will be, it doesn't really matter what I do” (present fatalistic), “Taking risks keeps my life from becoming boring” (present hedonistic), and “I complete projects on time by making steady progress” (future). Participants are instructed to read each item and, as honestly as they can, answer the question: “How characteristic or true is this of you?” answering on a 5-point scale ranging from 1 (*very untrue*) to 5 (*very true*). Higher scores on a scale reflect a greater orientation toward the TP being assessed by that scale.

#### Retirement planning

The RPQII (Muratore & Earl, 2010), consisting of 28 items, was used in the present study. Participants rated the planning effort that they

had invested across three domains: public protection (i.e., government based benefits); self-insurance (personal financial preparations), and self-protection (personal nonfinancial preparations). Higher scores indicate greater planning effort.

#### Retirement adjustment

This was measured using the 13-item scale from the Healthy Retirement Project (Wells, de Vaus, Kendig, Quine, & Petralia, 2006). Participants rated their agreement from 1 (*strongly disagree*) to 5 (*strongly agree*) to statements such as “I am well adjusted to the changes” and “people don't respect me as much now that I'm retired.”

#### Psychological wellbeing

This was measured using the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988). Ratings were summed to calculate an overall wellbeing score, such that a higher score indicates better wellbeing. As per previous studies (Muratore & Earl, 2014; Wong & Earl, 2009), 12 items were used to indicate a single global measure of wellbeing.

#### Life satisfaction

This was rated using a single item, “Overall, how satisfied are you nowadays with your life as a whole?” from 1 (*completely dissatisfied*) to 10 (*completely satisfied*). Other measures with seven or more scale points have produced similar results (de Vaus, Wells, Kendig, & Quine, 2007; Easterlin, 2009).

### Procedure

An online questionnaire containing all of the aforementioned measures was developed. Items were presented in the order listed above. Participants accessed the original questionnaire via a link embedded in an e-newsletter and thereafter, an email link. For completing all three rounds, participants were offered a summary report of results and a chance to win one of three \$100 gift vouchers.

## RESULTS

Descriptive statistics—including means, standard deviations and correlations among variables—are presented in Table 1 for participants who responded to all three rounds. All analyses were conducted using *Mplus 7.11* using the Maximum Likelihood Robust (MLR) estimator (Muthén & Muthén, 2012). Outcome variables were analyzed separately (i.e., as retirement adjustment, general health, and global life satisfaction). As our concern was with overall propensity to plan, retirement planning was analyzed as a single factor.

First, a measurement model was tested including the baseline measures of all five TPs, as well as retirement planning. The indicators associated with the retirement planning latent variable included the means of the three subscales of the RPQII. The measurement model provided evidence that the three subscales shared a common source of variance, with the planning factor having a composite reliability of .71. Overall, the model provided a close fit to the data,  $\chi^2 = 247.344$ ,  $df = 154$ , RMSEA = .041, CFI = .944, SRMR = .053.

In order to explore our first aim analysis was conducted on the TPs measures to determine the proportion of variance attributable to traits versus states. Using Widaman, Ferrer, and Conger (2010) approach, we first tested the longitudinal measurement invariance of the factor



