

# **Religiosity/Spirituality, and Subjective Wellbeing**

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for the award of Bachelor of Applied Science (Psychology)  
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**Ethics Summary Statement**

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We the undersigned declare that the above-named research project has been completed as described in the Application for Ethics Approval and in accordance with the ethics guidelines of Deakin University.

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## Abstract

The Australian Unity Wellbeing Index (AUWBI) attempts to further explore the quality of life construct with subjective measures of adult Australians' satisfaction with 'Life as a Whole', and other related variables. The Index was inaugurated in April 2001 when the first survey of 2000 participants was conducted, and has since been followed by six quarterly surveys of equal size (N = 2000). The AUWBI employs the Personal Wellbeing Index scale (PWI) as a reliable predictor of satisfaction with 'Life as a Whole'. The PWI comprises the seven important life domains, which are measured in terms of satisfaction, and include standard of living, health, achievements, relationships, community, safety, and future security. As a putative domain, Religion/Spirituality (R/S) was included from Survey 3 onwards, but surprisingly, has been found not to predict life satisfaction, beyond the PWI, for normative samples. However, it was proposed that R/S could confer a sense of control, which is especially important for the subjective wellbeing of depressed individuals who are identified as being <50% satisfied with 'Life as a Whole'. Based on this proposal, it was hypothesised that R/S would contribute unique variance, beyond the seven domains of the PWI, in the prediction of 'Life as a Whole' for individuals scoring below 50%. The study included Surveys 3, 4, 5, and 6 and was conducted using hierarchical multiple regression analyses. The hypothesis was not supported. Instead, it was found that R/S contributed unique variance only for those in Survey 4 who scored between 75-85% and in Survey 5 for those who scored <75%. The Survey 4 results were treated as anomalous. However, it was suggested that because Survey 5 was conducted immediately following the Bali bombing, R/S conferred a sense of control to vulnerable individuals, who anxiously perceived the traumatic event as a personal safety risk, in an attempt at maintaining or restoring a sense of wellbeing.



In recent times, scholars in the social sciences have been investigating the relationship between religion, spirituality, human emotional development and perceived wellbeing. Studies are increasingly finding a positive link between religious/spiritual beliefs and activities, and psychological wellbeing – particularly in the context of stress and coping (e.g., Ellison, 1994; Ferraro & Koch, 1994; Hathaway & Pargament, 1991; Paloutzian & Ellison, 1982; Pargament, Koenig, & Perez, 2000). Several studies (e.g., Cobb, 1976; Pearlin, Meneghan, Lieberman & Mullan, 1981) have documented the negative psychological effects that stress can have on the individual's feelings of control, and of self-worth, and it is within this context, that the stress-buffering effects of religiosity/spirituality can be best understood.

Individuals often aim to bolster their sense of control when attempting to cope with events they perceive as threatening to their wellbeing (e.g., chronic pain, terminal illness, environmental danger, and bereavement), and this will be the focus of the present study. Studies on perceived control have found that those with a stronger sense of control, or mastery, cope better with chronic illness (Affleck, Tennen, & Gersham, 1985; Taylor, Helgeson, Reed, & Shokon, 1991; Thompson, Sobolew-Shurbin, Galbraith, Schwankovsky, & Cruzen, 1993), are more likely to make desired behaviour changes (Bandura, 1977), and have better psychological wellbeing (Remondet & Hansson, 1991). The lack of perceived control, sometimes referred to as 'learned helplessness', is associated with depression, cognitive impairments, and fewer health-protective behaviours (Peterson, Maier, & Seligman, 1993).

According to Spilka, Shaver, and Kirkpatrick (1985), nearly all religions satisfy the need of individuals to control or predict events. Spilka et al. argue that individuals can take affirmative action to influence future outcomes in two ways. The first way is typified by the belief that if the individual places their trust and faith in God, they will be directly reciprocated by God's protection, and everything will work out well. The other way religion confers a sense of control is by providing mechanisms, such as prayer, and adherence to rituals, by which one can seek to influence future outcomes indirectly through God. Moreover, McIntosh and Spilka (1990) suggest that religion can offer a sense of secondary control. Secondary control can be gained by those who believe their actions will not influence the outcome of events, by finding an interpretation for an event that allows them to understand, and simply accept the event the way it is (Rothbaum, Weisz, &

Snyder, 1982). According to McIntosh and Spilka, religious attributions can protect against the feelings of vulnerability and unpredictability that might otherwise ensue from the belief that events are random and senseless.

Psychological recovery from negative events usually requires the development of meaningful and acceptable explanations, and interpretations for the event suffered, and the integration of these into stable and adaptive schema (Janoff-Bulman, 1989; Janoff-Bulman & Frieze, 1983; Park & Folkman, 1997; Landis, 1996; Taylor, 1983). Religion provides individuals with a purposeful perspective of a negative event, by attributing such events to God's overall plan. The belief that God is in control of one's circumstances can engender a sense of ultimate control in the individual (McIntosh & Spilka, 1990). The importance of such attributions to the coping process is exemplified by studies conducted on spinal cord injury victims (Bulman & Wortman, 1977), and other permanently disabled accident victims (Dalal & Pande, 1988), in which it was found the most frequently offered reason for their condition was that "God had a reason".

Many terms have been used in the literature to define the effects of religion and spirituality on wellbeing. These include personal wellbeing, psychological wellbeing, perceived wellbeing, and quality of life. In the present study, such terms will be subsumed under the term subjective wellbeing (SWB).

### Subjective Wellbeing

SWB represents the individual's satisfaction with their quality of life (QOL), and is an alternative to the objective measures of the QOL construct, such as wealth, employment rates, and life expectancy (Ferriss, 1988). Various measures of SWB have been reported across several studies. In his quest to establish a meaningful measure by which he could compare scores of SWB, Cummins (1995) examined 16 studies that had researched satisfaction with 'Life as a Whole' among large samples drawn from the general population, and found a remarkable consistency among the results. By using what he termed the 'Percentage of Scale Maximum' (%SM), Cummins was able to standardise and convert Likert-scale data from the various studies to a scale of 0-100% on the dissatisfied-satisfied continuum; whereupon zero represents complete dissatisfaction with life, and 100 represents complete satisfaction. He concluded that a standard for satisfaction with 'Life as

a Whole' between Western population samples can be expressed as  $75 \pm 2.5\%SM$ , and for within samples as  $75 \pm 12.5\%SM$ .

