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Part A: The Report

“The Wellbeing of Australians – Life Better/Worse, Children and Neighbourhood”

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Executive Summary

Introduction

The Australian Unity Wellbeing Index monitors the subjective wellbeing of the Australian population. Our first survey was conducted in April 2001 and this report concerns the 23rd survey, undertaken in April 2009. Our previous survey had been conducted six months earlier in September 2009. This six month period corresponded to the 24-30 month period of the new Labor Government, elected in November 2007. It was also marked by an increasing appreciation that the international financial situation was improving and that Australia would escape a deep recession.

By the time of the survey, the share market had substantially recovered. Moreover, few people had lost their jobs as a direct consequence of the economic environment and, for those people with jobs, many were better-off financially due to cuts in interest rates, and so, in mortgage repayments.

Each survey involves a telephone interview with a new sample of 2,000 Australians, selected to represent the geographic distribution of the national population. These surveys comprise the Personal Wellbeing Index, which measures people’s satisfaction with their own lives, and the National Wellbeing Index, which measures how satisfied people are with life in Australia. Other items include a standard set of demographic questions and other survey-specific questions. The specific topics for Survey 22 are Handedness, who makes decisions regarding personal health and expenditure, perceived control over health and expenditure, and whether people have a financial advisor.

The Theory

The theoretical framework for the interpretation of data is the theory of Subjective Wellbeing Homeostasis. This proposes that each person has a ‘set-point’ for personal wellbeing that is internally maintained and defended. This set-point is genetically determined and, on average, causes personal wellbeing to be held at 75 points on a 0-100 scale. The normal level of individual set-point variation is between about 60-90 percentage points. The provision of personal resources, such as money or relationships, cannot normally increase the set-point on a long term basis due to the genetic ceiling. However, they can strengthen defences against negative experience. Moreover, for someone who is suffering homeostatic defeat, the provision of additional resources may allow them to regain control of the wellbeing. In this case the provision of resources will cause personal wellbeing to rise until the set-point is achieved.

Low levels of personal resources, such as occasioned by low income or absence of a partner, weakens homeostasis. If personal challenges such as stress or pain exceed resources, homeostasis is defeated, and subjective wellbeing decreases below its normal range.

The Analyses

All data have been standardized to a 0-100 range. Thus, the magnitude of group differences is referred to in terms of percentage points. Reference is also made to normative ranges. These have been calculated for the Personal Wellbeing Index in terms of the whole data-set that combines data across all surveys (see Appendix 2). Norms have also been calculated separately for each of the Personal Wellbeing Index domains. They have also been calculated for gender, age groups, income, marital status, household composition, and work-status groups. These norms are presented at the back of their respective chapters. All of the reported trends are statistically significant.

Dot point summaries are provided at the end of each Chapter.
The Results

Personal Wellbeing Index:

The Personal Wellbeing Index has fallen by a non-significant 0.2 percentage points since Survey 22 in September 2010. Its current value of 76.0 remains one of the highest value it has reached over the nine years of these surveys. The previous occasion it reached this value coincided with the Athens Olympics in August 2004. This was an odd survey since data were collected over the Olympic period, meaning that the elated emotions of the nation at the amazing success of our athletes at these games, no doubt added to the value of the Personal Wellbeing Index. This current Survey 23, however, has received no such short-term emotional boost. This makes the record high level of personal wellbeing in Australia all the more extraordinary and possibly linked to the relief at Australia escaping a major recession.

Over all the surveys, it is notable that the Personal Wellbeing Index is so stable. It has varied by just 3.1 points over all the surveys. Moreover, the change from one survey to the next has been 1 point or less except for 4 of the 21 surveys. These occasions have been S1-S2 (September 11), S11-S12/S12-S13 (Sydney Olympics), S14-S15 (Second Bali bombing), and S20-S20.1 (Victorian Bush Fires). The Personal Wellbeing Index is currently 3.1 points above its level at Survey 1, which is significant.

The level of population wellbeing remains at one of its highest levels.

National Wellbeing Index

The National Wellbeing Index has fallen by a non-significant 0.2 percentage points since Survey 22. It remains at one of its highest level yet recorded.

Historical: The National Index, like the Personal Wellbeing Index started from a very low initial value in April 2001. The reason for this low value is not known. The National Wellbeing Index is more volatile than the Personal Index due to the relatively low level of homeostatic control. Its range is 7.9 points from April 2001 (S1:55.8) to September 2009 (S22: 64.1 points).

Overall, the National Wellbeing Index is also at one of its highest levels.

Terrorist Threat

It is notable that around half of the population continue to believe that there will be a terrorist attack ‘in the near future’.

Strong beliefs in the likelihood of an attack are associated with low personal wellbeing. The people who regard the likelihood of such an attack as 9/10 or 10/10 have below normal wellbeing. This finding raises the issue of the benefits and disadvantages of Government warnings concerning the possibility of terrorist attacks on Australia.

About 50% of the sample still consider that the threat of a terrorist attack in Australia is likely in the near future. Since people who regard such an attack as highly likely have lower than normal wellbeing, there is a clear downside to issuing national terrorist alerts.
Special Survey Topics

Children

(a) **Children and wellbeing**

On average, having children is associated with a 1.4 point higher level of wellbeing.

(b) **Parental gender and children**

Female wellbeing is unaffected by whether or not they have children. However males who do not have children have very low wellbeing. This largely reflects the gender difference associated with being unmarried and living alone.

(c) **Parental age and children**

(i) Not having children in the parental age-group of 36-56y is associated with low wellbeing. This may be caused by being unmarried and living alone.

(ii) At 66+ years, parental wellbeing is uninfluenced by whether or not they have children. Thus, the idea that having children is good for wellbeing in old age is not supported by these results.

(d) **Retirement and children**

People who are retired and without children have low wellbeing. It may be that people who have retired from paid work are at risk of losing their sense of life purpose, but that purpose can be found in their children, or their children’s children.

(e) **Looking for work and children**

If people are not looking for work, then having children is associated with enhanced wellbeing. However, the reverse is true for people who are looking for work. It seems possible that having children magnifies the stress of looking for a new job, probably due to time-constraints or a sense of bread-winner responsibility.

(f) **Age of youngest child**

Parental wellbeing is lowest when their children are aged 9-21 years. This effect is not a consequence of parental age.

(g) **Parental proxy responses**

(i) When parents try to predict the happiness of their child, they tend to over-estimate by about 3 points. So they see their child as happier than their child sees themself.

(ii) Parental proxy responses for their child tend to reflect the level of parental wellbeing. Section 10.3 shows numerous results to support this view including the figure shown which indicates such responding is influenced by the parental experience of a sad event.

(h) **Child’s life getting better or worse**

Females perceive their child’s life getting better more so than males.

(i) **Most desired age**

(i) Very few people desire to be older than they currently are.

(ii) The most desired age is people’s current age.

(iii) Very few adults would wish to be aged 0-12y again.

(iv) The overall most desired age is 21-30 years.

(v) The happiest people are those who desire to be their current age. People who would rather be a different age have lower wellbeing.

▶ The happiest people are those who would choose to be as old as they are. For people who wish they were a different age the most popular choice is 21-30 years.
**Life Better or Worse**

(a) In Survey 23, Australians are feeling more optimistic that their own lives are getting better than they did 8 or 9 years ago. They also feel more optimistic that life in Australia is getting better.

(b) Females are generally more optimistic than males that their own lives and life in Australia is getting better.

> **Australians are feeling more optimistic about their lives getting better than they were 9 years ago.**

**Neighbourhood**

(a) Levels of the perceived incidence of crime that reach 8/10 are associated with low wellbeing.

(b) The domains of standard and relationships are minimally affected by the level of perceived crime.

(c) The domain of health is very sensitive to levels of perceived crime, falling below its normal range at an incidence of 3/10.

(d) The domain of safety is closely linked to perceived crime, as expected.

(e) People who perceive a terrorist attack as likely or who have experienced a recent sad event evidence a higher level of perceived crime.

(f) Females show a higher level of perceived crime than males.

(g) People with a household income of $101,000 or more perceive a lower incidence of crime in their neighbourhood.

(h) People living in urban settings perceive a higher incidence of crime than those in living in Urban Surrounds or Regional areas.

(i) Wellbeing is significantly compromised by levels of both noise and noise-related stress that are rated 6/10 or higher.

> **Wellbeing is significantly compromised by neighbourhood noise and noise-related stress rated as 6/10 or higher.**

**Demographic Influences**

**Household Income:**

(a) Personal wellbeing consistently and significantly rises with income up to $101-150K. The 7.0 point gain over this range is associated with a change in wellbeing from below to well above the normative range. Whether the rise in SWB becomes significant beyond $101-150K will be revealed by the addition of further data. But certainly the rate of increase is much reduced at these higher income levels.

(b) The cost of increasing happiness increases with income. One additional percentage point of wellbeing for someone with a household income of $101-150K is an additional $143,000.

(c) Income has the largest effect on the domain of satisfaction with Standard of Living. It has no systematic influence on satisfaction with Community Connection.

(d) The proportion of people in the lowest income group has steadily diminished over the course of these surveys and the Personal Wellbeing Index of this group has also gone down. The reason seems not so much tied to income but to the fact that the residual people comprising this income category have fragile health and relationships.

(e) The personal wellbeing of people aged 26-55 years is highly sensitive to low income.
(f) Between the ages of 36-55 years, low income is associated with lower wellbeing for males than for females.

(g) (i) Household incomes under $30,000 combined with the presence of children, on average, takes wellbeing below the normal range.

(ii) For people who also have a partner, wellbeing enters the normal range at $31-$60K. The wellbeing of sole parents enters the normal range only at an income of $61,000-$100,000.

(h) Males who live alone have lower wellbeing than females who live alone. Moreover, whereas females enter the normal range at an income of $15-30K, males require three times as much ($100-150K).

(i) The negative effects of separation and divorce on wellbeing can be reduced by a decent household income. However, both groups remain below the normal range.

(j) Married males and females have a very similar level of wellbeing. However, divorced males have lower wellbeing than divorced females at all incomes except the lowest.

The wellbeing of people engaged in Fulltime home/family care is highly income dependent, from below normal at less than $30,000 to above normal at more than $60,000.

(k) People who are unemployed enter the normal range at $101-150K.

(l) Unemployment has a stronger detrimental effect on the wellbeing of unemployed males than females at all levels of household income.

Happiness is bought at discount by people who are poor. For people with a household income <$15,000, an additional $6,000 buys an extra point of wellbeing. At a household income of $151,000-$250,000, an extra point requires an extra $147,000. However, due to ceiling effects, whether this increase can actually be achieved is uncertain.

Gender:

(a) The 1.0 point higher PWI for females is caused by their higher values on the two interpersonal domains of relationships and community.

(b) Using the combined data, females have a 1.0 point higher PWI than males. However, this is survey-dependent. There is no systemic gender difference over the 4.0 year period Survey 14 to Survey 23.

(c) Relationships shows a significant interaction between gender and survey. It seems possible that the sense of threat over surveys 2 (September 2001) to 12 (August 2004) increased the level of relationship satisfaction for both genders, but more so for females than males.

Over the period of Surveys 13 (May 2005) to 22 (September 2009) the satisfaction of females returned to Survey 1 baseline, while the satisfaction of males shows a gradual rise. In Survey 23 female satisfaction has shown a sudden 3.2 point rise.

(d) The only personal domain to be mainly lower for females is safety. This dropped lower following September 11 for females but not for males. These differences were maintained up to October 2007 (S18). Since then the gender differences have been unpredictable.

(e) The National Wellbeing Index is at its highest level for both genders. Males tend to score higher than females showing that the Personal Wellbeing Index difference is not due to gender response bias.

(f) Satisfaction with the Economic Situation in Australia has received its pre-recession levels.

(g) Satisfaction with the natural environment has risen to unprecedented levels for both genders. This may be a consequence of both climate-change denial and the breaking of the drought in most of Australia.
(h) Gender differences in personal wellbeing only emerge at 26-35 years of age. They then progressively decrease with increasing age. The reason for this is not understood.

(i) The gender difference in satisfaction with relationships is most pronounced in the youngest groups. Males are lower than females.

(j) Males who live alone have lower personal wellbeing than females.

(k) Female wellbeing does not significantly differ between full-time employed and full-time home care. Male wellbeing is higher for full-time employment than full-time home care.

(l) Since Survey 9, the wellbeing of male fulltime workers has increased while the wellbeing of females has remained steady or even decreased.

(m) Unemployment has a more devastating effect on the wellbeing of males than on females.

(n) In terms of the lowest margin of the normal distribution, the risk of depression (scores <50) is highest in males aged 36-55 years and females aged 46-55 years.

> While females had higher wellbeing from April 2001 to May 2005, in subsequent surveys there has been no reliable gender difference.

**Age:**

(a) With the exception of the oldest group, all other ages lie at the top of their normal ranges.

(b) After the PWI being significantly different between the youngest and oldest groups over Surveys 2-16, the youngest group has sustained its rise to be statistically no different from the oldest group. The reason for this change is not known.

(c) While Health Satisfaction remains high for the youngest group, this is not so for the other ages.

(d) Satisfaction with Business is now very high for all ages.