AQ7

Table 1. Means, Standard Deviations, and Correlations Among Variables

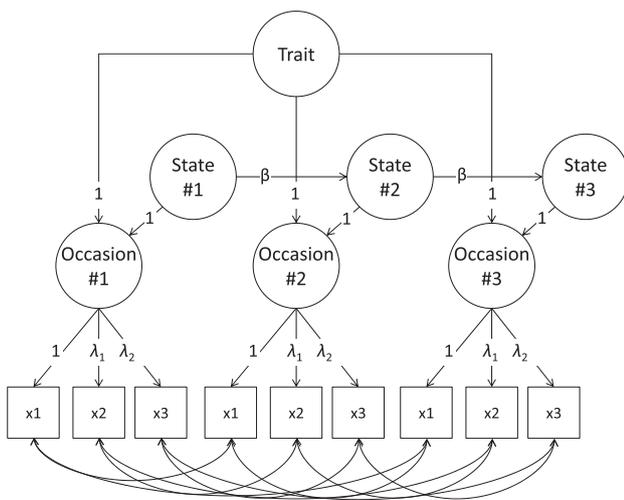
Variable	Means	SDs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Time perspectives (Time 1)																					
1. Past positive	3.80	0.77	(.75)																		
2. Past negative	2.41	1.05	-.27	(.82)																	
3. Present fatalistic	2.26	0.80	-.11	.38	(.74)																
4. Present hedonistic	3.11	0.76	.11	.01	-.15	(.73)															
5. Future orientation	3.69	0.71	.05	-.14	-.21	.08	(.63)														
Retirement planning (Time 1)																					
6. Public protection	13.80	6.30	.12	.14	.07	.15	.10	(.85)													
7. Self-insurance	29.81	9.71	.02	.04	-.09	.26	.18	.33	(.89)												
8. Self-protection	27.07	7.43	.15	-.02	-.08	.25	.21	.34	.60	(.85)											
Outcomes (Time 1)																					
9. Retirement adjustment	46.68	8.86	.25	-.44	-.37	-.02	.07	-.03	.03	.10	(.89)										
10. General health	21.11	6.89	.12	-.33	-.28	.05	.02	-.08	-.08	.04	.36	(.87)									
11. Global life satisfaction	7.86	1.80	.29	-.41	-.39	.05	.18	-.05	.07	.14	.68	.39	—								
Outcomes (Time 2)																					
12. Retirement adjustment	46.58	8.45	.25	-.40	-.37	-.02	.17	-.03	.01	.11	.85	.32	.66	(.89)							
13. General health	21.35	5.96	.15	-.21	-.21	.04	.10	-.11	.01	.05	.28	.30	.39	.33	(.83)						
14. Global life satisfaction	7.82	1.81	.19	-.29	-.35	-.01	.16	-.04	-.03	.05	.54	.36	.67	.60	.44	—					
Outcomes (Time 3)																					
15. Retirement adjustment	46.93	8.05	.25	-.38	-.36	-.04	.11	-.03	.05	.09	.85	.34	.64	.88	.30	.58	(.89)				
16. General health	21.18	6.32	.09	-.18	-.22	.03	.07	.04	.00	.06	.26	.36	.29	.25	.28	.29	.32	(.84)			
17. Global life satisfaction	7.80	1.86	.20	-.26	-.32	.03	.15	.01	.00	.10	.55	.26	.60	.57	.36	.62	.61	.39	—		
Demographics																					
18. Gender (0 = female, 1 = male)	0.54	0.50	-.02	-.05	-.14	-.12	-.05	-.11	-.13	-.27	.01	.11	.03	.08	.07	.08	.04	.09	.07	—	
19. Current age (years)	64.68	5.52	.10	-.05	.08	-.07	.10	.24	-.16	.03	.01	.05	-.07	.01	.01	-.03	.00	.03	-.08	.05	—
20. Years retired	6.09	6.06	.05	.04	.19	-.15	.01	.03	-.24	-.01	.01	.02	-.05	.02	-.05	-.04	.02	.04	-.07	.04	.56

Note. Correlations are significant above .10 ( $p < .05$ ), .13 ( $p < .01$ ), and .17 ( $p < .001$ );  $N = 367$ .

loadings, intercepts, and residual variances of the TPs scales. Across the three occasions of measurement, strict invariance was achieved for all five scales. Each scale was then analyzed using a trait-state-occasion model (TSO; Cole, 2012). An example of a TSO model is presented in Figure 1. Across the three occasions, approximately 79%–93% of the variance in each occasion was explained by a trait-like factor, after accounting for measurement error. All of the models provided a good fit to the data. The results of this analysis are presented in Table 2. Due to the stability of the TP scores across the three waves of data collection further analysis utilized only the Time 1 TP data.