### Subjective Wellbeing Homeostasis

The stability of SWB at the 75%SM level is attributed mainly to the existence of a psychological, homeostatic mechanism (Cummins, 1995). The homeostasis model proposed by Cummins (2000) is of an integrated system that couples a primary genetic capacity (affect type determined by personality ie. neuroticism/extroversion) with a secondary buffering system (the cognitive aspects of *control*, self-esteem and optimism). The purpose of homeostasis is to hold output, in the form of SWB, within a narrow range, despite variations in the person's environmental experience. Personality is the first order determinant of homeostasis, and its role is to create the set range (average 75%SM), and to supply the affective component of SWB. This provides a steady background influence on the second order cognitive buffers, such that their set-point is also 75%SM. The buffers constitute a regulatory system that aims to integrate affect with cognition concerning conditions of the external environment, with the intent of putting a positive spin on life.

The set-point for SWB was first proposed by Headey and Wearing (1992), and has since been corroborated by Cummins and Cahill (2000), who report that studies of Western populations consistently show the normative range to fall between 70–80%SM. The upper and lower margins are determined by  $\pm$  two standard deviations of 2.5% from the mean of 75, thus fluctuations between the margins are regarded as normal. For individuals, however, the normative range of SWB is expressed as 50-100%SM, and is determined by the use of  $\pm$  two standard deviations of 12.5%SM. Therefore, scores below 50%SM are said to signal defeat of the essential qualities of the homeostatic system, and thus, to constitute depression. Defeat can also be caused by a genetic constitutional weakness to maintain wellbeing within the normal range (Cummins & Cahill). Theoretically, therefore, it is unlikely that individuals who score  $>70\%SM$  are experiencing depression, whereas, it is possibly occurring in those who score between 50 and 70%SM, and most likely occurring for individuals who score  $<50\%SM$ .

### The Australian Unity Wellbeing Index (AUWBI)

The AUWBI is a subjective measure of Australians' satisfaction with their lives and life in Australia. The Index investigates overall wellbeing as an important part of life quality, and incorporates both personal and national perspectives. The AUWBI was inaugurated in April 2001, when the first of seven quarterly surveys, comprising approximately 2,000 Australian adults, was conducted. The Index is used to investigate SWB homeostasis, but is theoretically developed as the first level deconstruction of 'Life as a Whole'. Such deconstruction is necessary on the basis that the homeostatic system creates a positive sense of wellbeing that is non-specific and highly personalised. Psychological homeostasis is concerned with the perceived wellbeing of the individual who is making this assessment, but only in the most general sense (Cummins, Eckersley., Pallant, van Vugt, & Misajon, 2003a). As an effect, people generally view themselves as 'superior' to other people, or better than average (Headey & Wearing, 1988, 1989), and luckier, happier, and more moral than others (Andrews & Withey, 1976). Due to the abstract nature of homeostasis, its set-point can only be estimated by the 'Life as a Whole' question. With the employment of the Personal Wellbeing Index (PWI) scale, the AUWBI attempts to gain information about the components (domains) of life that also contribute, positively or negatively, to this sense of wellbeing.

The PWI is an adaptation of the Comprehensive Quality of Life Scale that was conceived, and argued by Cummins (1996), to form the first-level deconstruction of 'Life as a Whole'. It comprises the seven life domains of standard of living, health, achievements, personal relationships, safety, future security, and community, and is measured through satisfaction. The PWI has been found to reliably predict 50% variance in satisfaction with 'Life as a Whole' (Cummins, Eckersley, Pallant, Okerstrom, & Davern, 2002), thus appears as the major measurement instrument of 'Life as a Whole' within each survey.

Each survey varies in terms of a small number of items that are added to, and deleted from, the AUWBI, in an attempt at further exploring the QOL construct. The present study concerns a focus on religious/spiritual (R/S) wellbeing, which was first introduced in Survey 3 (March, 2002). As a putative new domain, R/S has been found, surprisingly, not

to contribute unique variance to 'Life as a Whole', beyond the PWI, in normative samples (Cummins et al, 2002).

### Hypothesis

Several studies have shown that a sense of personal control plays a key role in psychological recovery from negative events (e.g., Affleck et al., 1985; Taylor et al., 1991; Thompson et al., 1993). And there is mounting evidence to suggest that the stress-buffering pathways of religion and spirituality can enhance this cognition (e.g., McIntosh and Spilka, 1990; Spilka, Shaver, and Kirkpatrick, 1985) in the process of restoring and maintaining SWB homeostasis. Therefore, it is hypothesised that R/S will contribute unique variance, beyond the PWI, in the prediction of 'Life as a Whole' for individuals who score <50%SM on the 'Life as a Whole' scale.

## METHOD

### Participants

Four samples from Surveys 3, 4, 5, and 6 of the AUWBI were used in this study (Survey 7 was unavailable at the time of data analysis). All samples are geographically representative of Australia, and comprise randomly selected individuals over the age of 18. Survey 3 consisted of 2030 participants, with a mean age of 49 (range 18 to 92); survey 4 comprised 1986 participants with a mean age of 45 (18 to 92); Surveys 5 and 6 each consisted of 2000 participants, with the mean ages of 47 (18 to 95), and 45 (range 18 to 92), respectively.

### Materials

Participants were asked to rate their satisfaction level with 'Life as a Whole', the PWI, and R/S, on a Likert scale from 0 to 10; where 0 means completely dissatisfied, 5 means neutral, and 10 means completely satisfied (see Appendix B for sample). The survey questions appear as follows: "how satisfied are you with 1) 'Life as a Whole' (followed by the PWI, which is represented by questions 2 - 8) 2) your standard of living 3) your health 4) what you achieve in life 5) your personal relationships 6) how safe you feel 7) feeling part of your community 8) your future security?" For Survey 3, measures of R/S were derived from the question "how satisfied are you with your religious/spiritual beliefs?" For the remaining three surveys, the word "beliefs" was removed from the question to

accommodate religious/spiritual activities as well, thus reads “ how satisfied are you with your religion or spirituality?” Respondents were allowed to skip the R/S item if it had no relevance for them. Consequently, 1576 people provided a satisfaction response to this item for Survey 3; 1488 for Survey 4; 1382 for Survey 5; and 1359 for Survey 6.

Each variable score between 0 and 10 was converted to the %SM, and an aggregate %SM of the seven PWI domains was calculated to form a single PWI score for each individual.

### Procedure

The Deakin University Ethics Committee granted ethics approval to the organisers of the AUWBI, which is headed by Professor Robert A. Cummins of Deakin University. Given the data analysed in the present study emanated from this agreement, no further formal approval procedures were required.