(e) While Satisfaction with Government remains high for the younger groups, it is very low for people aged 56 years and older. This was the period around the end of the Rudd government.

(f) Satisfaction with National Security is very high within the younger groups, but average for the older groups.

(g) In their middle age, people who do not live with a partner are at risk of low wellbeing.

(h) Living with your children as a sole parent from 66 years and older is good for your wellbeing.

(i) The average wellbeing of married people varies by 2.3 points across the age-range. The wellbeing of people who are divorced varies by 6.3 points, is lowest at 46-55, and never enters the normal range.

(j) Unemployment has a devastating effect on personal wellbeing beyond 25 years of age.

► Over the past few years, the youngest 18-25 year group have shown a substantial and maintained rise in wellbeing. The reason for this is uncertain.

**Household composition – who people live with:**

(a) The highest levels of personal wellbeing are achieved by people living with their partner. The lowest personal wellbeing is found among sole parents. Their low wellbeing puts many of them at risk of depression.

(b) People who live alone have a major loss of wellbeing in terms of relationships and health. The relative lack of buffering caused by poor relationship availability makes the person more vulnerable to life stressors. Thus, minor health issues may seem important due to the lack of a close friend with whom such matters can be discussed.
For a couple living together, the presence of children reduces two domains (Standard of Living, Relationships) and enhances one domain (Health). This may be an example of domain compensation involving perceived health. The net result is little difference between these groups in the overall Personal Wellbeing Index. However, since money and relationships are the most important domains for overall wellbeing, the relative deficit in these for partners with children may make them less resilient to additional stress, particularly if this is caused by poor health.

The domain that is most deficient for sole parents is Relationships. It is particularly notable that this disparity in satisfaction is far higher than it is for Standard of Living even though the Sole Parents are a very low income group. It seems evident that the major factor missing from the lives of Sole Parents is an intimate relationship with another adult.

For people who live alone, those who are married, and widows have above normal range Personal Wellbeing Index.

With the exception of widows, the Personal Wellbeing of people who live alone is highly income-dependent. The wellbeing of Never Married and Separated enters the normal range at an income of about $101-150K. However, the wellbeing of people who are divorced remains below the normal range at this level of income.

Sole parents who are widowed or married have normal-range wellbeing at $61-100K. Those who have never married or who are separated or divorced require $101-150K to achieve normative range wellbeing.

One key to wellbeing for people who are unemployed is to live with a partner. The presence of children diminishes wellbeing to some extent, but only among low income couples.

For Sole Parents, part-time work is associated with only marginally higher wellbeing than part-time volunteering. Both groups enter the normal range at $61-100K.

Children, or other dependent family members, drain the financial and emotional resources of their supporting adults. When the family resources are adequate, dependents have little influence on parental wellbeing. When resources are inadequate children place the wellbeing of co-habiting adults at risk.

Marital Status:

People who are married have a significantly (2.3 point) higher wellbeing than people in a defacto relationship. In part this may be due to lower household income for the defacto group.

Widows have an average level of wellbeing that lies at the top of the normal range. This is despite low income for this group.

People who have never married have a level of personal wellbeing that lies between people who remain married and those who have separated or divorced. However, this is age dependent and is only evidenced by people aged between 26-65 years. Younger and older people who have never married have normal levels of wellbeing. See Chapter 5 for a full discussion.

Widows have relatively low health satisfaction. This is probably due to the burden of accumulated medical condition, that yield pain, such as arthritis. And in Survey 22 they have low relationship satisfaction.

Despite this, their overall wellbeing lies at the top of the normal range. This is due to compensating high levels in other domains.

The fact of full-time employment is not, of itself, able to bring all marital status groups into the normal range.
The negative effect of unemployment on wellbeing is partially buffered through marriage. However, the combination of separation/divorce and unemployment is devastating, yielding one of our lowest group mean scores for personal wellbeing (58.9).

Part-time volunteers have higher wellbeing than non-volunteers. The group to benefit most are people who are separated. This, may imply that the positive effect of volunteering is most evident in the early stages and dissipates as the activity become routine.

Even though people who are divorced and have a full-time well-paid job, their average level of wellbeing remains below the normal range.

For people who have never married, those who have retired require only $15-30K to enter the normal range. This does not occur for Fulltime students until their household income reaches $61-100K, while those in Fulltime employment require $101-150K. These differences are strongly influenced by effects due to age.

The presence of a partner acts as a buffer against negative life experiences. Through this means partners strengthen one another’s personal wellbeing.

Work Status:

Compared to their work group normal range, all groups are within range for Survey 23.

The profile of Full-time Employed shows that in Survey 23 they are doing very well in all domains except health.

The profile of Unemployed for Survey 23, matched against their own normative range, shows the domains to be generally high, with above normal satisfaction with Living Standard.

The personal wellbeing of most work-status groups falls in the generic normal range. People who are full-time retired lie above the normal range while people who are unemployed fall below.

Even though full-time retired have lower than normal health satisfaction, their personal wellbeing is above the generic normal range (see above). This emphasises that measures of subjective health are invalid as measures of overall wellbeing.

Even though full-time employed have a level of wellbeing at the top of the generic normal range, both domains that concern associations with other people (Relationships and Community) are low.

Full-time students have below-normal satisfaction in both domains that indicate connection to other people (relationships and community). This likely makes students more vulnerable to the effects of misfortune. On such occasions, inter-personal relations constitute a major buffer. Future Security is also very low.

People who are unemployed have lower than normal wellbeing for all domains except safety.

Of those people full-time employed, the 10.0% who are looking for work have lower than normal wellbeing. This is most particularly evident in the domain of Achieving. This domain pattern may be diagnostic of employees who are functioning poorly in their current employment.

Whether people who are unemployed are looking for work or not makes no significant difference to their low personal wellbeing. On a domain basis, people not looking for work have higher satisfaction with Achieving and Future Security.

Engaging in part-time volunteer work has a marginal relationship with higher wellbeing for people who are unemployed. It does not bring their wellbeing into the normal range.

Relative to gender-specific norms, fulltime employment favors the wellbeing of males slightly more than females.
(m) Males who are engaged in fulltime home or family care are positioned below their normative range. Their wellbeing is -3.5 points below males who are fulltime employed. The wellbeing of full-time home care females is -0.6 points below employed females. Thus, compared to Fulltime employment, males in full-time home care have a relatively greater wellbeing loss than females.

The low levels of wellbeing associated with unemployment are particularly low in Survey 22. Moreover, these low levels of wellbeing are not significantly ameliorated by either active job hunting or volunteer work.

Life Events:

(a) On average, about half of the sample consider that a recent life event, that has happened to them, has made them feel happier or sadder than normal.

(b) Both males and females were more likely to report a personal sad event in the period immediately following September 11 and just prior to the electoral defeat of 2007. More males than normal, but not females, reported a personal happy event immediately prior to the Iraq war.

(c) Females are more likely to recall the experience of a sad than a happy event in their lives.

(d) Young adults are more likely to report the experience of happy than sad events in their lives. This changes at 36-45 years. At this age and older, people are more likely to report the occurrence of a sad event.

(e) The recalled frequency of sad events is income sensitive up to an income of $61-100K. The recalled frequency of happy events continues to rise with income at least up to $151-250K.

(f) Females experience the intensity of both happy and sad events more strongly than males. This represents a pattern of enhanced emotional responsiveness for females.

(g) An investigation into changes in Personal Wellbeing Index across the days of the week detected no systematic effects. This is true irrespective of work-status.

Females experience the intensity of both happy and sad events more strongly than males. This represents a pattern of enhanced emotional responsiveness for females.
1. Introduction

The Australian Unity Wellbeing Index is a barometer of Australians’ satisfaction with their lives and life in Australia. Unlike most official indicators of quality of life and wellbeing, it is subjective – it measures how Australians feel about life, and incorporates both personal and national perspectives. The Index shows how various aspects of life – both personal and national – affects our sense of wellbeing.

The Index is an alternative measure of population wellbeing to such economic indicators as Gross Domestic Product and other objective indicators such as population health, literacy and crime statistics. The Australian Unity Wellbeing Index measures quality of life as experienced by the average Australian.

The Index yields two major numbers. The Personal Wellbeing Index is the average level of satisfaction across seven aspects of personal life – health, personal relationships, safety, standard of living, achieving, community connectedness, and future security. The National Wellbeing Index is the average satisfaction score across six aspects of national life – the economy, the environment, social conditions, governance, business, and national security.

A considerable body of research has demonstrated that most people are satisfied with their own life. In Western nations, the average value for population samples is about 75 percentage points of satisfaction. That is, on a standardised scale from 0 (completely dissatisfied) to 100 (completely satisfied) the average person rates their level of life satisfaction as 75. The normal range is from 70 points to 80 points. We find the Personal Wellbeing Index to always fall within this range. However, satisfaction with aspects of national life are normally lower, falling in the range 55 to 65 points in Australia.

The first index survey, of 2,000 adults from all parts of Australia, was conducted in April 2001. Now, a total of 23 surveys have been conducted. The data for this most recent Survey 23 were collected in April 2010. Copies of earlier reports can be obtained either from the Australian Unity website (www.australianunity.com.au) or from the Australian Centre on Quality of Life website at Deakin University (http://www.deakin.edu.au/research/acqol/index.htm). This report concerns the most recent survey.

The same core index questions, forming the Personal and the National Wellbeing Index, are asked within each survey. In addition we ask two highly general questions. One concerns ‘Satisfaction with Life as a Whole’. This abstract, personal measure of wellbeing has a very long history within the survey literature and its measurement allows a direct comparison with such data. The second is intended as an analogous ‘national’ item. It concerns ‘Satisfaction With Life in Australia’.

Each survey also includes demographic questions and a small number of additional items that change from one survey to the next. These explore specific issues of interest, either personal or national. Such data have several purposes. They allow validation of the Index, the creation of new population sub-groups, and permit further exploration of the wellbeing construct.

1.1. Understanding Personal Wellbeing

The major measurement instrument used in our surveys is the Personal Wellbeing Index (PWI). This is designed as the first level deconstruction of ‘Life as a Whole’. It comprises seven questions relating to satisfaction with life domains, such as ‘health’ and ‘standard of living’. Each question is answered on a 0-10 scale of satisfaction. The scores are then combined across the seven domains to yield an overall Index score, which is adjusted to have a range of 0-100.

On a population basis the scores that we derive from this PWI are quite remarkably stable. Appendix A1 presents these values, each derived from a geographically representative sample of 2,000 randomly
selected adults across Australia. As can be seen, these values range from 73.6 to 76.6, a fluctuation of only 3.0 points. How can such stability be achieved?

We hypothesize that personal wellbeing is not simply free to vary over the theoretical 0-100 range. Rather, it is held fairly constant for each individual in a manner analogous to blood pressure or body temperature. This implies an active management system for personal wellbeing that has the task of maintaining wellbeing, on average, at about 75 points. We call this process Subjective Wellbeing Homeostasis (Cummins et al., 2002).

The proper functioning of this homeostatic system is essential to life. At normal levels of wellbeing, which for group average scores lies in the range of 70-80 points, people feel good about themselves, are well motivated to conduct their lives, and have a strong sense of optimism. When this homeostatic system fails, however, these essential qualities are severely compromised, and people are at risk of depression. This can come about through such circumstances as exposure to chronic stress, chronic pain, failed personal relationships, etc.

Fortunately for us, the homeostatic system is remarkably robust. Many people live in difficult personal circumstances which may involve low income or medical problems, and yet manage to maintain normal levels of wellbeing. This is why the Index is so stable when averaged across the population. But as with any human attribute, some homeostatic systems are more robust than others. Or, put around the other way, some people have fragile systems which are prone to failure.

Homeostatic fragility, in these terms, can be caused by two different influences. The first of these is genetic. Some people have a constitutional weakness in their ability to maintain wellbeing within the normal range. The second influence is the experience of life. Here, as has been mentioned, some experiences such as chronic stress can challenge homeostasis. Other influences, such as intimate personal relationships, can strengthen homeostasis.

In summary, personal wellbeing is under active management and most people are able to maintain normal levels of wellbeing even when challenged by negative life experiences. A minority of people, however, have weaker homeostatic systems as a result of either constitutional or experiential influences. These people are vulnerable to their environment and may evidence homeostatic failure. An important feature of our survey analyses is the identification of sub-groups which contain a larger than normal proportion of people in homeostatic failure.

The influence of homeostasis

The purpose of SWB homeostasis is to maintain the wellbeing of each individual person close to their genetically-determined set-point, which averages 75 points. However, of course, wellbeing fluctuates around its set-point. These fluctuations can be very large if homeostasis is defeated in the presence of an unusually good or bad experience. While such experiences are unusual, when they do occur, people will normally return quite quickly to a level of wellbeing that approximates their set-point once again.

For these reasons, the wellbeing of individuals is normally highly predictable. It is lying within a restricted range around the set-point, called the set-point-range. The homeostatic processes attempt to hold each individual’s wellbeing within this range. Therefore, since there is a normal distribution of set-points around 75, probably between about 60 and 90 points, there is an associated distribution of overlapping set-point-ranges. This explains why the population mean is so predictable. The distribution of scores conforms to the distribution of set-point ranges, and these are genetically determined.