To investigate change in the three outcome variables (retirement adjustment, general health, and global life satisfaction), a series of latent growth models were tested (Little, 2013). Each growth model was specified with two latent variables, representing: (a) each person's standing on the outcome measures at baseline, and (b) change over the three measurement occasions. To account for the possibility of nonlinear change, the third factor loading of the latent change variable was freely estimated (whereas the first and the second loadings were fixed to 0 and 1). The baseline and change variables were regressed on the TPs and retirement planning variables. Due to the high proportion of trait-like variance, only the Time 1 measures of the TPs were used.

Analyses investigating the relationship between TP and planning, part of our second aim, are presented in Table 3. All three models provided a good fit to the data. As can be seen in the Table 3, retirement planning was positively predicted by future orientation, present hedonistic TP, and past negative TP. With regard to our third aim, investigating relationships between TP and retirement adjustment, baseline retirement adjustment was positively predicted by retirement planning and past positive TP, whereas past negative, present fatalistic, and present hedonistic TPs were negative predictors. Increases in retirement adjustment over time were predicted by future orientation and past negative TP. With regard to baseline general health, past negative and present fatalistic TPs were negative predictors.



**Figure 1.** Example of a multiple indicator trait-state occasion (TSO) model. For the items (x1–x3), factor loadings, intercepts, and residual variances are constrained to be equal across the three waves. Residual variances of corresponding items are permitted to covary across waves.

**Table 2.** Fit Information for Multiple-Class Adjustment, Wellbeing, and Satisfaction Models

	Variance			Fit Statistics							
	Trait	Occasion 1	Occasion 2	Occasion 3	Variance Explained by Trait (%)	$\chi^2$	df	p Value	CFI	RMSEA	SRMR
Past positive	0.393	0.463	0.401	0.446	90	35.371	30	.229	.995	.018	.068
Past negative	0.709	0.889	0.855	0.85	82	50.544	30	.011	.985	.035	.042
Present fatalistic	0.424	0.513	0.499	0.547	82	84.887	60	.019	.979	.027	.060
Present hedonistic	0.348	0.473	0.38	0.471	79	67.090	60	.247	.995	.014	.065
Future	0.246	0.275	0.252	0.267	93	32.302	30	.354	.996	.012	.051

Baseline global life satisfaction was positively predicted by past positive TP, whereas past negative and present fatalistic TPs were negative predictors.

### DISCUSSION

Principally, our research sought to answer three important questions about TP. Firstly, how stable is TP? Secondly, does TP predict propensity to plan? And thirdly, does TP predict how well people adjust to retirement? In relation to our first aim, findings point to the stability of TP over time. During an 18-month period scores remain largely consistent (79%–93%) suggesting that TP may be more difficult to change than Zimbardo and Boyd (1999) originally thought. It may be quite challenging to “reset your psychological clock” to achieve the desired combination of “high levels of past-positive TP, moderate-high levels of future and present-hedonistic TP and low levels of past-negative and present-fatalistic TP” (Zimbardo & Boyd, 2008, p. 297). While previous research has focused on Future TP, our study demonstrates that rather than striving to change TPs it may be better to work with current TPs and promote understanding by making explicit the link between TP and planning efforts. Gupta, Hershey, and Gaur (2012) provided evidence in their study that 71.6% of people were predominantly anchored in one of the five TPs. Past negative TP was the most frequently reported in around 40% of cases. An approach focused on sharpening self-insights on TP and better understanding the resulting impact on planning behavior is a logical next step.

At the same time it is also important to make known the link between retirement adjustment and planning, creating the impetus for activity. There is considerable value in directing future research attention towards past and present TPs (i.e., present-fatalistic, present-hedonistic, past-negative, and past-positive) as well as future TP.