All 4 surveys were conducted by call centre telephone operators, and yielded an average 33% response rate. The operator first read out a plain language statement (see Appendix B) to the respondent, which identified that the call was made on behalf of the Australian Centre on Quality of Life, the nature of the survey, that the respondent’s phone number was obtained from the White Pages, and that anonymity was assured. The operator then asked whether they could speak with a male member of the household who had had the most recent birthday, and was at least 18 years old. This request was necessary until such time the campaign had filled its male participant quota of 50%, as generally, females make up a highly disproportionate number of survey participants. The respondents were then informed that the survey would take 10 minutes to complete, and if permission was granted, the operator would explain the Likert scale process and begin with the survey. At the end, the participant was thanked and asked whether they would be interested in participating in a follow-up survey (longitudinal design), and that they could obtain information about the survey from the AUWBI website at <http://acqol.com.au>.

## RESULTS

The appropriateness of the data set was examined before hypothesis testing was conducted, using the SPSSPC+ statistical package for MS Windows. Prior to analysis, all variables were screened for normality, linearity and univariate outliers. The examination first

concerned the accuracy and completeness of the data. The descriptive statistics for all surveys revealed the means and standard deviations of the relevant variables to be plausible, and all data values were contained within scale range (see Table 1). Missing values for the 'Life as a Whole' variable, the PWI domains, and R/S, were considered inconsequential to the analyses, as they appeared random in nature, and did not amount to more than 5% of the total sample (Tabachnick and Fidell, 2001). Codes identified the average 28% of respondents across the four surveys that treated R/S as irrelevant; thus they were not treated as missing values.

The data set was next considered for normality of distribution and outlier values. A univariate examination for normality of distribution was not necessary for any of the variables involved in hypothesis testing. This can be explained by the fact that all quality of life variables ('Life as a Whole' and PWI) are naturally negatively skewed, irrespective of both the nature of the population sample, and of the measurement instrument employed in the analysis (Cummins, 1995). Likewise, the R/S variable appears negatively skewed, but this is also assumed to represent the participants' valid responses. Low outlier values were also preserved as valid responses. Transformation of any of the skewed variables, therefore, was not necessary. Such transformation would discard the variables' natural behaviour, thus contaminating the analysis. Moreover, multivariate normality cannot be known for the data set, since univariate normality and univariate outliers remained on all examined variables. Data analysis proceeded following the resolution of these issues, and on the basis that assumptions underlying the analysis technique were not violated.

For the multiple regression analyses employed in this study, the cases to independent variables (IV) ratio exceeded the minimum requirement of 5 to 1. Given that there are 8 IV's in this study, the minimum number of 40 cases would be required. Survey 6 recorded the lowest number of respondents in the < 50% SM category at 54 (See Table 1).

#### Hierarchical Multiple Regression Analysis to Predict 'Life as a Whole'.

The data used for this study was taken from Surveys 3, 4, 5, and 6. Hierarchical multiple regression analysis was employed to determine whether the addition of R/S improved prediction of satisfaction with 'Life as a Whole', beyond that afforded by the seven domains of the PWI. Each survey was analysed first at the level of the entire survey, and

then by dividing each survey into two groups as above and below 50%SM. This analysis tested the hypothesis that R/S would contribute unique variance to ‘Life as a Whole’ only for individuals below 50%SM.

Table 1 shows the descriptive statistics for the three variables concerned in this study, ‘Life as a Whole’, the PWI and R/S. As can be seen in the table, the scores on each variable appear consistent within the groups, and across all surveys.

Table 1  
Group Means, Standard Deviations, and N for ‘Life as a Whole’, PWI and R/S for Three Groups; Whole Sample, => <50% SM

Domain	Survey 3		Survey 4		Survey 5		Survey 6	
	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)
<b>Whole Sample</b>								
LIFE	2027	78.13 (17.86)	1985	77.13 (17.15)	1999	77.92 (17.85)	1999	78.36 (16.79)
PWI	1901	75.19 (12.52)	1898	74.41 (12.27)	1933	74.90 (12.71)	1943	75.47 (12.05)
R/S	1576	73.40 (24.29)	1488	71.97 (23.35)	1382	75.68 (21.17)	1359	75.29 (23.14)
<b>=&gt;50%SM</b>								
LIFE	1786	80.43 (14.11)	1901	79.36 (13.62)	1920	80.03 (13.82)	1924	80.37 (13.61)
PWI	1824	76.27 (11.13)	1820	75.43 (11.02)	1857	75.89 (11.43)	1871	76.33 (11.22)
R/S	1504	73.85 (23.98)	1425	71.83 (23.17)	1327	75.92 (21.03)	1305	75.56 (22.82)
<b>&lt; 50%SM</b>								
LIFE	83	25.13 (13.74)	84	27.40 (13.00)	79	25.62 (14.74)	75	29.32 (12.79)
PWI	77	49.37 (15.50)	78	49.77 (15.77)	76	48.89 (17.59)	72	49.27 (11.89)
R/S	72	63.61 (12.71)	63	63.85 (26.05)	55	68.91 (23.48)	54	68.12 (29.21)

For each of the regression analyses, the seven PWI domains were entered first as block one. The entry of R/S as block two allowed a determination of whether it was able to contribute unique predictive variance beyond the seven PWI domains. The results, using the alpha criteria level of .05%, are presented in Table 2. The hypothesis was supported only for Survey 5, ( $F(1, 44) = 5.351, p < .05$ ), where R/S contributed unique variance of 8.9% ( $R^2$  change = .089) in the prediction of ‘Life as a Whole’ for those <50%SM. Unexpectedly, however, R/S was also found to add unique variance for those => 50%SM both for this survey, and Survey 4. In summary, R/S contributed unique variance in Survey 5 for everyone, and in Survey 4, only for those =>50%SM.