Why, then, does the mean of the survey samples vary from one time to the next? The answer, we propose, is that events which are experienced by the whole population will exert a systematic influence on the wellbeing of the individuals making up the whole sample. These influences will act to cause the wellbeing of each affected individual to be more likely to lie either above or below its set-
point. Thus, a national event, such as Olympic success, will exert a systematic influence, such that each person’s wellbeing will be more likely to be found above their set-point than below. In other words, a meaningful national event will systematically change the probability of measured wellbeing being dominated by scores that lie within the upper or lower halves of the set-point-ranges. Moreover, the stronger and more universal the experience, the more likely is each individual level of wellbeing to be found above or below its set-point, and the more the sample average will deviate from 75 points.

So, how much variation in survey mean scores is possible? There are two answers to this. The first involves a catastrophic experience, such as might occur in a sudden financial depression, such as might have happened if the 2007-2009 economic downturn had continued. In this event, the average wellbeing of the sample would possibly sink below any approximation of the normal range as a high proportion of the population suffer homeostatic defeat. This, however, will be a most unusual situation and one not yet experienced in the history of these surveys.

The second form of variation in survey mean scores will reflect systematic shifts in the probability of wellbeing being found above or below each set-point, but within each set-point range, and under homeostatic control. The extent of such variation depends on a number of factors as:

(a) The strength and ubiquity of the experience.

(b) The width of the set-point-range. While this remains somewhat speculative, a ball-park figure seems to be about 12 points.

(c) The strength of homeostasis. The influence of homeostasis is to control small fluctuations around the set-point. However, as wellbeing strays further and further from the set-point, homeostatic forces are increasingly unleashed to reign it back. We propose that these controlling forces increase in intensity with distance from the set-point until they lose control and SWB goes into free-rise or free-fall under the control of the experience.

So, given all these suppositions, how much movement is possible while most people’s wellbeing remains under homeostatic control? The answer is uncertain but certainly much less than the full six points on either side of the set-point defining the set-point range. The boundaries of this range demarcate homeostatic failure and so wellbeing would normally be maintained much closer to the set-point.

The total variation of population mean scores to date is 3.1 percentage points, or about 1.5 points on either side of the average set-point. This represents just 25% of the set-point-range. What this indicates is that the mood of the nation normally fluctuates within only a very tight band of values. What is not known is the extent that these small movements indicate anything important about the frequency of psychopathology or changed behaviour at a national level.

Causal influences

It is not possible from these cross-sectional data to determine causation of the changes in personal wellbeing between surveys. However, a number of ideas concerning possible sources of influence can be advanced. These are acknowledged in the caption to each figure. It is at least notable that the major changes in the level of the PWI have been associated with major national events. These trends are shown in Figure 2.1.

1.2. The Survey Methodology

A geographically representative national sample of people aged 18 years or over and fluent in English, were surveyed by telephone over the period 12th April to 2nd May. Interviewers asked to speak to the person in the house who had the most recent birthday and was at least 18 years old. A total of 16,426 calls were made. Of these, 4,940 connected with an eligible respondent and 2,000 agreed to complete the survey. This gives an effective response rate (completes/(refusals and completes)) of 42%. This
low response rate reflects, in part, the methodological constraint that an even geographic and gender split was maintained at all times through the survey.

All responses are made on a 0 to 10 scale. The satisfaction responses are anchored by 0 (completely dissatisfied) and 10 (completely satisfied). Initial data screening was completed before data analysis.

1.3. **Presentation of results and type of analysis**

In the presentation of results to follow, the trends that are described in the text are all statistically significant at \( p < .05 \). More detailed analyses are presented as Appendices. These are arranged in sections that correspond numerically with sections in the main report. All Appendix Tables have the designation ‘A’ in addition to their numerical identifier (e.g. Table A9.2).

All satisfaction values are expressed as the strength of satisfaction on a scale that ranges from 0 to 100 percentage points.

In situations where homogeneity of variance assumptions has been violated, Dunnetts T3 Post-Hoc Test has been used. In the case of t-tests we have used the SPSS option for significance when equality of variance cannot be assumed.

The raw data for this and all previous reports are available from our website: [http://www.deakin.edu.au/research/acqol/index_wellbeing/index.htm](http://www.deakin.edu.au/research/acqol/index_wellbeing/index.htm).

1.4. **Internal Report Organisation**

(a) The new results from this survey are summarised in Table 2.1 (see Chapter 2).

(b) Most Tables are presented as appendices.

(c) Chapter 2 presents a comparative analysis of Personal and National Wellbeing with previous surveys.

(d) Chapters 3-8 present the major groupings of independent (demographic) variables. Within each Chapter, the first section concerns the analysis of all dependent variables listed in Table 2.1. This is followed by analyses of the demographic variables in combination with the Personal Wellbeing Index and other measures.

(e) Chapter 9 concerns Life Events.

(f) Chapters 10-12 concern the special topics for this survey which are the presence of children, whether life is getting better or worse, and neighbourhood noise and consequential levels of stress.

(g) Chapter 13 concerns a technical analysis of data in relation to homeostasis.

(h) Each Chapter contains a dot-point summary.

1.5. **Glossary of Terms**

**Normal Ranges:** These set the boundaries within which ‘normal’ values will fall. Each range is generated by computing the distance of two standard-deviations on either side of the mean. There are various types of range as:

(a) **Generic normal range for group means:** These are calculated using survey mean scores as data. For example, the generic Personal Wellbeing Index normal range for groups has been calculated using...
each overall survey Personal Wellbeing Index mean as data, so N for this calculation is the number of surveys.

This is the most commonly employed comparison in the report. The range reflects the extent of variability between surveys and the 95% probability that any future survey mean will fall within this range. Any group mean score can be compared against this range to indicate the extent of its ‘normality’.

(b) **Specific normal ranges for groups**: These are calculated using the mean scores of specific groups within surveys as data (e.g. people who are retired).

(c) **Generic normal ranges for individuals**: These are calculated using the scores from individuals as data. For example, the generic Personal Wellbeing Index normal range for individuals has been calculated using the Personal Wellbeing Index scores from all of the people involved in the surveys. So N for this calculation is the number of people within all of the combined surveys.

This range reflects the variability between people and the 95% probability that the score from any single person will fall within this range.

(d) **Specific normal ranges for individuals**: These are calculated using the scores from individuals within specific groups as data. Thus, there is a specific normal range for the individuals who are full-time retired, and there is a 95% probability that the score from a retired person will fall within this range.

| **Homeostatically Protected Mood (HPMood):** | A genetically-derived individual difference in mood comprising the three affects of Content, Happy and Alert. It accounts for the majority of variance in Subjective Wellbeing. |
| **Personal Wellbeing Index (PWI):** | The Personal Wellbeing Index comprises eight domains rated on satisfaction. All results from the Index are standardized into a scale from 0 to 100. |
| **Subjective Wellbeing (SWB):** | The output from the Personal Wellbeing Index. It measures how satisfied people are with their lives. |
| **Wellbeing:** | An abbreviated form of subjective wellbeing as measured by the Personal Wellbeing Index. |
2. Personal and National Wellbeing Over Time

2.1. A Comparison Between Survey 22 and Survey 23

Table 2.1: Means and standard deviations of the 23rd survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Survey 22</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Survey 23</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Point change from December 2009</th>
<th>Significance of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERSONAL WELLBEING INDEX</td>
<td>1892</td>
<td></td>
<td>76.27</td>
<td>12.32</td>
<td>1926</td>
<td></td>
<td>76.03</td>
<td>12.05</td>
<td>-0.236</td>
<td>0.550</td>
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<td>Personal domains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Standard of living</td>
<td>1962</td>
<td></td>
<td>79.84</td>
<td>15.74</td>
<td>1963</td>
<td></td>
<td>79.64</td>
<td>15.77</td>
<td>-0.199</td>
<td>0.893</td>
</tr>
<tr>
<td>2. Health</td>
<td>1961</td>
<td></td>
<td>74.21</td>
<td>20.10</td>
<td>1964</td>
<td></td>
<td>73.95</td>
<td>19.57</td>
<td>-0.261</td>
<td>0.680</td>
</tr>
<tr>
<td>3. Achieving</td>
<td>1944</td>
<td></td>
<td>74.03</td>
<td>18.47</td>
<td>1960</td>
<td></td>
<td>74.18</td>
<td>18.14</td>
<td>0.151</td>
<td>0.797</td>
</tr>
<tr>
<td>4. Personal relationships</td>
<td>1952</td>
<td></td>
<td>79.71</td>
<td>21.23</td>
<td>1956</td>
<td></td>
<td>81.52</td>
<td>19.28</td>
<td>1.810</td>
<td>0.005</td>
</tr>
<tr>
<td>5. How safe you feel</td>
<td>1962</td>
<td></td>
<td>80.75</td>
<td>17.01</td>
<td>1959</td>
<td></td>
<td>78.73</td>
<td>16.78</td>
<td>-2.025</td>
<td>0.000</td>
</tr>
<tr>
<td>6. Community connect</td>
<td>1950</td>
<td></td>
<td>72.07</td>
<td>19.33</td>
<td>1951</td>
<td></td>
<td>71.33</td>
<td>19.22</td>
<td>-0.744</td>
<td>0.228</td>
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<tr>
<td>7. Future security</td>
<td>1934</td>
<td></td>
<td>72.72</td>
<td>19.15</td>
<td>1953</td>
<td></td>
<td>72.55</td>
<td>19.74</td>
<td>-1.751</td>
<td>0.779</td>
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<tr>
<td>8. Religion/ Spirituality</td>
<td>1699</td>
<td></td>
<td>71.68</td>
<td>25.21</td>
<td>1694</td>
<td></td>
<td>72.51</td>
<td>24.83</td>
<td>0.837</td>
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<tr>
<td>Life as a whole</td>
<td>1960</td>
<td></td>
<td>78.63</td>
<td>16.62</td>
<td>1963</td>
<td></td>
<td>78.52</td>
<td>16.49</td>
<td>-0.105</td>
<td>0.843</td>
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<tr>
<td>NATIONAL WELLBEING INDEX</td>
<td>1813</td>
<td></td>
<td>64.08</td>
<td>13.19</td>
<td>1850</td>
<td></td>
<td>63.89</td>
<td>13.99</td>
<td>-0.189</td>
<td>0.674</td>
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<td>National domains</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Economic situation</td>
<td>1943</td>
<td></td>
<td>66.50</td>
<td>18.21</td>
<td>1951</td>
<td></td>
<td>64.96</td>
<td>19.06</td>
<td>-1.534</td>
<td>0.010</td>
</tr>
<tr>
<td>2. Environment</td>
<td>1951</td>
<td></td>
<td>61.23</td>
<td>18.32</td>
<td>1957</td>
<td></td>
<td>64.14</td>
<td>18.02</td>
<td>2.919</td>
<td>0.000</td>
</tr>
<tr>
<td>3. Social Conditions</td>
<td>1935</td>
<td></td>
<td>63.90</td>
<td>17.84</td>
<td>1941</td>
<td></td>
<td>65.65</td>
<td>17.65</td>
<td>1.750</td>
<td>0.002</td>
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<td>4. Government</td>
<td>1955</td>
<td></td>
<td>59.17</td>
<td>22.77</td>
<td>1954</td>
<td></td>
<td>54.61</td>
<td>23.20</td>
<td>-4.560</td>
<td>0.000</td>
</tr>
<tr>
<td>5. Business</td>
<td>1887</td>
<td></td>
<td>63.87</td>
<td>16.34</td>
<td>1905</td>
<td></td>
<td>65.42</td>
<td>16.41</td>
<td>1.549</td>
<td>0.004</td>
</tr>
<tr>
<td>6. National security</td>
<td>1929</td>
<td></td>
<td>69.35</td>
<td>18.21</td>
<td>1931</td>
<td></td>
<td>68.09</td>
<td>19.79</td>
<td>-1.253</td>
<td>0.041</td>
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<tr>
<td>Life in Australia</td>
<td>1957</td>
<td></td>
<td>85.22</td>
<td>16.31</td>
<td>1957</td>
<td></td>
<td>84.28</td>
<td>16.54</td>
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<td>Terror attack likely (%)</td>
<td>51.5%</td>
<td></td>
<td></td>
<td></td>
<td>50.3%</td>
<td></td>
<td></td>
<td></td>
<td>-1.2%</td>
<td></td>
</tr>
<tr>
<td>Likelihood of terrorist attack</td>
<td>997</td>
<td></td>
<td>64.96</td>
<td>18.18</td>
<td>979</td>
<td></td>
<td>64.32</td>
<td>20.28</td>
<td>-0.644</td>
<td>0.457</td>
</tr>
</tbody>
</table>

The Major Indices

These results are found in Table 2.1 (Survey 21), Table 2.1.1 (Comparative between surveys). Past comparative results between surveys are found in Tables A2.1.2 and A2.1.3.

Note: The shaded blue area in the subsequent figures shows the generic normal range for survey mean scores.
2.2. Personal Wellbeing Index

Figure 2.1: Personal Wellbeing Index

Scores above this line are significantly higher than S1.


Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Stock market collapse
- k = Fires and floods
- l = Stock market recovery

Special Surveys:
18.1: Three months after the change in Government and following several consecutive interest-rate rises.
20.1: Following the Victoria Bush Fires in which 173 people died.

Note: In this and subsequent figures, the shaded (blue) area shows the generic normal range of survey means scores for the measure in question (Table A2.22). These blue areas represent two standard deviations around the mean using survey mean scores as data.
The Personal Wellbeing Index has not significantly changed in the six months since Survey 22 in September 2009. Its current value of 76.0 is not significantly different from the highest values it has reached over the 10 years of these surveys and the second consecutive survey that is has been at this very high level.

The first occasion it reached this value coincided with the Athens Olympics in August 2004. This was an odd survey since data were collected over the Olympic period, meaning that the elated emotions of the nation at the amazing success of our athletes at these games, no doubt added to the value of the Personal Wellbeing Index. The high levels of the last two surveys probably reflect the sense of relief that Australia escaped the recession and that people’s savings and superannuation funds remain secure. There may also be an element of positive downward comparison against countries that have not been so lucky.

Over all the surveys, it is notable that the Personal Wellbeing Index is so stable. The survey mean scores have varied by just 3.1 points. Moreover, the change from one survey to the next has been 1 point or less except for 4 of the 21 surveys. These occasions have been S1-S2 (September 11), S11-S12/S12-S13 (Sydney Olympics), S14–S15 (Second Bali bombing), and S20-S20.1 (Victorian Bush Fires). The Personal Wellbeing Index is currently 2.8 points above its level at Survey 1, which is significant.

**Historical:** The most obvious trend for the Personal Wellbeing Index is that it rose following September 11 and remained generally higher. Of the 22 surveys conducted since Survey 1, 16 (72.7%) have been significantly higher than this initial value.

It seems that both positive and negative events have acted to raise the wellbeing of the Australian population. In terms of the negative events, it appears that the presence of external threat causes the population wellbeing to rise. This has occurred first followed September 11 and reached its maximum about 6 months after the event. The second occurred immediately following the Bali Bombing and ran into the build-up in tension surrounding the Iraq war. It is possible that the Second Bali Bombing, which substantially increased the perceived probability of a terrorist attack in Australia (see section 2.8) prevented the Personal Wellbeing Index continuing its fall back to the baseline value recorded at that time. In Survey 12, the positive influence of Olympic success also caused personal wellbeing to rise, to an even greater extent than either of the terrorist or war events. And now in Survey 22 it has risen to record heights again. It is notable that the same set of domains seem to be affected by both kinds of event, as can be seen in Section 2.2 of this chapter.

In other respects Australia is remarkably politically stable. Over Surveys 1-18, Prime Minister Howard lead the Liberal Party to successful re-election in both November 2001 and October 2004. At the time of Survey 18 (October 2007) it was looking as though a change of Government was likely at the November 2007 election, and indeed this transpired with Kevin Rudd becoming the new Labor Prime Minister. However, this was more due to a general sense in the electorate that it was time for a change, rather than a perception of the government as incompetent. Moreover, the policies of the two major parties contesting the election were very similar. These factors further enhance the sense of political and social stability, as shown by the lack of significant change in the Personal Wellbeing Index at the time of the special survey (18.1:February 2005) conducted three months following the election.
National Wellbeing Index

Figure 2.2: National Wellbeing Index

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Asian Tsunami
- f = Stock market collapse
- g = Second Bali Bombing
- h = Labor Government Elected
- i = Fires and floods
- j = Stock market recovery
- k = Second Gulf War
- l = Stock market recovery

Strength of satisfaction

Maximum = 64.1
Current = 63.9
Minimum = 55.8
The National Wellbeing Index has not significantly changed in the six months since Survey 22 (-.2 points). It remains among the highest levels yet recorded. This sudden increase in Survey 22 reversed a trend of decreasing national wellbeing that ran from October 2007 to May 2009.

**Historical:** The National Index, like the Personal Wellbeing Index Figure 2.1 started from a very low initial value in April 2001. The reason for this low value is not known. What is evident is that the National Wellbeing Index is more volatile than the Personal Index due to the relatively low level of homeostatic control. Its range is 7.9 points from April 2001 (S1: 55.8) to September 2009 (S22: 64.1 points).

**Note:** No test of significance can be run against Survey 1 due to a different composition of the NWI at that time.
2.3. **Personal Wellbeing Domains**

The eight personal domains have generally followed the Personal Wellbeing Index in showing no change since the last survey. However, two domains have changed over this time. Satisfaction with relationships has gone up (+1.8 points) and satisfaction with safety has gone down (-2.0 points).
How satisfied are you with your Standard of Living?

Figure 2.3: Satisfaction with Standard of Living

<table>
<thead>
<tr>
<th>Survey Date</th>
<th>Major events preceding survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Apr 2001</td>
<td></td>
</tr>
<tr>
<td>S2 Sept 2001</td>
<td></td>
</tr>
<tr>
<td>S3 Mar 2002</td>
<td></td>
</tr>
<tr>
<td>S4 Aug 2002</td>
<td></td>
</tr>
<tr>
<td>S5 Nov 2002</td>
<td></td>
</tr>
<tr>
<td>S6 Mar 2003</td>
<td></td>
</tr>
<tr>
<td>S7 Jun 2003</td>
<td></td>
</tr>
<tr>
<td>S8 Aug 2003</td>
<td></td>
</tr>
<tr>
<td>S9 Nov 2003</td>
<td></td>
</tr>
<tr>
<td>S10 Feb 2004</td>
<td></td>
</tr>
<tr>
<td>S11 May 2004</td>
<td></td>
</tr>
<tr>
<td>S12 Aug 2004</td>
<td></td>
</tr>
<tr>
<td>S13 May 2005</td>
<td></td>
</tr>
<tr>
<td>S14 Oct 2005</td>
<td></td>
</tr>
<tr>
<td>S15 May 2006</td>
<td></td>
</tr>
<tr>
<td>S16 Oct 2006</td>
<td></td>
</tr>
<tr>
<td>S17 Apr 2007</td>
<td></td>
</tr>
<tr>
<td>S18 Oct 2007</td>
<td></td>
</tr>
<tr>
<td>S18.1 Feb 2008</td>
<td></td>
</tr>
<tr>
<td>S19 Apr 2008</td>
<td></td>
</tr>
<tr>
<td>S20 Oct 2008</td>
<td></td>
</tr>
<tr>
<td>S20.1 Feb 2009</td>
<td></td>
</tr>
<tr>
<td>S21 May 2009</td>
<td></td>
</tr>
<tr>
<td>S22 Sept 2009</td>
<td></td>
</tr>
<tr>
<td>S23 April 2010</td>
<td></td>
</tr>
</tbody>
</table>

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Stock market collapse
- k = Fires and floods
- l = Stock market recovery

Strength of satisfaction:
- Maximum = 79.8
- Current = 79.6
- Minimum = 74.5
Satisfaction with standard of living has not significantly changed in the six months since Survey 22 (-.2 points). It remains above the normal range and among the highest levels yet recorded. The reason for this continued high level seems likely tied to the recovering economy. The range of scores is 5.3 points between April 2001 (S1:74.5) and September 2009 (S22:79.8).

**Historical:** The values for this domain have generally remained significantly higher than they were at Survey 1, with only two (Survey 4 in 2002 and Survey 15 in 2006) being statistically at the same level as this first survey. Thus, 20/22 (90.9%) of the subsequent survey mean scores are higher than Survey 1.

It is interesting to note that the rise in satisfaction with Standard of Living between May 2006 (S15) and October 2007 (S18) occurred despite a succession of 0.25 point rises in interest rates. It is also interesting to note that the rise in wellbeing from April 2008 (Survey 19) commenced in the face of the continuing economic down-turn.

There were probably two reasons for this. One was that the various economic stimulus packages released by the Government provided households with additional discretionary income. The second was that the poor national economic situation had had a serious negative effect on only a minority of the population. The people who were personally adversely affected were those who had lost their job, or who were reliant on interest from shares or other investments for their income. But these people were in a great minority. While a majority of people had lost wealth with the downturn, for the most part their investments were intact and so they felt they could just wait for the economy to recover. And, in the meantime, if they still had a job and a mortgage, and if their wage has not diminished, then they were better off financially than maybe they had ever been due to the decrease in interest rates and, so, their mortgage payment.
How satisfied are you with your Health?

Figure 2.4: Satisfaction with Health

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Stock market collapse
- k = Fires and floods
- l = Stock market recovery
Satisfaction with health really does not change significantly between surveys and so is a good benchmark to indicate that the data set as a whole is reliable. In this survey (74.0 points) it has fallen by a non-significant 0.2 points since Survey 22 but remains within its normal range. It remains not different (+0.4 points) from its level at Survey 1.

**Historical:** This domain rose briefly at March 2003 (S6: Pre-Iraq war) but quickly returned to its original level. It is notable that the level of significance at Survey 6 was marginal \((p=.02)\) and so probably reflects a random fluctuation. The overall ANOVA between surveys is non-significant \((p = .078)\) (Table A 2.1). It is evident that satisfaction with personal health is little influenced by either world or national events and this stability is confirmation that the change in other domains since Survey 1 are valid. The range of scores is 2.4 points between April 2001 (S1:73.6) and March 2003 (S6: Pre-Iraq war:76.0).
Achieving in Life

Figure 2.5: Satisfaction with What you are Currently Achieving in Life

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Stock market collapse
- k = Fires and floods
- l = Stock market recovery

<table>
<thead>
<tr>
<th>Survey Date</th>
<th>Major events preceding survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 2001</td>
<td>a</td>
</tr>
<tr>
<td>Apr 2001</td>
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Achieving in life has not significantly changed in the six months since Survey 22 (+.2 points). It remains no different than it was at Survey 1.

**Historical:** The wording of this item has changed once. From Survey 1 to Survey 10, satisfaction with ‘what you achieve’ barely changed over the surveys. It was marginally higher at Survey 6 (Pre-Iraq war), and over this period the range of scores was 1.8% between April 2001 (S1:73.2) and March 2003 (S6:Pre-Iraq war:75.0).

In Survey 11 the wording of this item changed from ‘How satisfied are you with what you achieve in life?’ to ‘How satisfied are you with what you are currently achieving in life?’. The reason for this change is to make it more explicit that the question referred to current life rather than to some past aggregation of achievement.

The effect of this word change has significantly reduced the score for this domain. The average value over Survey 1 to Survey 10 is 74.47 (SD=0.45). The average value over Survey 11-Survey 17 is 72.96 (SD = 0.53). So it appears to still be a highly reliable measure that has stabilised about 1.5 points below the original and no different from Survey 1.
Relationships

How satisfied are you with your Relationships?

Figure 2.6: Satisfaction with Relationships

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Fires and floods
- k = Stock market collapse
- l = Stock market recovery

Strength of satisfaction

Survey Date

Strength of satisfaction

Survey Date

Maximum = 81.5
Current = 81.5
Minimum = 77.2

Australian Unity Wellbeing Index, Survey 23, Report 23, April 2010
Satisfaction with relationships, has risen by a significant 1.8 points in the six months since Survey 22, and is now at its highest level yet recorded (81.5 points), which is right at the top of the normal range.

The highest value for this domain has been 81.39 points at the time of the Athens Olympics (S12). It has been at an equivalently high level on two previous occasions. These are Survey 7 (Hussein deposed) and Survey 12 (Athens Olympics). The current rise does not seem to be tied to any special event and cannot readily be explained. Notably, its value is within the normal range and so it may simply reflect a random fluctuation.

The overall pattern of change for this domain does not conform to that of the Personal Wellbeing Index (Figure 2.1). The range of scores is 4.3 points between February 2008 (S18:77.2) and April 2010 (S23:81.5).
Figure 2.7: Satisfaction with How Safe you Feel
Satisfaction with personal safety has fallen by a significant -2.0 points since the last Survey 22. It is now close to the average value across surveys, back down from a 2.5 year period (April 2007 to September 2009) in which it maintained a high level, generally above 80 points. The reason for this fall is not immediately evident. The range of scores is 5.1 points between April 2001 (S1:75.2) and October 2008 (S20: 80.3).

**Historical:** The first major rise in Safety satisfaction followed the defeat of Saddam Hussein in Iraq at Survey 7 and has been maintained ever since. This sustained rise may have been linked to the positive feelings of relief following the defeat of Hussein without unleashing weapons of mass destruction, and subsequently our increasingly strong American alliance. The rise during the Olympics (S12) may have been more due to the overall sense of elevated wellbeing than to specific feelings of greater safety. The further rise is hard to explain. While it is associated with a decreasing proportion of the sample feeling that a terrorist attack is likely, it is also true that terrorist attacks were unthought of prior to Survey 2.

It is interesting to relate these data on safety to the sense of terrorist threat that is felt by the population. Since Survey 9 (November 2003) we have asked people ‘whether they think a terrorist attack is likely in Australia in the near future’ and, if they say ‘Yes’, we ask about the strength of their belief that such an attack will occur.