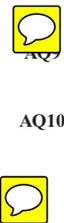
With regard to our second aim it appears that TPs predict retirement planning. As reported in previous studies, future orientation positively predicts retirement planning, but evidence was also found that past negative TP and present hedonistic TP predict positively. Similar results were reported by Petkoska and Earl (2009) with a group of current employees’ where leisure planning was predicted by present hedonistic TP, suggesting that this result is consistent across samples and time. If these other TPs are successful in promoting planning then it may not be necessary to strive for the balance advocated by Zimbardo and Boyd (2008) but instead to encourage people to understand their TP and to apply it. This approach is currently used by positive psychology advocates such as Seligman (Seligman, Steen, Park, & Peterson, 2005) and Csikszentmihalyi (Seligman & Csikszentmihalyi, 2000) in applying strengths in the pursuit and the achievement of goals.

It is possible that preservation of lifestyle may be the motive underlying relationships between planning and past negative TP and present hedonistic TP. Although people with high levels of present hedonistic TP, may focus on the present they may be keen to plan now in order to preserve their lifestyle for the future. In other words, such individuals may be motivated to plan out of concerns relating to loss aversion (cf., Kahneman, Knetsch, & Thaler, 1991). This provides us with a valuable insight because it may be possible to capitalize on this preexisting preference. Similarly those with a past negative TP may be planning to protect against future losses by reflecting on past negative outcomes and learning from their mistakes. For example, if losses were previously experienced through investment in the stock market, planning may focus on alternative strategies for managing finances that avoids risky

Table 3. Predictors of Retirement Outcomes

Variable	Retirement Planning		Retirement Adjustment		General Health		Global Life Satisfaction	
	Baseline	Change	Baseline	Change	Baseline	Change	Baseline	Change
Retirement planning	—	—	.18*	-.25	.07	.02	.13	-.05
Past positive	.12	-.02	.22***	-.02	.08	.04	.24**	-.02
Past negative	.15*	.38*	-.27***	.38*	-.36**	.18	-.20**	.11
Present fatalistic	-.03	.09	-.38***	.09	-.41*	.02	-.36***	-.01
Present hedonistic	.27**	.03	-.20*	.03	-.05	-.04	-.14	-.03
Future orientation	.29**	.45*	-.08	.45*	-.13	.11	.08	.02
R <sup>2</sup>	.25	.27	.42	.27	.44	.04	.41	.01
Latent variable mean	—	0.16	46.36***	0.16	21.02***	-2.01***	7.795	-0.82***
Latent variable SD	2.71	2.25	8.60	2.25	4.04	4.82	1.73	2.01

Note. Standardized coefficients are presented. The third (Time 3) factor loadings for the latent change variable were 1.03 (retirement adjustment), 1.49 (general health), and 1.43 (life satisfaction). The residual correlations between the baseline and change scores were -.37 (retirement adjustment;  $p = .001$ ), .03 (general health;  $p = .95$ ), and -.18 (life satisfaction;  $p = .28$ ). For the retirement adjustment model, the model fit statistics were:  $\chi^2 = 364.941$ ,  $df = 204$ , RMSEA = .037, CFI = .952, SRMR = .052. For the general health model, the fit statistics were:  $\chi^2 = 344.879$ ,  $df = 202$ , RMSEA = .035, CFI = .952, SRMR = .047. For the global life satisfaction model, the fit statistics were:  $\chi^2 = 359.561$ ,  $df = 202$ , RMSEA = .037, CFI = .944, SRMR = .048.



investments. In a similar vein, such people may learn to avoid social engagements or leisure activities they have previously found unpleasant. In sum, dissatisfaction with the past may create greater impetus for creating a more positive future by eliminating or minimizing negative aspects of their lives, and provide useful experience for making wise planning decisions.

Consistent with our third aim exploring retirement adjustment, as expected and reported elsewhere, retirement planning was again a positive predictor. Different TPs predict baseline measures and changes across time in retirement adjustment. Future orientation and past negative TP positively predict increases in retirement adjustment over time. This suggests that although there is no direct link between future TP and outcomes, improvements in scores can be observed over time. It may be that those with a future TP are taking a learning approach to retirement, making improvements based on past experiences and continuing to make improvements. Those with past negative TP similarly may make improvements by being careful to avoid past mistakes and over time to become better adjusted. Alternatively, their dissatisfaction may motivate them to make modifications to their lifestyle to improve adjustment.