Table 2  
Multiple Regression Analysis for => <50%SM split

	R	R <sup>2</sup>	R <sup>2</sup> Change	F	p
<b>Survey 3</b>					
<b><u>Whole sample</u></b>					
Model 1	.729	.531		238.723	.000
2	.729	.531	.000	.023	.881
<b><u>=&gt;50% SM</u></b>					
Model 1	.620	.385		116.397	.000
2	.621	.386	.001	2.535	.112
<b><u>&lt; 50% SM</u></b>					
Model 1	.625	.390		5.021	.000
2	.633	.401	.011	.951	.334
<b>Survey 4</b>					
<b><u>Whole sample</u></b>					
Model 1	.727	.529		226.967	.000
2	.728	.530	.001	1.894	.169
<b><u>=&gt;50% SM</u></b>					
Model 1	.667	.444		155.098	.000
2	.668	.446	.002	4.949	.026*
<b><u>&lt; 50% SM</u></b>					
Model 1	.512	.262		2.532	.026
2	.525	.276	.014	.966	.330
<b>Survey 5</b>					
<b><u>Whole sample</u></b>					
Model 1	.683	.466		165.521	.000
2	.683	.467	.001	2.003	.157
<b><u>=&gt;50% SM</u></b>					
Model 1	.656	.430		137.458	.000
2	.660	.436	.006	12.548	.000*
<b><u>&lt; 50% SM</u></b>					
Model 1	.418	.175		1.365	.243
2	.514	.265	.089	5.351	.025*
<b>Survey 6</b>					
<b><u>Whole sample</u></b>					
Model 1	.710	.504		191.053	.000
2	.710	.505	.001	.271	.603
<b><u>=&gt;50% SM</u></b>					
Model 1	.672	.451		148.263	.000
2	.673	.453	.001	.381	.066
<b><u>&lt; 50% SM</u></b>					
Model 1	.589	.347		3.345	.006
2	.594	.353	.006	.392	.535

Model 1 Predictors = PWI; Model 2 Predictors = PWI and R/S \* Significant at 0.05 level (2-tailed)

The fact that the results were significant for all individuals in Survey 5, and for those =>50%SM in Survey 4, raises the possibility that a different cut-off score might be effective in defining the level of wellbeing in which R/S is able to make a unique contribution. In order to examine this possibility, I conducted a systematic set of hierarchical regression analyses (see Table 3).

Table 3

Summary of Multiple Regression Analyses for Prediction of ‘Life as a Whole’ at Various Levels, Indicating the PWI Contribution at Step One ( $R^2$ ), and the Unique Contribution From R/S at Step Two ( $R^2$  change)

	N	$R^2$	$R^2$ change	p
<b>Survey 3</b>				
=>75%SM	1366	.307	.001	.159
<75%SM	661	.390	.003	.106
<70%SM	339	.280	.009	.095
<65%SM	339	.280	.009	.095
<60%SM	339	.280	.009	.095
<55%SM	231	.262	.012	.114
<50%SM	83	.390	.011	.334
<45%SM	83	.390	.011	.334
<b>Survey 4</b>				
=>85%SM	608	.074	.004	.154
=>80%SM	1269	.214	.011	.000*
=>75%SM	269	.214	.011	.000*
<75%SM	715	.334	.002	.255
<70%SM	339	.324	.000	.809
<65%SM	339	.324	.000	.809
<60%SM	339	.324	.000	.809
<55%SM	217	.275	.001	.648
<50%SM	84	.262	.014	.330
<45%SM	84	.262	.014	.330
<b>Survey 5</b>				
=>75%SM	1322	.246	.001	.290
<75%SM	678	.237	.010	.017*
<70%SM	322	.143	.031	.006*
<65%SM	322	.143	.031	.006*
<60%SM	216	.158	.036	.016*
<55%SM	216	.158	.036	.016*
<50%SM	79	.175	.089	.025*
<45%SM	79	.175	.089	.025*
<b>Survey 6</b>				
=>75%SM	1343	.238	.001	.445
<75%SM	656	.318	.002	.271
<70%SM	319	.253	.009	.124
<65%SM	319	.253	.009	.124
<60%SM	198	.277	.003	.528
<55%SM	198	.277	.003	.528
<50%SM	75	.347	.006	.535
<45%SM	75	.347	.006	.535

\*Significant at 0.05 level (2-tailed)

The Table shows that for Survey 5, R/S begins to contribute unique variance at <75%SM, and continues to do so right through to individuals <45%SM. Unfortunately, further examination of R/S <45%SM was not plausible, as <40%SM comprised only 28 participants (N=28). Interestingly, Table 3 also shows that for Survey 4, R/S contributes only for the individuals who score in the band 75 to 85%SM (exploration of those >75%SM was limited to Survey 4 based on significance). This analysis does not support the hypothesis and, curiously, shows that R/S contributes unique variance for one specific group >50%SM line. In a bid to gain some insight into the surprising results, a correlation analysis of the dependent and independent variables was conducted.

#### Correlations Between ‘Life as a Whole’, PWI, and R/S

A table of correlations for all surveys and groups, has been drawn up to explore the shared relationships between the PWI, R/S and ‘Life as a Whole’ (see Table 4). The aim of this approach is to gain a global insight as to why R/S contributes unique variance to ‘Life as a Whole’ only for Surveys 4 and 5 (significant correlations are marked in bold).

Table 4

#### Pearson Bivariate Correlations Between ‘Life as a Whole’ and the Predictor Variables, PWI and R/S

	<u>Survey 3</u>		<u>Survey 4</u>		<u>Survey 5</u>		<u>Survey 6</u>	
	PWI	R/S	PWI	R/S	PWI	R/S	PWI	R/S
<b><i>Whole sample</i></b>								
Life as a Whole	.681**	.184**	.673**	.201**	.633**	.242**	.655**	.217**
PWI		.246**		.266**		.309**		.309**
<b><i>=&gt;50% SM</i></b>								
Life as a Whole	.605**	.169**	<b>.594**</b>	<b>.240**</b>	<b>.586**</b>	<b>.271**</b>	.605**	.202**
PWI		.230**		<b>.254**</b>		<b>.262**</b>		.302**
<b><i>&lt;50% SM</i></b>								
Life as a Whole	.522**	.129	.407**	.149	<b>.287**</b>	<b>.256**</b>	.329	.089
PWI		.342**		.321*		<b>.300*</b>		.386

\*\* Correlation is significant at the 0.01 level (2-tailed) \* Correlation is significant at the 0.05 level (2-tailed)

Firstly, when comparing across surveys in Table 4, it can be seen that for Surveys 4 and 5, at the => 50%SM level, R/S shares its strongest relationship with ‘Life as a Whole’ (r =.240, and r=.271, respectively), while the PWI appears to share its weakest relationship with ‘Life as a Whole’ (r =.594, and r = .586, respectively). This pattern recurs in Survey 5

for those <50% SM., where R/S correlates highest with ‘Life as a Whole’ ( $r = .256$ ), and the PWI correlates lowest with ‘Life as a Whole’ ( $r = .287$ ).