These data are combined with the population levels of ‘Satisfaction with Safety’ in Table A2.9. It can be seen that the average level of safety satisfaction correlates negatively with the percentage of people who think an attack is likely ($r = -.58$, which is highly significant) but much less strongly with the strength of belief among those respondents who think an attack likely ($r = -.09$, non-significant). The correlation of -.58 explains about 34% of the variance between these two measures, which is a significant degree of co-variation. Other factors that will be contributing variance to safety are homeostasis, personal circumstances and, quite possibly, the sense of security offered by an effective wellbeing military force and alliance with the USA. The latter influence, exemplified by the rise in safety at Survey 7 (defeat of Hussein) may represent a constant background factor onto which the fluctuations in terrorist attack probabilities are imposed.

One implication of these results is that raising terrorist attack fears through issuing terrorist alerts, harms the safety satisfaction, and thereby compromises the overall wellbeing of vulnerable members of the population. However, the most remarkable feature of this graph of safety satisfaction is its continued rise over the period of these surveys. This is further discussed in Section 2.4.1.
Community

How satisfied are you with Feeling Part of your Community?

Figure 2.8: Satisfaction with Feeling Part of Your Community

- Strength of satisfaction
  - Maximum = 73.0
  - Current = 71.3
  - Minimum = 68.6

- Major events preceding survey

- Key:
  - a = September 11
  - b = Bali Bombing
  - c = Pre-Iraq War
  - d = Hussein Deposed
  - e = Athens Olympics
  - f = Asian Tsunami
  - g = Second Bali Bombing
  - h = New IR Laws
  - i = Labor Government Elected
  - j = Stock market collapse
  - k = Fires and floods
  - l = Stock market recovery
People’s satisfaction with feeling part of their community has not changed significantly since the last survey (-.7 points). It reached its highest level yet recorded at Survey 20.1, at a time immediately following the Victorian bushfires. At that time Satisfaction with Community was 0.3 points higher than it was at the time of the Athens Olympics, and 4.4 points higher than it was in Survey 1. It seems self-evident that this rise was due to the increased sense of community generated by the tragedy of the floods and fires. These events generated an enormous out-pouring of sympathy and tangible assistance, which caused the population to experience a heightened sense of belonging to the ‘Australian family’.

It is interesting, however, that this elevated level of satisfaction with community connection was maintained over the next 7 months, in May and September. The range of scores is 4.4 points between April 2001 (S1:68.6) and February 2009 (S20.1:Victorian Fires:72.99).

**Historical:** Apart from the Olympic period elevation (S12) and the 2009 surveys, the previous rises are coherently related to times of major conflict. In the six months following September 11, satisfaction with community connectedness went up from its lowest level in April 2001, and was maintained at this higher level for a further six months. It then fell, but returned to an even higher level in the lead-up to the Iraq war (S6). This higher level was maintained for six months following the defeat of Hussein (S9), then dissipated only to be recharged once again following the second Bali bombing (S14). This pattern is consistent with social psychological theory. A perceived source of threat will cause a group (or population) to become more socially cohesive. However, it must also be noted that the level of safety satisfaction also rose at the time of the Athens 2004 Olympics (Survey 12), around the period of the election of the new Labor Government (Surveys 18 and 18.1) and following the Victorian bushfires (Surveys 20.1 to 22).
Future Security

How satisfied are you with your Future Security?

Figure 2.9: Satisfaction with Future Security

Key: 
a = September 11  
b = Bali Bombing  
c = Pm-Iraq War  
d = Hussein Deposited  
e = Athens Olympics  
f = Asian Tsunami  
g = Second Bali Bombing  
h = New IR Laws  
i = Labor Government Elected  
j = Stock market collapse  
k = Fires and floods  
l = Stock market recovery
Satisfaction with future security has not changed significantly since the previous survey (-.2 points) and remains quite high. It seems evident that the economy is dominating people’s views of their future. It, like the stock market, has recovered much of its lost ground, and has returned to lie among the highest values, being only 0.6 points below the maximum 73.2 points reached in February 2008. The range of scores is 4.6 points between September 2001 (S2: 68.6) and February 2008 (S18: 73.2).

**Historical:** Satisfaction with future security dropped to its lowest level immediately following September 11, and then rose to a significantly higher level six months later (S3). It then rose again immediately following the Iraq war (S7), and then gradually fell back. This pattern is very similar to that shown by safety and the explanations are probably similar to those that have been stated for the safety domain. The correlation between the survey mean scores for safety and future security is $r = .72$ (Table A2.13).
How satisfied are you with your Spirituality or Religion?

Figure 2.10: Satisfaction with Religion/Spirituality

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Stock market collapse
- k = Fires and floods
- l = Stock market recovery
The new Personal Wellbeing Index domain ‘How satisfied are you with your spiritual fulfilment or religion’ was included for the first time in Survey 16. In Survey 17 this was changed to ‘How satisfied are you with your spirituality or religion?’

Satisfaction with spirituality/religion has not changed significantly since the previous survey (+.8 points). It has, however, moved close to the top of its normal range.

**Historical:** The first survey to include Satisfaction with Spirituality/Religion was conducted in October 2006. Since that time satisfaction with this domain has increased and it remains close to its maximum level.

**The strength of Spiritual/Religious Satisfaction**

While 11.6 percent of the combined sample respond that they do not have the Spiritual/Religious experience, there is another 3.2% who respond that they are zero satisfied with their experience. These are two very different groups of people as seen by matching of the strength of the Spiritual/Religious experience to the Personal Wellbeing Index. This is shown in Table A2.14 and below.

![Figure 2.11: Satisfaction with Spiritual/Religious vs. Personal Wellbeing Index (combined sample)](image)

This figure shows the relationship between the Spiritual/Religious experience and personal wellbeing. These can be summarised as:

1. People who have no spiritual/religious experience (11.3% of the combined samples) have normal levels of wellbeing.
2. People who rate their spiritual/religious experience as providing 0-6 levels of satisfaction have a level of personal wellbeing that lies below the normal range (36.8% of the sample of believers).
3. The Personal Wellbeing Index of the spiritual/religious group does not enter the normal range until people rate their level of satisfaction as 7/10.

The three groups of Spiritual/Religious experience are shown in relation to the Personal Wellbeing Index domains in Table A2.15. From this it can be seen that:

1. There are no significant differences in the Personal Wellbeing Index between people who do, and those who do not have the Spiritual/Religious experience, on any other domain.
2. For all domains, the zero Spiritual/Religious satisfaction group are significantly lower than the other two groups.
In order to compare the pattern of the relationship between Spiritual/Religious, the figure below charts the pattern of both Spiritual/Religious, Relationships and Future Security (Table A12.4 and Table A12.9).

![Figure 2.12: Spiritual/Religious vs. Relationships x Future Security (Personal Wellbeing Index)](image)

It can be observed that the Spiritual/Religious domain behaves differently from the other two domains in this figure. Low scores are less attached to low Personal Wellbeing Index values, and high scores are less attached to high Personal Wellbeing Index values. In other words, the Spiritual/Religious domain is more independent of the Personal Wellbeing Index than the other two domains.

This is consistent with the correlation matrix in Table A2.18.1 which shows the domain to be obviously less strongly connected to ‘Life as a whole’ and to the other seven domains, than the other domains are connected to one another.

Despite this, the Spiritual/Religious domain makes a significant unique contribution of 1.0% to ‘Life as a whole’ (Table A2.18.1) using the combined surveys. A comparison with Table A2.17.1, which shows the regression for the seven domains only, shows that the Spiritual/Religious inclusion drops the unique contribution of Standard (-1.1%), decreases the net explained unique variance from 14.9 to 13.8% (-0.9%) but increases the overall explained variance (Adjusted R²) from 50.4 to 51.1% (+0.7%).

These results qualify the Spiritual/Religious domain as a component of the Personal Wellbeing Index in Australia.

The performance of the Personal Wellbeing Index at different levels of Spiritual/Religious

Tables A2.19 to A2.19.5 show regressions of the original seven domains against Life as a Whole when the data set is restricted to match levels of Spiritual/Religious. The first (A2.19) shows the full data-set. The next shows the data set reduced by eliminating all respondents who scored 0 or 1 on Spiritual/Religious. This process of elimination is repeated through the remaining tables.

It can be seen that this procedure does not substantially change the pattern of domain contributions to LAAW. The explained variance drops from 51.6% (full data set) to 47.7% (Spiritual/Religious 7-10 only), but this probably just reflects the overall reduced variance in the sample.

It can be concluded that the performance of the 7-domain Personal Wellbeing Index is not influenced by different levels of Spiritual/Religious satisfaction.
Changes in the value of the Personal Wellbeing Index due to Spiritual/Religious inclusion

Table A2.16 shows that, because the average level of Spiritual/Religious satisfaction is lower than the domain average, its inclusion reduces the Personal Wellbeing Index mean by about 0.6 percentage points. This is a substantial difference, given that the overall variation in the Personal Wellbeing Index mean between surveys is only 3.0 points (Table A2.21).

For this reason the Spiritual/Religious domain is not included in the calculation of the Personal Wellbeing Index for any of the cumulative data or time-series data in this report.

Conclusion: People who have low satisfaction (0-6) with their Spiritual/Religious beliefs are likely to have very low wellbeing. The wellbeing of ‘believers’ only reaches that of ‘non-believers’ when the strength of satisfaction with their beliefs reaches 7/10.

The Spiritual/Religious domain is quite insensitive to change in the Personal Wellbeing Index. Thus, its inclusion, may make the Personal Wellbeing Index somewhat less sensitive to change.
2.4. Life as a Whole

How satisfied are you with your Life as a Whole?

Figure 2.13: Satisfaction with Life as a Whole

Strength of satisfaction
Maximum = 79.1
Current = 78.5
Minimum = 75.2

Key:

a = September 11
b = Bali Bombing
c = Pre-Iraq War

d = Hussein Deposed
e = Athens Olympics
f = Labor Government Elected

g = Second Bali Bombing
h = New IR Laws
i = Stock market collapse

j = Fires and floods
k = Stock market recovery
l = Stock market recovery
“How satisfied are you with your Life as a Whole?”

Satisfaction with life as a whole has not changed significantly since the previous survey (-.1 points). It remains higher than its level at Survey 1.

**Historical:** After the initial rise one year following September 2001 (S3), this global item dropped back 6 months later, only to rise again after the Bali bombing (S5) and during the period of the Iraq war (S6-S7). Then it gradually decreased until, one year after Hussein had been defeated it was no different from Survey 1 once again. Since Survey 12 it seems to have stabilized at about 77-78 points which is marginally significantly higher than at Survey 1. The range of scores is 3.9 points between April 2001 (S1:75.2) and August 2004 (S12:Olympics:79.1).

### 2.4.1. Summary of the Changes in Personal Wellbeing

The level of personal wellbeing in Australia has not changed over the past 12 months and has remained at a fairly high level. It seems likely that this high level is sustained by a sense of relief that Australia has escaped the global recession and that people’s savings, investments, and superannuation remain secure. There may also be an element of positive downward comparison against countries that have not been so lucky.

Looking back over the entire record of the Index (Figure 2.1) it appears that it has mainly varied within a band of just two percentage points, from 76 to 74. There have been three slight variations outside this range. The first of these was the very first survey, which registered 73.2 points. The second was the survey run at the time of the Athens Olympics (76.3 points) and the third is Survey 22 (76.3 points). Of these three, is the first survey which is most deviant. Even though the data have been checked and the result appears reliable, the deduction that the events of September 11 somehow triggered a rise in the Personal Wellbeing Index rests entirely on this initial value.

It is interesting to reflect on the domains that have fuelled this rise and those that have not some relevant data are provided in Table 2.2.

<table>
<thead>
<tr>
<th>Domains</th>
<th>Standard</th>
<th>Health</th>
<th>Achieving</th>
<th>Relationships</th>
<th>Safety</th>
<th>Community</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 arithmetically lower than all others</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>S1 lower than the normal range</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>S2 lower than the normal range</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Other values outside the normal range</td>
<td>✓</td>
<td>S22/S23</td>
<td>X</td>
<td></td>
<td>S12/S20.1</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

In summary of these results:

(a) In terms of simple arithmetic comparisons, Survey 1 is the lowest value for 3/7 domains.

(b) In statistical terms, Survey 1 is lower than the normal range for 3/7 domains.

(c) Only 2 domains (Standard and Community) have registered a subsequent value outside (above) the normal range.
Conclusion

The fact that less than about half of the domains registered a highly unusual value at Survey 1 is encouraging to the view of Survey 1 data as generally reliable. However, the fact that, of the total 3 values that lie below the normal range, 100% are found in Survey 1 remains a concern.

At Survey 12 (Athens Olympics, August 2004) all domains except Health and Achieving were significantly higher than normal. The domains of Health (Figure 2.4) and Achieving (Figure 2.5) have shown virtually no change through the entire survey sequence.

Since Survey 13, the other domains have changed as follows:

**Standard** (Figure 2.3): Along with several other domains, Standard of Living peaked first at the time of the Athens Olympics (S12, August 2004). Over the next 4.5 years it remained within a 2 percentage point band, but it peaked again at Survey 22 (September 2009) perhaps fuelled by the recovering economy.