Baseline retirement adjustment is positively predicted by past positive TP, whereas past negative, present fatalistic, and present hedonistic TPs are negative predictors. This may suggest underlying the past positive and past negative TP are positive and negative affect and this colors the current view of retirement adjustment. Those with a past positive TP may view everything positively, while those with past negative TP view things negatively. Those focused on the present viewed adjustment to retirement negatively, raising questions about training such as mindfulness aimed at bringing people more into the present. It is possible that those people with fatalistic beliefs experience an absence of mastery, which has been found to be an important predictor of retirement adjustment (Donaldson et al., 2009). It should also be noted that those with a fatalistic perspective may or may not be planning, partly accounting for the relationship with retirement adjustment. Similarly, those with present hedonistic TPs, although planning during retirement, may experience some unanticipated loss in lifestyle through poorer health, loss of a partner or extra expenses. Knowing that a relationship exists between the variables, it may be possible to work with individuals to continue to encourage planning but also to create a more realistic set of expectations about retirement. Interestingly, future TP did not directly predict retirement outcomes, but clearly this relationship may be indirect and mediated by retirement planning.

### Future Directions

While researchers continue to identify predictors of retirement planning and adjustment what is needed most to affect change are evidence based interventions. The dearth of retirement planning interventions encourages us to look to related fields for program design. The idea of working with the existing TP and applying a positive psychology approach to promote planning is yet to be fully explored. For example, rather than encouraging someone with a present hedonistic TP to be more future oriented, planning would focus on their preferred TP. This approach might include asking about short-term current lifestyle and activities (e.g., enjoying overseas travel), discussing maintenance of that leisure lifestyle (e.g., expecting to travel for 2 weeks every second year), anticipating changes across time (e.g., making more use of

holiday tours) and determining costs over time as opposed to the traditional approach of asking “How much money do you need to retire”? Therefore it is recommended that the approach used in the design of any TP based interventions should be firstly to help individuals understand their TP and its influence on planning, and then include tailored TP based counselor led discussions and exercises.

The career planning literature provides some evidence based recommendations that may contribute to future thinking. Brown and colleagues (2003) offers practical advice in designing career interventions that could be similarly applied to retirement planning interventions. Recommendations by Brown and colleagues emphasize the importance of activities led by counselors. These may include: feedback on TP results, current retirement planning behavior, and resource acquired for retirement and mastery levels; and encouraging recognition of transfer of learning from other transitions; goal setting; developing detailed plans with implementation intentions; sharing information about how retirees imagine they will spend retirement versus how many do; instructing on how to access online resources to seek out more information; and using role models to demonstrate decision making and coping strategies. A critical feature is evaluation and a comparison of pre- and post-test measures to determine whether the intervention has promoted retirement planning behaviors and better retirement outcomes. Previous training models have been piloted and are detailed in Earl and colleagues (in press).

Gender differences in retirement planning were reported by Petkoska and Earl (2009) and in goal setting by Hershey and colleagues (2002). Hershey and colleagues reported that women set more goals relating to social contacts while men set more leisure goals. Petkoska and Earl (2009) reported a greater propensity for women to plan in the areas of health and interpersonal/leisure planning. Differences in the propensity to plan according to gender could be further explored. It may be that tailored gender-specific interventions are needed to encourage planning and goal-setting in different domains.

Since the original data collection several new measures have been published which may help to better capture the retirement planning experience. The concept of planning could be expanded to include new measures focusing on resource acquisitions across financial, health, social, emotional, cognitive, and motivation (Leung & Earl, 2012). These measures focusing on acquisition of resources during retirement rather than retirement planning (Earl & Archibald, 2014; Leung & Earl, 2012) may yield different results since important differences in antecedents and consequences of the two constructs indicate that the constructs of retirement planning and resource accumulation do not operate interchangeably.