Because it was found that R/S contributes unique variance within specific %SM bands, that is, for Survey 4 at  $\Rightarrow 75\%SM$ , and for Survey 5, at  $<75\%SM$ , further correlation analyses were conducted to explore the variable relationships within such bands. Table 5 lists the correlations for both %SM bands for all surveys, so that global comparisons can be made in the assessment of each significant correlation. The Table shows a recurring theme to that presented in the correlation matrix in Table 4, wherein for Survey 4  $\Rightarrow 75\%SM$ , the relationship between R/S and ‘Life as a Whole’ is strongest among all surveys ( $r = .180$ ), while the relationship between the PWI and ‘Life as a Whole’ is the weakest ( $r = .395$ ). In Survey 5 for those  $<75\%SM$ , R/S again correlates strongest with ‘Life as a Whole’ ( $r = .115$ ), while the PWI can be seen again to correlate weakest with ‘Life as a Whole’ ( $r = .514$ ).

Table 5  
Pearson Bivariate Correlations Between ‘Life as a Whole’, PWI and R/S, for  $\Rightarrow 75\%SM$ , and  $<75\%SM$

	<u>Survey 3</u>		<u>Survey 4</u>		<u>Survey 5</u>		<u>Survey 6</u>	
	PWI	R/S	PWI	R/S	PWI	R/S	PWI	R/S
<b><math>\Rightarrow 75\%SM</math></b>								
Life as a Whole	.397*	.120**	<b>.395**</b>	<b>.180**</b>	.435**	.162**	.420**	.152**
PWI		.171**		<b>.204**</b>		.205**		.250**
<b><math>&lt;75\%SM</math></b>								
Life as a Whole	.589**	.087	.542**	.084	<b>.514**</b>	<b>.115</b>	.563**	.083
PWI		.230**		.235		<b>.167**</b>		.238**

\*\* Correlation is significant at the 0.01 level (2-tailed) \* Correlation is significant at the 0.05 level (2-tailed)

Tables 4 and 5 consistently indicate that in the instances where R/S contributes unique variance, it shares its strongest correlation with ‘Life as a Whole’, while the PWI shares its weakest correlation with ‘Life as a Whole’. This shows that while the PWI becomes relatively less important to the individuals within these %SM bands in the determination of how satisfied they are with their lives overall, R/S becomes more important for their sense of wellbeing.

### Interplay Between the PWI and R/S Variable

The behaviour of the PWI and R/S variable would suggest some kind of interplay between the two in the prediction of life satisfaction. The clearest verification of this phenomenon can be found in Table 3. The table illustrates that the PWI contributes least variance to 'Life as a Whole' for Survey 4, 75-85%SM ( $R^2 = .214$ ), and Survey 5, <75%SM ( $R^2 = .237$  to  $.175$ ), which in turn, seems to free up variance in 'Life as a Whole' for R/S to make its strongest claims ( $R^2 = .011$ , and  $R^2 = .010$  to  $.089$ , respectively).

The effect of R/S on 'Life as a Whole' covers a much broader band of participants in Survey 5 than it does for Survey 4. This may suggest that something interesting is occurring in Survey 5 and that possibly the Survey 4 results are anomalous. Further insight into Survey 5 led to the exploration of the PWI domains. Appendix A (Cummins, Eckersley., Kai Lo, Okerstrom, Hunter, & Davern, 2003b) contains figures showing the trends of the seven life domains over the first seven surveys. Presenting data in this study beyond the four surveys of concern was necessary to provide the best perspective into the relative levels of the safety and interpersonal domains, which are of particular interest here. It can be seen that Australians' satisfaction with the PWI domain of safety (Figure 5) fell noticeably from Survey 4 to Survey 5, as did national security (Figure 8). Both drops appear to be related to the Bali bombing which involved Australians, and which occurred immediately before Survey 5 was conducted. It is suggested that the fall in satisfaction with both domains reflected Australians' perceived threat from extremists Islamics, who were found responsible for the traumatic event, and also their uncertainty about the Federal government's ability to protect the nation against similar events in the future. Moreover, no changes have been recorded for the three domains of relationships (Figure 4), community (Figure 6), and future security (Figure 7). The interpersonal domains would be expected to rise given that people tend to band together for added sense of security following such events (see Survey 3 following September 11 attacks on USA). All three domains remain at levels that are not statistically significant from their lowest recorded level, which indicates the significance of safety and national security to Australians at this time. As a result of the domain findings, possible suggestions on the interplay between the PWI and R/S in the determination of SWB for Survey 5, will be offered in the discussion.

### Summary of Results

The hypothesis that R/S would contribute unique variance, beyond the seven domains of the PWI, in the prediction of 'Life as a Whole' for those <50%SM, was not supported. Instead, it was found that R/S contributed unique variance in Survey 4, for those 75-85%SM and in Survey 5, for those <75%SM. It was revealed that in these instances, R/S shared relatively strong correlations with 'Life as a Whole', while the PWI correlated relatively weakly with that variable. This phenomenon suggests that there is some interplay between the predictors in the determination of one's SWB.

### DISCUSSION

The major finding of this study is that it did not support the hypothesis that satisfaction with religion and spirituality would contribute unique variance, beyond the seven domains of the PWI, in the prediction of 'Life as a Whole' for those below 50%SM. However, a most interesting finding emerged in relation to Survey 5 for those <75%SM, where R/S did contribute unique variance. It is speculated that given the survey was conducted one month after the Bali bombing in November 2002, anxiety associated with the life-threatening event caused individuals <75%SM to become more satisfied with their religion and spirituality as the means to maintain, or restore their SWB. According to SWB homeostasis, this group of individuals would be most vulnerable to such threats. That is, anxious thoughts may have exacerbated the mental state of those <70%SM who are said to be possibly suffering from depression, and for those <50%SM who are very likely to be suffering from depression (Cummins & Cahill, 2000).

It can not be known with any degree of certainty why the PWI appeared as a relatively weak predictor of life satisfaction overall in Survey 5, but it can be seen that in traumatic times, people become more concerned with primal issues that are usually taken for granted, such as health (Figure 2 in Appendix A shows an increase which is significant from its lowest recorded level) and safety. In relative terms, the remaining domains may appear less important during such times. It is likely that the perception of external threat following the Bali bombing, which was targeted partly at Australia by extremists Islamics, caused Australians great concern about their personal safety and livelihood. It is suggested that most of the anxiety shown at the whole sample level for safety in Survey 5 emanated from

those <75%SM, and is related to the onus of self-protection. A sense of control in such circumstances would be paramount, as it is essential to SWB homeostasis. As a cognitive buffer, the aim of control is to protect against perceptions of adverse environmental conditions that can cause psychological harm. Perceptions of control would take on extra significance for individuals who are already showing signs of psychological vulnerability.