**Relationships** (Figure 2.6): This domain has remained within its normal range of 4.3 points throughout the entire sequence. Notably, its largest fluctuation between surveys (3.2 points between Survey 12 and Survey 13) occurred entirely within the normal range.

**Safety** (Figure 2.7): This domain has been rising, on average, throughout this series of surveys. It has dropped back in the most recent survey, so whether this signals a future change of direction remains to be seen. While the correlation of -.58 with the % of the sample expecting a terrorist attack is interesting (Table A2.9), this cannot explain the full pattern of results. The lowest level of safety was immediately prior to September 11; a time at which the possibility of terrorist attacks in Australia were not even being considered by the general population.

**Community** (Figure 2.8): This domain has peaked twice, with values above the normal range. The first occasion was Survey 12 (August 2004) at the time of the Athens Olympics, and the second was Survey 20.1 (February 2009) at the time of the devastating Victorian bushfires. It seems likely that either national elation at the demonstration of sporting prowess or national horror at the level of bushfire destruction, bonds the community and makes people feel more connected to one another. Over the surveys 21-22 Community has remained at very high levels.

**Future Security** (Figure 2.9): This domain has changed markedly since its nadir in Survey 15, (May, 2006) it rose to unprecedented heights in Survey 18.1 (February 2008) and then plummeted for reasons probably linked to the falling stock market at this time. It has now returned to one of its highest levels.

It is important to note that the two domains of Safety and Future Security do not measure the same experience. While the mean scores between surveys show a high correlation (.69, Table A2.13), the within-survey correlation, using the scores of individuals (Table A2.17.1) is much lower (.43). It can also be noted that, while Safety remained high over Surveys 15-16 (Table A2.1), Future Security fell to be no different from Survey 1.

Why, then, did population satisfaction with Safety and Security suddenly rise to such heights? It is most unclear, but some co-indicators can be identified.

The reason for the trend of rising satisfaction with safety is uncertain. One possibility is that the continued presence of a ‘terrorist threat’ during this period has given people a heightened sense of safety because the threat has not materialised as an attack on Australian soil. This may give rise to feelings that the anti-terrorist measures, so evident at airports and in the media, are effective. This brings to consciousness a domain of life that is normally of little real consequence to most Australians, and so they have increased positive regard for their safety, instead of the more neutral feelings they held before the threat was evident.
It may also be fuelled by perceptions of competence in the military and the police to deal with difficult situations. In terms of the military, Australian troops are playing an increasingly active role as peace-keepers within the Pacific region, with troops deployed in New Guinea, the Solomon Islands, and East Timore. The Australian police have uncovered terrorist threats and, working with other authorities, successfully prevented a recurrence of the Sydney ‘race riots’ of November 2005. There is also increasing evidence of Islamic integration within Australia and, perhaps therefore, a sense that potential threats are being effectively managed.
How satisfied are you with the Economic Situation in Australia?

Figure 2.14: Satisfaction with Economic Situation in Australia

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Fires and floods
- j = Stock market collapse
- k = Labor Government Elected
- l = Stock market recovery

<table>
<thead>
<tr>
<th>Survey Date</th>
<th>Major Events Preceding Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>51 Apr 2001</td>
<td>S1 Apr 2001</td>
</tr>
<tr>
<td>52 Sep 2001</td>
<td>S2 Sept 2001</td>
</tr>
<tr>
<td>53 Mar 2002</td>
<td>S3 Mar 2002</td>
</tr>
<tr>
<td>54 Aug 2002</td>
<td>S4 Aug 2002</td>
</tr>
<tr>
<td>55 Nov 2002</td>
<td>S5 Nov 2002</td>
</tr>
<tr>
<td>56 Mar 2003</td>
<td>S6 Mar 2003</td>
</tr>
<tr>
<td>57 Jun 2003</td>
<td>S7 Jun 2003</td>
</tr>
<tr>
<td>59 Nov 2003</td>
<td>S9 Nov 2003</td>
</tr>
<tr>
<td>60 Feb 2004</td>
<td>S10 Feb 2004</td>
</tr>
<tr>
<td>61 May 2004</td>
<td>S11 May 2004</td>
</tr>
<tr>
<td>62 Aug 2004</td>
<td>S12 Aug 2004</td>
</tr>
<tr>
<td>63 May 2005</td>
<td>S13 May 2005</td>
</tr>
<tr>
<td>64 Oct 2005</td>
<td>S14 Oct 2005</td>
</tr>
<tr>
<td>65 May 2006</td>
<td>S15 May 2006</td>
</tr>
<tr>
<td>69 May 2008</td>
<td>S19 May 2008</td>
</tr>
<tr>
<td>70 Oct 2008</td>
<td>S20 Oct 2008</td>
</tr>
<tr>
<td>71 May 2009</td>
<td>S21 May 2009</td>
</tr>
<tr>
<td>72 Sep 2009</td>
<td>S22 Sep 2009</td>
</tr>
<tr>
<td>73 Apr 2010</td>
<td>S23 Apr 2010</td>
</tr>
</tbody>
</table>
“How satisfied are you with the Economic Situation in Australia?”

Satisfaction with the economic situation has fallen by a significant -1.5 points since Survey 22 and is now at 65.0 points. It is now back to the same level it has been for much of the period of these surveys, between about 64-68 points. This is the most volatile domain. The range of values is 14.9 points, being between April 2001 (S1:53.6) and October 2007 (S18: 70.9 points).

**Historical:** This domain rose significantly from its baseline (S1) immediately following September 11 (S2) and again six months later (S3). This was followed by a sustained and gradual rise up to Survey 18. It then showed a precipitous 12.4 point fall over the 12 month period including Survey 19 (April 2008) and Survey 21 (May, 2009). The reason is almost certainly tied to the major fall in the stock market over this period. It then staged a dramatic recovery back to its normal level.

The domains of Economic Situation and Business in Australia showed an almost continuous rise over the six-year period of these surveys from 2001 to 2007. This run ended in October 2007 with both domains posting significant falls (Economic situation -8.5 points and Business -2.2 points). These may have been influenced by rising interest rates or by popular perceptions of Labor governments in general as poor economic managers. The stock-market collapse in 2008 further enhanced this loss of satisfaction. The turn-around between October 2008 (S20) and May 2009 (S21) may have been initiated by the Government’s various measures to stimulate the economy, most particularly the $900 one-off cash payments to tax-payers and school-age children in March/April 2009. It has been sustained by the evident economic recovery.
How satisfied are you with the state of the Natural Environment in Australia?

![Graph showing satisfaction with the state of the Natural Environment in Australia over time.](image)

**Key:**
- **a** = September 11
- **b** = Bali Bombing
- **c** = Pre-Iraq War
- **d** = Hussein Deposed
- **e** = Athens Olympics
- **f** = Asian Tsunami
- **g** = Second Bali Bombing
- **h** = New IR Laws
- **i** = Labor Government Elected
- **j** = Stock market collapse
- **k** = Fires and floods
- **l** = Stock market recovery

**Figure 2.15:** Satisfaction with State of the Natural Environment in Australia
“How satisfied are you with your state of the Natural Environment in Australia?”

Satisfaction with the state of the environment has risen by a significant 2.9 points since the last survey and is now at 64.1 points. This is the highest level yet recorded. The range is 5.4 points between October 2006 (S16:55.8) and September 2009 (S22:61.2).

**Historical:** It fell by a dramatic 3.1 points between Survey 15 to Survey 16 and remained significantly below its value at Survey 1 at least six months, up to Survey 17. Then returned to be no different from Survey 1 once again.

This is the only domain to have fallen significantly below the level of Survey 1 values in any survey. Prior to Survey 16 the domain was very stable, fluctuating by only 3.0 points over the entire time-series. While the satisfaction with the natural environment has, on occasion, moved to be significantly higher than Survey 1, the reason is not clear but probably reflects general increases and decreases in the Index overall, rather than anything directly attributable to the environment.

In this context of stability, the fall of 3.1 points at Survey 16 is both remarkable and attributable. In the period since the previous survey Al Gore’s film ‘An Inconvenient Truth’ had been released and widely discussed in Australia. Moreover, in the few months prior to Survey 16 the media had repeatedly featured ‘global warming’ and the various doomsday scenarios. Thus it appears that this negative publicity has changed people’s perception of the degree to which they feel satisfied with the natural environment.

This decreased level of satisfaction is interesting for two reasons. First, it is one of the few times we have been able to link a change in a particular domain to a national phenomenon (negative publicity). Second, it reinforces the separate performance of objective and subjective variables. The actual state of the natural environment had not changed discernibly between Survey 15 and Survey 16.

It is also interesting that this lower satisfaction lasted somewhere between 6-12 months. People then generally adapted to the negative information and it lost the power to influence their satisfaction with the environment.

The sudden decrease in satisfaction with the natural environment, that occurred towards the end of 2006, was sustained over just two surveys (Survey 16 and Survey 17) conducted six months apart. By the following survey in November 2007, satisfaction had returned to its original level, and this has now been sustained. These results attest to the speed of adaptation by the population to continuous negative publicity. During the period of this recovery in satisfaction with the natural environment, the actual natural environment has continued to deteriorate with the continuation of the drought in Australia and the inexorable rise in global warming.
Section 2 Personal and National Wellbeing Over Time continued

How satisfied are you with Social Conditions in Australia?

Figure 2.16: Satisfaction with Social Conditions in Australia

Key:
- a = September 11
- b = Bali Bombing
- c = Pre-Iraq War
- d = Hussein Deposed
- e = Athens Olympics
- f = Asian Tsunami
- g = Second Bali Bombing
- h = New IR Laws
- i = Labor Government Elected
- j = Stock market collapse
- k = Fires and floods
- l = Stock market recovery

Introduction of new anti-union Industrial relations laws

Survey Date:
- S1 Apr 2001
- S2 Apr 2001
- S3 May 2001
- S4 Sep 2001
- S5 Oct 2001
- S6 Mar 2002
- S7 Jun 2002
- S8 Aug 2002
- S9 Nov 2002
- S10 Feb 2003
- S11 May 2003
- S12 Aug 2003
- S13 May 2004
- S14 Oct 2004
- S15 Mar 2005
- S16 Aug 2005
- S17 Oct 2005
- S18 Apr 2006
- S19 Oct 2006
- S20 May 2007
- S21 Sep 2007
- S22 Apr 2008
- S23 Apr 2009
- S24 Apr 2010
- S25 Apr 2011
- S26 Apr 2012
- S27 Apr 2013
- S28 Apr 2014
- S29 Apr 2015
- S30 Apr 2016
- S31 Apr 2017
- S32 Apr 2018
- S33 Apr 2019
- S34 Apr 2020

Strength of satisfaction
- Maximum = 65.7
- Current = 65.7
- Minimum = 59.3

Major events preceding survey

Introduction of new anti-union Industrial relations laws

Figure 2.16: Satisfaction with Social Conditions in Australia
“How satisfied are you with Social Conditions in Australia?”

Satisfaction with social conditions has risen a significant 1.8 points over the past six months and is now at its highest level yet recorded. The range of values is 4.6 points between April 2001 (S1:59.3) and September 2009 (S22:63.9).

**Historical:** Looking over the whole record, the rise in satisfaction with social conditions, evident following September 11 (S2), was sustained over the next two years (S9), after which it fell back to be no different from Survey 1. Then, at the time of the Olympics, it rose to its record high and reached this level again at Survey 14. If the falls from Survey 14 to Survey 16 reflected the new Industrial Relations laws that came into effect shortly before Survey 15, this effect has now dissipated.
How satisfied are you with the Government in Australia

Maximum = 61.5
Current = 54.6
Minimum = 52.6

Survey Date

Major events preceding survey

Key:

a = September 11
b = Bali Bombing
c = Pre-Iraq War
d = Hussein Deposed
e = Athens Olympics
f = Asian Tsunami
g = Second Bali Bombing
h = New IR Laws
i = Labor Government Elected
j = Stock market collapse
k = Fires and floods
l = Stock market recovery

Liberal Government re-elected
November 2001
Liberal Government re-elected
October 2004
Labor Government elected
November 2007

Figure 2.17: Satisfaction with Government in Australia
“How satisfied are you with Government in Australia?”

Satisfaction with Government has fallen by a significant -4.6 points over the past six months and is now at 54.6 points. It now approximates the average level recorded for the Howard Government.

**Historical:** Satisfaction with Government rose a significant 2.1 points between Surveys 17 to 18, and a further 5.4 points between Surveys 18 and 19. This took the total rise from April 2007 to April 2008 to 7.5 points. It recorded its lowest level at Survey 16 (52.6 points) and is currently about 7 points above this earlier level. The 2.7 point fall over the 18 month period from Survey 13 to Survey 16 is significant.

Satisfaction with Government appears to rise in times of national threat. If this is correct, it explains the elevated satisfaction with Government in September 2001 (S2) as a direct result of the September 11 attacks. A similar, but more muted rise is evident in the Bali bombing (S5) survey, and again following the overthrow of Hussein (S7). The most obvious explanation for the September 11 (S2) and Bali (S5) rise is that the perception of external threat causes satisfaction with Government (authority) to increase.