### Limitations

Underlying TP may be additional antecedents not included in the model such as procrastination. This is very possible due to findings reported by Ferrari and Diaz-Morales (2007) that procrastination operates in a trait-like way such that avoidant procrastination relates to present fatalistic TP and arousal procrastination is negatively related to future TP and positively related to present hedonistic TP. Gupta and colleagues (2012) and Sirios (in press) similarly reported negative relationships between procrastination and Future TP. Other possible additions to the model include the Big five models of personality (Ferrari and Diaz-Morales, 2007; Steel, 2007) and negative and positive affect (Sirios, in press).

The future orientation alpha coefficient was barely acceptable and there may be better alternatives to consider. Early evidence (Zacher, 2013) points to the value of considering future TP measures that are multi-faceted, and include sub-scales such as focus on opportunities, perceived remaining time and focus on limitations. Other measures of TP that incorporate past, present, and future preferences may be worthwhile considering, ideally those that can be interpreted as both state or trait depending on the instructions provided to participants (e.g., State-Trait Anxiety Inventory).

It is possible that the TP items in the current survey are biased toward trait measures rather than state accounting for the consistency across time. However, it is highly unlikely that during the 18-month period participants were surveyed no other contextual changes took place. However, it would be prudent for future longitudinal studies to include measures of life stressors measures such as the Holmes and Rahe (1967) stress scale to determine the influence of life events and the effect that these have on TP. It could also be argued that the ZTPI measures utilized are trait based and if applied to measure state might produce different results. Without a measure of the latter it is difficult to conclude with any certainty but evidence from other measures such as the PANAS (Watson & Clark, 1999) demonstrates high convergent correlations between the trait and state based measures of the same items (.64 for positive affect and .53 for negative). Donzuso and colleagues (in press) reports similar relationships between state and trait versions of the State-Trait Anxiety Inventory (.63). It cannot be concluded therefore that trait and state measures would vary significantly without additional evidence.

There have been limited applications of the retirement planning measures in a cross-cultural context. It may be that the planning measures translate differently in cultures particularly where compulsory retirement is the norm.

## CONCLUSIONS

The balancing act described by Zimbardo and Boyd (2008) to promote good psychological health may be less possible than originally thought. Using TP to promote more retirement planning leading to better retirement adjustment may provide a more realistic solution. However, focusing on future TP alone may not provide a complete picture, especially for those who are focused more on the past and the present. We acknowledge these temporal preferences in clinical psychology through processes such as mindfulness aimed at bringing people more into the present moment and yet we fail to reflect this in our thinking about retirement planning. In essence, by focusing our efforts only on future orientation to promote more planning we may be preaching to the converted.