The evidence from other studies suggest religion and spirituality have protective qualities for vulnerable individuals (e.g., Ferraro & Koch, 1994; Hathaway & Pargament, 1991; Paloutzian & Ellison, 1982; Pargament et al., 2000), and this may be reflected in Table 1. The table shows that for Survey 5, at the whole sample level, satisfaction with R/S rose significantly by 3.71%. Moreover, for those <50%SM, the rise was even greater at 5.06%. It is suggested that these increases signal an attempt by Australians to gain some sense of control over the external threat, as studies on perceived control have found that those with a stronger sense of personal control cope better with negative life conditions (Lawler & Schmied, 1992; Schussler, 1992; Taylor et al., 1991; Thompson et al., 1993; Wallston & Wallston, 1981), and have better psychological wellbeing (Remondet & Hansson, 1991).

According to Spilka et al. (1985), nearly all religions satisfy the need of individuals to control events. As was reported earlier, religion and spirituality can provide a sense of primary and secondary control. In the primary sense, Australians may have taken affirmative action by placing their trust and faith in God to control events in the belief that they could influence God to protect them against harm. Australians could also have gained a sense of primary control by praying, or adhering to religious rituals in the Bali aftermath. An upsurge in church attendance would be evident in such a case, which would be caused by new members and increased visitations from current members. Although this cannot be verified in the present study, future studies on similar events could seek to factor in such information.

Secondary control, on the other hand, can be gained by those who believe their actions will not influence the outcome of events, by finding an interpretation for an event that allows them to understand, and simply to accept things the way they are (Rothbaum et al., 1982). According to McIntosh and Spilka (1990), religious attributions can confer a sense of secondary control by protecting against the feelings of vulnerability and unpredictability that might otherwise ensue from the belief that events are random and senseless. Some

Australians may have attributed the Bali event as a part of “Gods overall plan” in the belief that such events are meant to happen and that there would be no point in worrying about it. According to McIntosh and Spilka, this belief can also engender a sense of ultimate control in the individual.

Another possibility is that Survey 5 witnessed a religious polarisation, wherein people rallied behind their religion as a show of faith. Perhaps this provided people with a sense of unity with others of the same persuasion, in their attempt at fostering a sense of strength against the perceived dangers of extraordinary terrorist antics. This has intuitive appeal, given that the majority of participants in this study were Christians, and extremists Islamics had conducted the bombing.

There are some methodological limitations of this study, which need to be addressed. Firstly, it is acknowledged that none of the speculation fits for the Survey 4 findings. The findings for Survey 4 have been viewed as anomolous. It is also acknowledged that many of the p values reported may have produced Type 1 error (Tabachnick & Fidell, 2001), however, it was necessary to conduct a targeted, methodical approach to explore for whom R/S contributed unique variance in ‘Life as a Whole’. Moreover, as this was a cross-sectional study, causal inference from the data set can not be made to link the Bali bombing with both the increase in R/S, and its unique contribution of variance. However, further cross-sectional studies conducted immediately following any future terrorist threats to Australia may present opportunities to further explore how such life-threatening events impact on the relations between PWI, R/S, and ‘Life as a Whole’ for the most vulnerable groups.

In conclusion, the PWI appeared relatively weak as a predictor of life satisfaction for vulnerable individuals in Survey 5 <75%SM, while R/S was able to contribute unique variance for the same group. This possibly reflected the individual’s perception that the domains of the PWI were largely inadequate for the fulfilment of their needs at the time. Such needs appeared to relate to personal health and safety issues, perhaps indicating an anxious population. As a suggestion of interplay between the PWI and R/S, it was proposed that the most vulnerable individuals sought to enhance their personal control over the perceived risk associated with life-threatening terrorist activities, as a means to feeling



safer in the extraordinary environment, and that they did this through religion and spirituality. Improving safety conditions was recognised as an important, albeit unconscious, attempt at maintaining or restoring SWB homeostasis. Finally, it was suggested that causation could not be inferred between the Bali bombing and R/S unique variance contribution, and that future similar events involving Australia (should they occur), could present as opportunities for further exploration into this phenomenon.