The pre-Iraq war situation (S6) was different. While it constituted a threat to Australia in so far as there were fears of Weapons of Mass Destruction being unleashed in Iraq and perhaps elsewhere, Australian troops were committed to fight in the front-line. This involvement divided the nation, with 23% in favour and 53% opposed to the war (Report 6.0). Perhaps because of this division, the rise in satisfaction with Government did not materialise. Moreover, the subsequent rise at S7 may represent an increased satisfaction for a quite different set of reasons, which involve relief at no deaths among the Australian troops and the bolstered American alliance.

It is interesting that none of these rises associated with external threat are sustained over more than three months and that the substantial rise in national wellbeing occasioned by the Olympics was not reflected in Satisfaction with Government.

The rise following Survey 16 may be linked to the election of a new leader of the opposition (Labor) party in December 2006 and the general feeling at that time that a change of government was due. This was followed in November 2007 with the election of the Labor Government and a significant rise in satisfaction with Government that was sustained over two years. The range of values is 8.9 points between October 2006 (S16:52.6) and April 2008 (S19:61.5). The honeymoon period for the Labor Government is now over.
Figure 2.18: Satisfaction with Business in Australia
“How satisfied are you with Business in Australia?”

Satisfaction with Business has risen by a significant 1.5 points since Survey 22 and is now at 65.4 points, which is its highest level. The range of values is 10.0 points between September 2001 (S2:55.4) and April 2010 (S23:65.4 points).

**Historical:** Satisfaction with both Business and the economy may have increased following September 11 because the doomsayers were proved wrong. The attacks did not, as has been widely predicted, drive the global economy into recession. Moreover, the Australian economy has performed better than expected over the entire post-September 11 period.
National Security

How satisfied are you with National Security in Australia

Figure 2.19: Satisfaction with National Security

Survey Date
Major events preceding survey
Strength of satisfaction

Key:

a = September 11
b = Bali Bombing
c = Pre-Iraq War
d = Hussein Deposed
e = Athens Olympics
f = Asian Tsunami
g = Second Bali Bombing
h = New IR Laws
i = Labor Government Elected
j = Stock market collapse
k = Fires and floods
l = Stock market recovery

Strength of satisfaction:
Maximum = 70.9
Current = 68.1
Minimum = 57.3
Satisfaction with national security has fallen by a significant 1.3 points since Survey 22 and is now at 68.1 points. It remains at one of its highest levels. It is interesting to note that this high level has been maintained despite the surge in ‘boat people’ arriving as illegal immigrants in Australian waters. While these events may remind Australians that our borders are not completely secure, they do not seem to impact on the sense of national security. The range of values is 13.6 points between September 2001 (S2: 57.3) and April 2008 (S19: 70.9).

**Historical:** The dramatic rise of 4.6 points from Survey 2 to Survey 7 probably reflects the September 11 induced low point followed by the strengthened American alliance and the lack of terrorist events in Australia. However, this has now been eclipsed by the 6.4 point rise over the 18 month period between October 2006 (Survey 16) and April 2008 (Survey 19). It is notable that this rise parallels the rise in Satisfaction with Government. However, over all of the surveys, the mean scores of these two national domains are not significantly correlated with one another (r = .43, Table A2.13).

National Security: This domain fell by a significant 2.9 points between April 2008 (S19) and May 2009 (S21). It now appears to be returning to its former high level. This leaves the question of why there was such a surge in satisfaction with this domain over the period 2006-2009 (Figure 2.19). There are two obvious contenders as:

(a) The diminishing threat from terrorism. Over the period 2006-2008 the proportion of our sample expecting a terrorist attack ‘in the near future’ dropped from around 60% to 40% and this level may represent a stable baseline (Figure 2.23). However, this does not explain the rise in satisfaction with national security following the First Bali Bombing (Figure 2.19).

(b) The arrival of illegal immigrants by boat. This really started to become a significant problem for Australia around the turn of the millenium. Whereas in 1997/8 only 157 people arrived by boat, by 1999/2000 the number had swelled to 4,175. The Howard Government responded to this threat by instigating increasingly harsh penalties for arrivals, which were internationally publicised and were associated with a reduced number of new arrivals. The Labor Government, elected in November 2007, was known to have a more humane attitude, conditions in Sri Lanka and Afghanistan continued to deteriorate, and new arrivals increased once again. The rise in the number of boat people became most evident only during the past year or so. While this could, perhaps be partially responsible for the fall in National Security from October 2008 to May 2009, it obviously cannot explain the current rise in National Security.
### 2.6. Life in Australia

![Satisfaction with Life in Australia](image)

**How satisfied are you with Life in Australia?**

<table>
<thead>
<tr>
<th>Major events preceding survey</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>a = September 11</td>
<td>d = Hussein Deposed</td>
</tr>
<tr>
<td>b = Bali Bombing</td>
<td>e = Athens Olympics</td>
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</tr>
<tr>
<td>h = New IR Laws</td>
<td>k = Fires and floods</td>
</tr>
<tr>
<td>j = Labor Government Elected</td>
<td>l = Stock market recovery</td>
</tr>
</tbody>
</table>

**Figure 2.20: Satisfaction with Life in Australia**

- **Maximum** = 85.0
- **Current** = 84.3
- **Minimum** = 70.0
“How satisfied are you with Life in Australia?”

Satisfaction with life in Australia has not statistically changed since the last survey. It remains at a high level. This may well be due to the fact that Australia has weathered the economic storm so well and people are contrasting Australia with other countries that have not been so lucky. The range of scores is 15.2% between April 2001 (S1:69.7) and May 2009 (S20:85.3).

**Historical:** This domain rose consistently from April 2001 (S1) to March 2002 (S3) and has since remained fairly stable and high. The major change occurred between S2 and S3, when the strength of satisfaction rose by 10.9%. Since then it has remained very substantially higher than it was at Survey 1.

Of all the personal and national measures, ‘Life in Australia’ has shown the strangest behaviour. Over the first three surveys it increased by around 15 points and has since remained quite stable. The reason for this early rise between April 2001 and March 2002 is not known. However, it is notable that it involves both Survey 1 and Survey 2, thereby giving credibility to the initial survey.

Life in Australia: This has been the most volatile domain, showing and extraordinary 15 point rise from 2001 to 2002. Since then it has stabilised at about 82-85 points, and it remains at one of the highest levels yet recorded. This may be due to the common perception that Australia has weathered the economic storm so well and people are contrasting Australia with other countries that have not been so lucky.
Summary of changes in National Wellbeing over the past 6 months

The overall National Wellbeing Index has remained steady over this period, but this is not true of the domains, most of which have changed significantly. Three domains have risen and three fallen.

The rising domains are:

**Environment (+2.9 points)**: This rise continues a recent change over the past year, taking this domain to new heights. The cause is certainly not the actual state of the environment, which has been steadily worsening over this period. There are at least two possible reasons for this rise as:

(a) The breaking of the drought in much of NSW and Victoria;

(b) A positive reaction to relief due to the publicity given to the people who deny the human origin of climate change.

**Social Conditions (+1.8 points)**: This also continues a year-long rise, and may reflect the positive economic conditions and low-level of union action.

**Business (+1.5 points)**: This also continues a year-long rise and probably reflects confidence in the economic recovery.

The falling domains are:

**Government (-4.6 points)**: This is a sudden end to the high levels of satisfaction with Government that have characterized the past two years since the Labor Government was elected. This new level reflects the average sustained by the Howard Government. A number of recent issues may have contributed to this fall including the fiasco of the home insulation program, reneging on a core-election promise related to greenhouse-gas emission control, and the increasing number of illegal immigrants arriving by boat. It may also be the case that after two years the honeymoon period had run its course. It is interesting to observe that this change in satisfaction appears to be quite specifically directed to the Government itself, rather than being a reflection of some other malaise in the country. Not only does the fall in satisfaction greatly exceed all other domains but the two other national domains that have also fallen remain at normal (Economic situation) or high (National security) levels. Moreover, neither the Personal nor the National Wellbeing Index have changed significantly over the past six-month period.

**Economic Situation (-1.5 points)**: This domain remains at average levels.

**National Security (-1.3 points)**: This domain remains at very high levels.
2.7. **Australian Wellbeing Summary**

A summary of the changes in population wellbeing is shown in Figure 2.21 below. In this figure, the vertical lines show the generic normal range for the Personal Wellbeing Index and for each domain. The red cross indicates the strength of satisfaction in Survey 23.

**Figure 2.21: Survey 23 PWI and Domains vs. Generic Normal Ranges Based on Survey Mean Scores (N=22)**

It can be seen that the Personal Wellbeing Index lies close to the top of its normal range, as do also the domains of Standard, Safety, Community and Future Security. The other domains lie close to their normal mean except Health, which is very low for this survey.

This differential domain responses are important in indicating that the changes are not occurring at random. This is evidenced by those domains that do not change, such as the Health and Achieving domains in the Personal Wellbeing Index. Other domains seem to change in a manner over which shows at least the possibility of causality. Satisfaction with Standard of Living and Future Security have conspicuously risen during the period of economic recovery.

**Figure 2.22: Survey 23 NWI and Domains vs. Generic Normal Ranges Based on Survey Mean Scores**

The National Wellbeing Index lies at the top of its normal range. All domains lie in the top-half of their normal range except environment, which is above-range, and economic situation and Government which are mid-range or low.
Satisfaction with Government appears to rise at times of perceived national threat, at the prospect of a change in leadership, and during the first six months of office during the ‘Honeymoon’ period. Satisfaction with the Natural Environment fell over a period of one year with the public perception of climate change as a reality. However, over the past year the ‘climate change denialists’ have gained ascendancy in the media, and this may well be the reason for the current rise in satisfaction. If people now believe there is no threat, they may view the natural environment in a more positive light through a contrast effect.

Other, speculative comments on these domain changes are as follows:

**Threat Events**

International events that are either nationally threatening (terrorist threats or war) can enhance personal and national wellbeing. Moreover, they involve much the same set of domains as:

Enhanced satisfaction with material conditions (Standard of Living, Social Conditions, Natural Environment, Business and Economy). The purpose of this, terms of a threat response, may be to encouraging satisfaction with the living environment that requires defending. The alternative would be to leave the living environment for somewhere else, but for most people this is not a realistic option due to issues of personal investment.

Enhanced satisfaction with the other people who share the environment under threat (personal relationships and feeling connected to the community) and with the leaders of these people (Government). The increased strength of these connections means people feel they are not alone in facing the threat and that they have worthy leaders.

Enhanced satisfaction with general issues of safety (personal safety, future security, national security). If the source of threat is to be approached and met, with the aim of defending the living environment, then it is necessary that people have confidence in their own survival as a consequence of such action.

**Domain exceptions**

While most of the 13 domains are accounted for in the above description, one domain (Health) shows no reliable change as a consequence of these national and international events. There are various possible reasons for the stability of this domain as follows:

1. The sense of personal health could be under competing forces. In a threat situation, it could be adaptive to have a heightened sense of one’s own powers to defend oneself, and this would be expected to cause an increased satisfaction with health. However, perceived health may be more chronically under threat than the other domains. Practically everybody has some source of health concern and, thus, the homeostatic devices that maintain health satisfaction are already working over time, such that another source of external threat has little additional impact.

2. The perceptions of personal health may be driven more by comparisons with other people than the other domains. That is, the most obvious systematic changes in health, on a population basis, are due to age. Thus, given such obvious differences between age-groups, perhaps people judge their health against their age-cohort rather than using an internal standard. The result of such comparisons, if this is true, would be a dominant reference for health satisfaction (age-cohort) that would attenuate the influence of other external influences.
Nationally Enhancing Events

While both threat and enhancement events caused wellbeing to rise, the cause of each rise should be different. The preceding description is based on a sociobiological interpretation of an adaptive response to threat. The rise in wellbeing due to nationally enhancing events has no such adaptive links and is more simply explained in the personal pride of being part of a winning team.

There are likely to be two major differences between these two event types. First, the threat event should be longer lasting. It may be adaptive to maintain a sense of threat for a long period after the event, thereby maintaining the alertness to detect a new source of harm and the resources to deal with it. Enhancement events, on the other hand, are likely to be far more transitory. The fact of the team’s success is soon submerged within the caldron of current life realities. This is consistent with the data shown in Report 12.0 at the time of the Athens Olympics.

The second difference is in the domains that are responsive. The Olympic enhancement event had no effect on the following domains:

Health: This may be for the reasons already described.
Achieving: The grand achievements of others is a double-edge sword. The reflected glory is tempered by an upward-comparison against lower personal achievement.
Natural environment: This is not a domain that involves connection to other people.
Government: The achievements are those of the athletes, not of the leaders.

Regional disasters

Survey 20.1 was conducted at the tail-end of savage bushfires in Victoria that claimed 173 lives. This regional disaster generated outpourings of grief and sympathy from across Australia, and was associated with a significant rise in the Personal Wellbeing Index. This was led most conspicuously by the domain of Community but all other personal domains showed an upward trend.

Prospect of a change in Government

Survey 17 was held at a time when a new and credible contender for the position of Prime Minister had appeared and satisfaction with Government in the preceding survey showed an all-time low. The polls at this time showed a real sense that the control of the Government could change to the Labor party at the forthcoming election later in the year. This represented the strongest potential challenge to the Government since its time in office, which spans the series of these surveys from Survey 1 to Survey 17.