## REFERENCES

- Adams, G. A., & Rau, B. L. (2011). Putting off tomorrow to do what you want today: Planning for retirement. *American Psychologist*, 66, 180–192.
- Australian Bureau of Statistics. (2013a). Retirement and retirement intentions, July 2012 to June 2013 (cat. no. 6238.0). Retrieved April 22, 2014 from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/6238>.
- Australian Bureau of Statistics. (2013b). Deaths in Australia: Life tables, states, territories and Australia, 2010–2012 (cat. No. 3302.0). Retrieved April 22, 2014 from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3302.0>.
- Brown, S. D., Ryan Krane, N. E., Brecheisen, J., Castelino, P., Budisin, I., Miller, M., & Edens, L. (2003). Critical ingredients of career choice interventions: More analyses and new hypotheses. *Journal of Vocational Behavior*, 62, 411–428.
- Cole, D. A. (2012). Latent trait-state models. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 585–600). New York: The Guildford Press.
- Corral-Verdugo, V., Fraijo-Sing, B., & Pinheiro, J. Q. (2006). Sustainable behavior and time perspective: Present, past, and future orientations and their relationship with water conservation behavior. *Revista Interamericana de Psicología*, 40, 139–147.
- Denton, M. A., Kemp, C. L., French, S., Gafni, A., Joshi, A., Rosenthal, C. J., & Davies, S. (2004). Reflexive planning for later life. *Canadian Journal on Aging*, 23, 71–82.
- Donaldson T., Earl J. K., & Muratore A. M. (2010). Extending the integrated model of retirement adjustment: Incorporating mastery and retirement planning. *Journal of Vocational Behavior*, 77, 279–289.
- Donzuso, G., Cerasa, A., Giola, M. C., Caracciolo, M. & Quattrone, A. (in press). The neuroanatomical correlates of anxiety in a health population: Differences between the State-Trait Anxiety Inventory and the Hamilton Anxiety Rating Scale. *Brain and Behavior*.
- Earl, J. K., & Archibald, H. (2014). Retirement planning is more than just accumulating resources. *European Journal of Management*, 14, 21–36.
- Earl, J. K., Muratore, A., Leung, C., & Yu, T. W. (in press). Career interventions: Retirement. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.-in-Chief), *APA handbooks in psychology: APA handbook of career intervention: Vol. 2. Applications*. Washington, DC: American Psychological Association.
- Easterlin, R. A. (2009). Lost in transition: Life satisfaction on the road to capitalism. *Journal of Economic Behavior & Organization*, 71, 130–145.
- Elder, H. W., & Rudolph, P. M. (1999). Does retirement planning affect the level of retirement satisfaction? *Financial Services Review*, 8, 117–127.
- Epel, E., Bandura, J. N., & Zimbardo, P. (1999). Escaping homelessness: The influences of self-efficacy and time perspective on coping with homelessness. *Journal of Applied Social Psychology*, 29, 575–596.
- Ferrari, J. R., & Diaz-Morales, J. F. (2007). Procrastination: Divergent time orientations reflect different motives. *Journal of Research in Personality*, 41, 707–714.
- Goldberg, J., & Maslach, C. (1996). *Understanding time: Connections between the past and future*. Paper presented at the annual convention of the Western Psychological Association, San Jose, CA.
- Goldberg, D. P., & Williams, P. (1988). *A user's guide to the General Health Questionnaire*. Windsor, UK: NFER-Nelson.
- Gupta, R., Hershey, D. A., & Gaur, J. (2012). Time perspective and procrastination in the workplace: An empirical investigations. *Current Psychology*, 31, 195–211.
- Harber, K., Zimbardo, P., & Boyd, J. N. (2003). Participant self-selection biases as a function of individual differences in time perspective. *Basic and Applied Social Psychology*, 25, 255–264.
- Hershey, D. A., Jacobs-Lawson, J. M., & Neukam, K. A. (2002). Influences of age and gender on workers' goals for retirement. *International Journal of Aging and Human Development*, 55, 163–179.
- Hershey, D. A., & Mowen, J. C. (2000). Psychological determinants of retirement preparedness. *The Gerontologist*, 40, 687–697.

- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, 213–218.
- Jacobs-Lawson, J. M., & Hershey, D. A. (2005). Influence of future time perspective, financial knowledge, and financial risk tolerance on retirement savings behaviors. *Financial Services Review*, 14, 331–344.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *The Journal of Economic Perspectives*, 5, 193–206.
- Keough, K. A., Zimbardo, P. G., & Boyd, J. N. (1999). Who's smoking, drinking, and using drugs? Time perspective as a predictor of substance use. *Basic and Applied Social Psychology*, 21, 149–164.
- Leung, C. S. Y., & Earl, J. K. (2012). Retirement Resources Inventory: Construction, factor structure and psychometric properties. *Journal of Vocational Behavior*, 81, 171–182.
- Lewin, K. (1951). *Field theory in the social sciences: Selected theoretical papers*. New York: Harper.
- Little, T. D. (2013). *Longitudinal structural equation modeling*. New York: The Guildford Press.
- Livneh, H., & Martz, E. (2007). Reactions to diabetes and their relationship to time orientation. *International Journal of Rehabilitation Research*, 30, 127–136.
- Meon, P., Sweet, S., & Swisher, R. (2005). Embedded career clocks: The case of retirement planning. *Advances in Life Course Research*, 9, 237–265.
- Milfont, T. L., & Gouveia, V. V. (2006). Time perspective and values: An exploratory study of their relations to environmental attitudes. *Journal of Environmental Psychology*, 26, 72–82.
- Muratore, A. M., & Earl, J. K. (2010). Predicting retirement preparation through the design of a new measure. *Australian Psychologist*, 45, 98–111.
- Muratore, A. M. & Earl, J. K. (2014). Improving retirement outcomes: The role of resources, preretirement planning, and transition characteristics. *Ageing and Society*. Advance online publication. doi: 10.1017/S0144686X14000841
- Muthén, L., & Muthén, B. (2012). *Mplus User's Guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.
- Nuttin, J. & Lens, W. (1985). *Future time perspective and motivation: Theory and research method*. Hillsdale, NJ: Erlbaum.
- Oyserman, D., & Markus, H. R. (1990). Possible selves and delinquency. *Journal of Personality and Social Psychology*, 59, 112–125.
- Parker, A. M., Carvalho, L. S. & Rohwedder (2013, September). *Cognitive ability, expectations, and beliefs about the future: Psychological influences on retirement decisions* (Working Paper WP 2013–298). Presented at the Michigan Retirement Research Centre, Ann Arbor, Michigan.
- Petkoska, J., & Earl, J. K. (2009). Understanding the influence of demographic and psychological variables on retirement planning. *Psychology and Aging*, 24, 245–251.
- Rothspan, S., & Read, S. J. (1996). Present versus future time perspective and HIV risk amongst heterosexual college students. *Health Psychology*, 15, 131–134.
- Savickas, M. L., Silling, S. M., & Schwartz, S. (1984). Time perspective in vocational maturity and career decision making. *Journal of Vocational Behavior*, 25, 258–269.
- Shultz, K. S., & Wang, M. (2011). Psychological perspectives on the changing nature of retirement. *American Psychology*, 66, 170–179.
- Sirios, F. M. (in press). Out of sight, out of mind? A meta-analytic investigation of procrastination and time perspective. *European Journal of Personality*.
- Spiegel, P. E., & Shultz, K. S. (2003). The influence of preretirement planning and transferability of skills on naval officers' retirement satisfaction and adjustment. *Military Psychology*, 15, 285–307.
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133, 65–94.
- Topa, G., Moriano, J. A., Depolo, M., Alcover, C., & Morales, J. F. (2009). Antecedents and consequences of retirement planning and decision-making: A meta-analysis and model. *Journal of Vocational Behavior*, 75, 38–55.
- Watson, D., & Clark, L. A. (1999). *The PANAZ-X: Manual for the positive and negative affect schedule—Expanded form*. Iowa Research Online, The University of Iowa's Institutional Repository: Department of Psychology Publications.
- Wells, Y., de Vaus, D., Kendig, H., Quine, S., & Petralia, W. (2006). *Healthy retirement project: Technical report*. Retrieved from La Trobe University website: <http://www.latrobe.edu.au/aipca/projects/hrp.pdf>
- Widaman, K. F., Ferrer, E., & Conger, R. D. (2010). Factorial invariance within longitudinal structural equation models: Measuring the same construct across time. *Child Development Perspectives*, 4, 10–18.
- Wong, J. Y., & Earl, J. K. (2009). Towards an integrated model of individual, psychosocial, and organizational predictors of retirement adjustment. *Journal of Vocational Behavior*, 75, 1–13.
- Zacher, H. (2013). Older job seekers' job search intensity: The interplay of proactive personality, age and occupational future time perspective. *Ageing and Society*, 33, 1139–1166.
- Zacher, H. (2014). Individual difference predictors of change in career adaptability over time. *Journal of Vocational Behavior*, 84, 188–198.
- Zimbardo, P., Keough, K., & Boyd, J. N. (1997). Present time perspective as a predictor of risky driving. *Personality and Individual Differences*, 23, 1007–1023.
- Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271–1288.
- Zimbardo, P. G., & Boyd, J. N. (2008). *The time paradox: The new psychology of time that will change your life*. New York: Free Press.