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## Appendix A

### Personal Wellbeing Domains

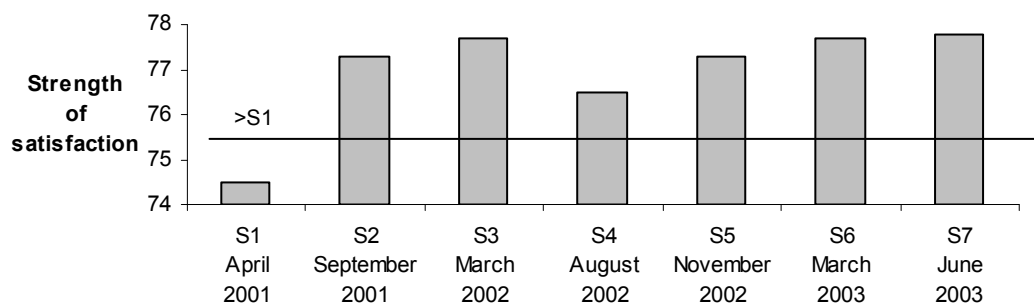


Figure 1: Satisfaction with **Standard of Living**

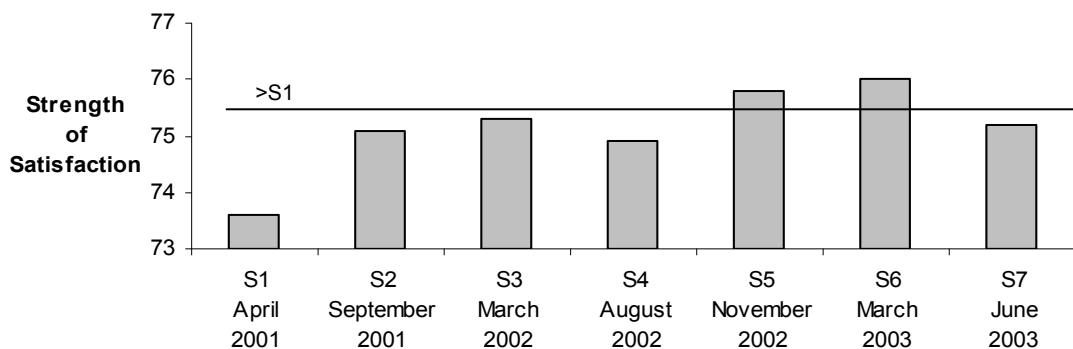


Figure 2: Satisfaction with **Health**

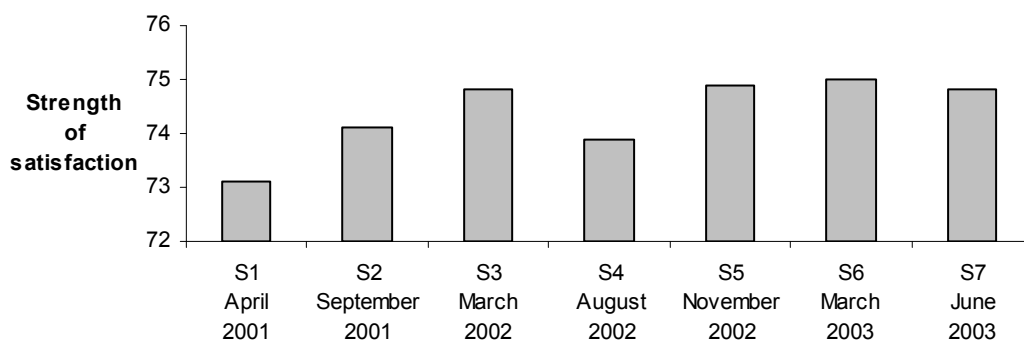


Figure 3: Satisfaction with **What you Achieve in Life**

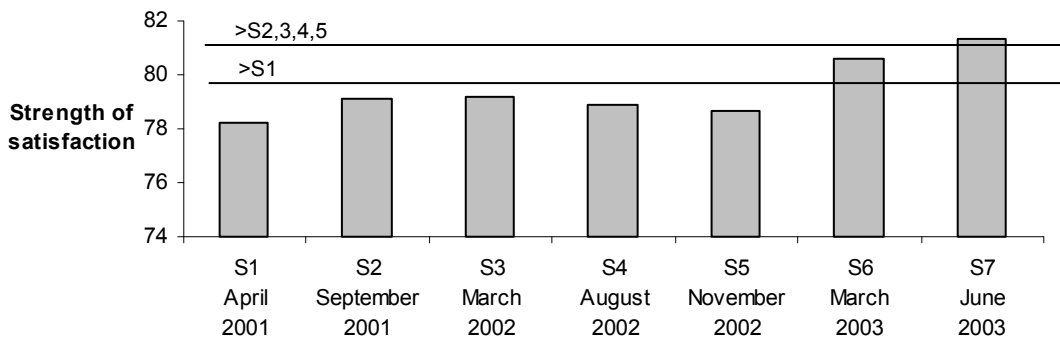


Figure 4: Satisfaction with **Relationships**

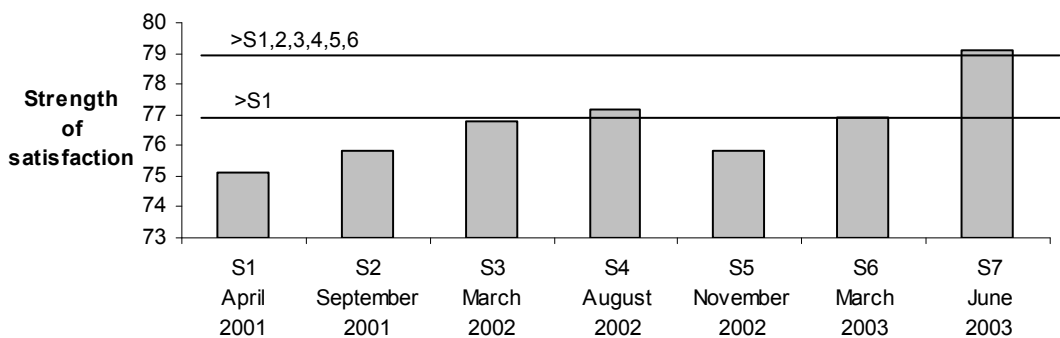


Figure 5: Satisfaction with **How Safe you Feel**

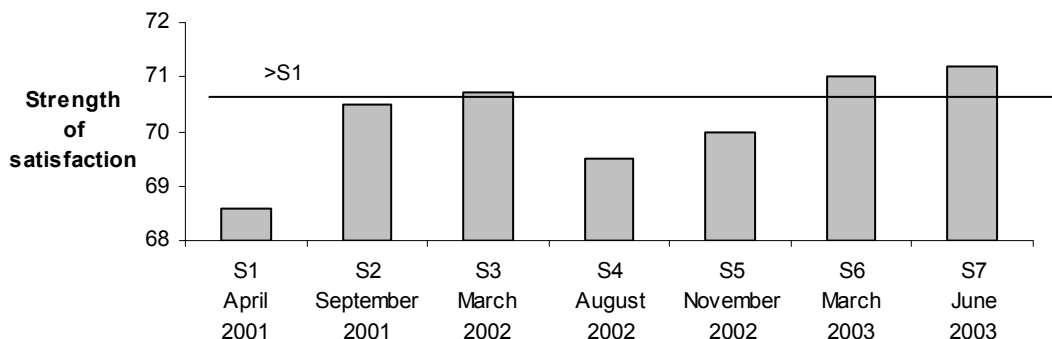


Figure 6: Satisfaction with **Feeling Part of Your Community**

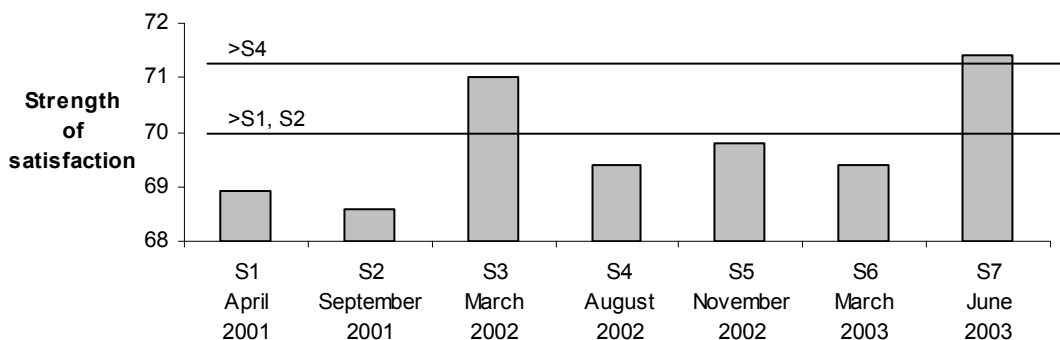


Figure 7: Satisfaction with **Future Security**

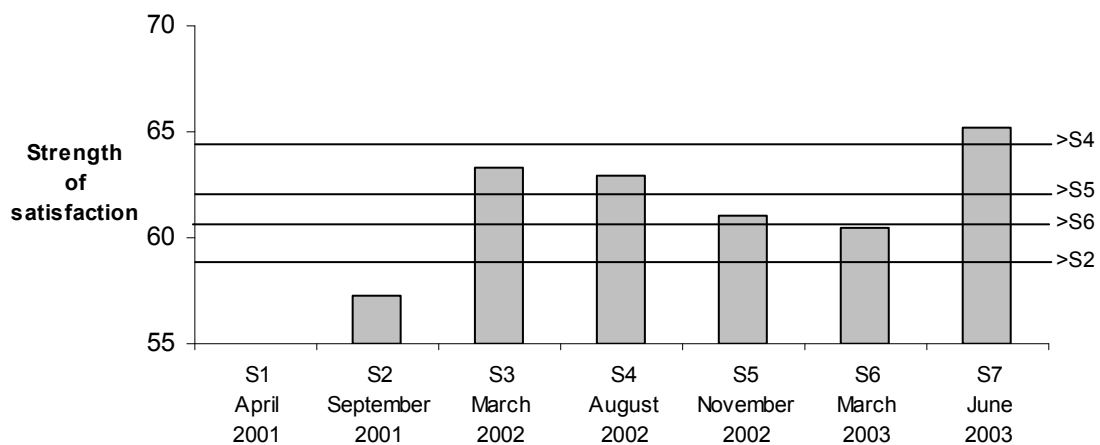


Figure 8: Satisfaction with **National Security**

## Appendix B

### The Australian Unity Wellbeing Index Questionnaire – Survey 4, September 2002

“Hello, my name is ..... I’m calling on behalf of the Australian Unity Wellbeing Index and Deakin University. Your telephone number has been obtained from the White Pages and we are doing a survey on how people feel about life in Australia. The survey results are used to create an index of national wellbeing and it will only take about 5 minutes to complete”

“Can I please speak to a male in your house who had the most recent birthday, and who is at least 18 years old.”

Instructions: In the initial stages of the survey we are targeting males until the male quotas are filled. If the person who answers is that person then continue. If the person is available repeat opening paragraph. If the person is not available, ask when they will be available and organise a call back time.

“The survey is a joint initiative between Deakin University’s Australian Centre on Quality of Life and Australian Unity, it will involve asking you questions about how satisfied you are with different aspects of your life and then more generally about life in Australia. Would you like to share your views, by being involved in the survey?”

“Thank you. Information you give us will only be used to publish an overall survey result and you can access that information by writing in to either Deakin University or Australian Unity.

“You are welcome to withdraw from this survey at any time. If you do your answers will not be used when the results are analysed. “

“I am going to ask how satisfied you feel, on a scale of Zero – 10.”

“Zero means you feel very dissatisfied. 10 means you feel very satisfied. And the middle of the scale is 5, which means you feel neutral.”

“Would you like me to go over this again for you?”

“In that case I will start by asking how satisfied you are with life. So,-----“



**(Personal wellbeing)**

(Personal - Abstract)

1. Thinking about your own life and personal circumstances, how satisfied are you with your life as a whole?

0    1    2    3    4    5    6    7    8    9    10

“Turning now to various areas of your life, -----“

(Personal Domains)

How satisfied are you with...?

2. your standard of living?

0    1    2    3    4    5    6    7    8    9    10

3. your health?

0    1    2    3    4    5    6    7    8    9    10

4. what you achieve in life?

0    1    2    3    4    5    6    7    8    9    10

5. your personal relationships?

0    1    2    3    4    5    6    7    8    9    10

6. how safe you feel?

0    1    2    3    4    5    6    7    8    9    10

7. feeling part of your community?

0    1    2    3    4    5    6    7    8    9    10

8. your future security?

0    1    2    3    4    5    6    7    8    9    10

9. your religion or spirituality?

0    1    2    3    4    5    6    7    8    9    10

[tick this box if the question does not apply to the respondent]

10. your financial security?

0    1    2    3    4    5    6    7    8    9    10

11. Thinking about the work that you do, what do you consider to be your main area of work?

[drop-down check menu, but no prompt from interviewer]

- Paid employment
- Family & household care
- Voluntary work
- Study
- Other (record)
- No area of work Skip to Q15

12. How many hours each week do you normally spend on this work?

13. How satisfied are you with this work as a whole?

0    1    2    3    4    5    6    7    8    9    10

14. How satisfied are you with the number of hours you spend on this work each week?

0    1    2    3    4    5    6    7    8    9    10

15. How satisfied are you with the amount of leisure time you have?

0    1    2    3    4    5    6    7    8    9    10

16. How satisfied are you with the way you spend your leisure time?

0    1    2    3    4    5    6    7    8    9    10

**(National well-being)**

(National – Abstract)

“Turning now to life in Australia-----“

17. how satisfied are you with life in Australia?

0    1    2    3    4    5    6    7    8    9    10

*(National Domains)*

How satisfied are you with-----

18. the economic situation in Australia?

0    1    2    3    4    5    6    7    8    9    10

19. the state of the natural environment in Australia?

0    1    2    3    4    5    6    7    8    9    10

- 20. the social conditions in Australia?  
0      1      2      3      4      5      6      7      8      9      10
- 21. Government in Australia?  
0      1      2      3      4      5      6      7      8      9      10
- 22. business in Australia?  
0      1      2      3      4      5      6      7      8      9      10
- 23. national security in Australia?  
0      1      2      3      4      5      6      7      8      9      10

(Recent Life Events)

24. Has anything happened to you recently causing you to feel happier or sadder than normal?

	Yes, happier
	Yes, sadder
	No

If 'yes', how strong would you rate this influence?

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

25. What about the September 11 terrorist attack in America last year? Does this make you feel sadder than usual now?      Yes       No

If 'yes', how strong would you rate this influence?

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

26. How important to you is Australia's success at the Commonwealth Games?

0	1	2	3	4	5	6	7	8	9	10
Not at all important										Extremely important

Now, just a couple more questions about yourself.

27. Interviewer – record the sex of the respondent

Male                      Female

28. Can you tell me your age? *Interviewer type in age.*
29. Can you please give me an idea of your **household's** annual income, combined from all sources and before tax?  
 < \$15,000  
 \$15,000 - <\$30,000  
 \$30,000 - <\$60,000  
 \$60,000 - <\$90,000  
 \$90,000+
30. How many people live in your household?
31. Let me ask about your ancestry   
 In which country were you born?  
 What is your ethnic origin?   
 [Drop down menu, but no prompt from interviewer]
32. We are going to carry out another survey like this in 6 months' time. Would you be willing to help us again?  
 Yes                  No

(If YES) Thank You. Can you please tell me your name? You will not be identified in any report, but we need to record your name in order to contact you again.

*Interviewer type in name.*

(If NO, or YES) Thank you for helping us with this survey