It is notable that the domains most positively affected over this period were been safety and security. It is possible that this is a consequence of the voters having the prospect of two good candidates. One is the steady and reliable incumbent and the other a well-equipped challenger who offers the prospect of limited change. That the population would be well served by any election outcome and may be a source of security.

Conclusion

While this explanatory account is stronger in some respects than in others, and suffers from the inevitable post-hoc nature of the arguments, it does appear to have some degree of cohesion. But perhaps the most important observation is at least some of the significant changes that have been observed, and the lack of change in some domains, clearly indicates that these patterns are not due to random variation.
2.8. **Likelihood of a Terrorist Attack**

The above figure indicates the percentage of respondents in each survey (since Survey 9) who think that a terrorist attack in Australia is likely in the near future. As markers of such attacks, the first Bali Bombing occurred prior to Survey 5 (November 2002), which was one year prior to the start of this record. The Second Bali Bombing occurred in October 2005, just before Survey 14.

The data for Survey 22 were collected over the period of the September 11 anniversary. At that time it was assumed that the 12.9% increase in the number of people who considered an attack likely over the period survey was a ‘September 11’ effect, indicating how perceptions can be changed by exposure to relevant information. However, now that the Survey 23 results are similar, an alternative reason must be sought.

Figure 2.23 shows data that are restricted to the people who consider a terrorist attack likely (e.g. the 51.5% who said ‘Yes’ in Survey 22). They are asked to rate the strength of their belief that such an attack will occur (Table A2.1). The mean scores representing the strength of their belief for each survey are shown.

As can be seen, the strength of this belief has changed little over the past three years but remains higher than it had been over the period February 2004 to May 2005.
The following observations can be made:

1. **Proportion of people expecting an attack.**

   One year following the first Bombing (Survey 9) 64.1% of the sample thought an attack to be likely. One year following the second bombing (Survey 16) the percentage of such people (61.9) is 2.2% lower. Moreover, 2 years after each event the figures are 59.7% (Survey 12) and 49.4% (Survey 18) a difference of 10.3%. It is evident that more people are adapting faster to the second bombing in terms of its perceived threat to Australian security. This is as expected. The most recent may be anomalous and need to be confirmed by the next survey.

2. **The strength of belief shows the reverse pattern (Figure 2.24).** One year following the first Bombing (Survey 9) the mean strength of belief was 64.6 points. This is 3.3 points less than the equivalent period (Survey 16) following the second Bombing. The same pattern is shown two years after each event (Survey 12: 62.6 points vs. Survey 18: 66.5 points) with a 3.9 point higher estimation after the second bombing. Thus, at each of these time intervals, the second bombing produced fewer people who regarded a future attack likely but with stronger convictions.

   The explanation for these changes may lie with the threshold belief strength people require to answer ‘Yes’. That is, there is likely to be some minimal level of belief strength (say 7/10) that causes people to say ‘Yes’ an attack is likely.

   Then, assuming that the average strength of belief will decrease over time, fewer people will meet the threshold for a ‘Yes’ response, and so the proportion of the sample responding in this way will progressively decrease. However, since the ‘Yes’ responders have a supra-threshold strength of belief, the belief strength within this group will decrease only marginally over time.

   While this explanation is consistent with the data pattern following each attack, it does not explain why the threshold for the ‘Yes’ response is higher after the Second Bali Bombing. This change, however, could be explained through adaptation. That is, repeated exposure makes the organism less responsive.

   ![Figure 2.25: Likelihood of terrorist attack (combined survey 9-15)](image)

   Using the PWI mean scores in Table A2.3, the correlation between the perceived likelihood of a terrorist attack and personal wellbeing is -.82 (p<.01). This is the statistic that would normally be reported, but it is quite misleading. It implies that there is a simple, progressive decrease in SWB as the perceived likelihood of an attack increases. This is quite wrong as can be shown by some additional calculations and thought.
The correlation of .82 shows that 66.6% of the variance in SWB can be explained by perceived attack probability. However, this estimate is exquisitely sensitive to the extreme values as follows.

Only 0.5% of the sample have answered ‘Yes’ on this basis of an estimated attack probability of 1/10. Their inclusion is problematic. Not only do most people require a higher level of probability before answering ‘Yes’ but their Personal Wellbeing Index of 77.4 points is also anomalous, being 1.1 points above the normative range. Thus, their inclusion powerfully influences the correlation. If the correlation calculation includes all probabilities 1-8, the $r = -.606$ (36.7% explained variance) whereas if the calculation omits those extreme values and includes the probabilities 2-8, then $r = -.345$ (11.9% explained variance). Thus, an alternative interpretation of these results is as follows.

People who rate the probability as 1/10 are anomalous and should be removed from the analysis. Then, over the range of probability from 2/10 to 8/10 personal wellbeing does not reliably change. Thus, for most of the probability range, believing there is a probability of a terrorist attack has no measurable effect on wellbeing. This changes at a probability estimate of 9 or 10/10. These people who consider an attack very likely comprise 15.8% of the sample and are mainly responsible for the high overall linear correlation. If the correlation calculation includes values 2-10 then $r = .742$ explaining 55.1% of the variance.

It is therefore evident that the -.74 correlation has been generated by the distributional extremes and cannot be validly used to indicate a progressive negative influence of one variable upon the other. This is perfectly consistent with homeostasis theory, such that personal wellbeing is being actively managed. Only at the extreme levels of perceived probability is there evidence of a damaging influence of attack beliefs on wellbeing.

Figure 2.26: Likelihood of Attack x Personal Wellbeing Index Showing 2SD Below the Mean

Figure 2.26 shows the two-standard deviation range of the Personal Wellbeing Index for each level of attack likelihood using the scores of individuals (Table A2.3). The interpretation of this figure is as follows:

1. The 50 point level marks the transition from positive satisfaction (above) to negative dissatisfaction (below). Since we propose on the basis of homeostatic theory, that people normally have a positive level of SWB, all values should normally lie above 50 points.

2. The mean and standard deviation of the Personal Wellbeing Index has been calculated for each sub-group representing a level of perceived likelihood of an attack. The lower margin of the distribution for each sub-group has been calculated as the mean – (2 x SD). To be consistent with (1) above, this lower margin should lie above 50 points.
3. It can be seen that, for likelihood estimations ranging from 1 (10%) to 8 (80%), the lower margin of each distribution approximates 50 points.

4. The actual value for the Personal Wellbeing Index is determined by the following two influences:

   (a) A genetically determined set-point range. On average this set point is 75 and the magnitude of the range is about 12 points. Ranges can be set higher or lower than this but will be (approximately) equally distributed throughout the likelihood sub-groups.

   (b) The probability of someone, at any moment, providing a response that represents the top or the bottom of their range depends on their current state. That is, normal fluctuations in their current experience will influence Personal Wellbeing within a 12 point range.

5. Within any survey there will be a small group of people who are being unusually positively influenced by their circumstances. These people will not only record a high Personal Wellbeing Index but will also, as a consequence, be more likely to record a low probability of attack. It is well known that one consequence of high SWB is the perception of low levels of risk. Thus, this group will record a higher-than-normal level of SWB.

6. At higher levels of attack probability the cognitive assessment of the probability does not systematically influence the distribution of set-point ranges or the likelihood that people are operating at the top or bottom of their range. As a consequence, the distribution of SWB is normal between the attack probabilities of 20-80%.

7. At a perceived probability of 90% the influences mentioned before are at work as:

   (a) People who are under the influence of a sad experience will be more likely to perceive a high risk of attack. They will, as a consequence, tend to cluster in the high risk categories.

   (b) Because of their recent experience they are likely to provide a Personal Wellbeing Index that represents the bottom of their set-point range.

   (c) Some of these people will be suffering homeostatic-defeat. This is unlikely to be caused by the perception of an imminent attack. More likely, their prior depressed condition causes them to regard the risk of an attack, and no doubt other negative events, as high.

In order to investigate these predictions, Figure 2.27 has been prepared.
Figure 2.27: Personal Wellbeing Index x Attack Probability x Life Events

Figure 2.27 depicts the Personal Wellbeing Index of people characterized in two separate ways (Table A2.7). First by whether they have recently experienced a happy or sad event (or no event). Second by their perceived probability of a terrorist attack. Values < 20% probability are omitted since the number of cases is too small to be reliable.

To take the ‘no event’ group first, it can be seen that all levels of attack probability failed to shift Personal Wellbeing Index much beyond the normal range. Thus, even when people perceived an attack as 100% certain their Personal Wellbeing Index remained only just below the normal range. This surely indicates that such perceptions are not able, of themselves, to defeat SWB homeostasis. The total range of values for the Personal Wellbeing Index for this group is 2.3 points.

People who recall having recently experienced a happy event lie at the top or above the normal Personal Wellbeing Index range. The range of values spans 4.5 percentage points, from 79.9 to 75.4. This may represent people with high set-points who are pre-disposed to recall happy events and to optimistically regard the probability of a terrorist attack as low. The perception of a high risk of attack may take their SWB towards the bottom of their set-point range, but this level still represents the top of the normal range for the general population.

The range of Personal Wellbeing Index values for the happy event group (4.4 points) is double the range of 2.4 points for the no-event group. The interpretation that is offered is that these two groups are constitutionally different in terms of their relative set-point ranges. The ‘happy event’ group are more likely to perceive things positively due to their high set point. However, the effect of the perceived probability of a terrorist to decrease SWB within each group’s set-point-ranges is the same for both.

The ‘sad event’ group exhibits a less regular pattern than the other two. However, the pattern has two interesting characteristics as:

(a) The range of values is 6.4 points, which is higher than the other two groups. However, there is something strange about the PWI value of 72.8 points at 50% probability. This value lies well above the trend-line for the other mean scores. If this value is ignored then the range becomes 5.2 points, which is similar to the happy event group.

(b) The value of Personal Wellbeing Index does not systematically decrease with increasing attack probability. Rather it does not reliably change between probability estimates of 20 to 80/100. Then, at higher levels of probability, the Personal Wellbeing Index falls.
This is highly relevant because we have argued elsewhere, on theoretical and empirical grounds, that 70 points represents the level that is most vigorously defended by the homeostatic system. Thus, the interpretation of these ‘sad event’ data is as follows. These people have naturally low set-point-ranges. This gives them a less positive view of their life which, in turn, makes them more likely to recall sad events and to perceive threat. As a consequence, their homeostatic system is working harder to maintain SWB and at a perceived threat of 90-100% the system fails. At a mean Personal Wellbeing Index of 66.4 points a higher-than-normal proportion of the people will be experiencing symptoms of depression.

2.8.1. Satisfaction with Safety and Terrorist Attack Probability

As a point of validation, it would be expected that there would be some degree of correlation between changes between surveys in satisfaction with safety and the perceived probability of a terrorist attack. These data are presented in Table A2.9. With only 15 survey mean scores to work with the one-tail criterion for significance is \( r = .48 \). Thus, the actual correlations with safety (percentage who think an attack likely = -.63; strength of belief = -.12). Only the former is significant. There are several reasons for this as:

1. The fear of a terrorist attack is not the only factor influencing the population’s sense of safety.
2. Only a minority of people with strong convictions that an attack is highly likely and with a low set-point will be likely to drive this relationship (see Figure 2.27).

It is also notable that the correlation between the percentage of the sample who think an attack is likely and the strength of their belief is .29. This is convergent validation for the two measures between surveys.

2.9. State Comparisons

2.9.1. State/Territory Comparisons using Cumulative Data

Table A2.10 shows the mean Personal Wellbeing Index score for each State and Territory using the combined data (N = 45,905). The results are shown below.

![State/Territory Comparisons using Combined Data (Personal Wellbeing Index)](image-url)
Statistical tests of significance show that TAS, VIC, SA, QLD > NSW, WA. However, it is important to note that these differences, while significant due to the large number of cases, are very small, with the maximum difference between States of only 1.4 points.

An important perspective onto these results is that the means for all states and territories fall well within the normal range (73.6 – 76.5 points). Moreover, the full range of these results is 1.2 points.

### 2.9.2. State/Territory Comparisons Over Time

![State x Grouped Surveys (Personal Wellbeing Index)](chart.png)

Figure 2.29: State x Grouped Surveys (Personal Wellbeing Index)

The comparisons in Figure 2.25.2 are derived from Tables A2.11 and A2.12. Apart from the first survey which stands alone, all other consecutive surveys have been combined. This is necessary in order to have sufficient numbers of respondents in each analytic cell to stabilize the patterns of change. Unfortunately the numbers of respondents from Tasmania, ACT and NT are too small to be reliable, and so have not been included. These small numbers come about because our sampling for each survey is based on a proportional basis relative to the geographic distribution of population across Australia.

What is evident from this pattern of change is that the five States were not different from one another at the time of the first survey. Following this, however, they can be roughly separated into three groups as follows:

Victoria, Queensland and South Australia all showed a significant rise following September 11 (Survey 2) and maintained much the same elevated pattern up to Surveys 12/13. In other words, the Personal Wellbeing of people in these states was elevated above normal between September 2001 and May 2005, a period of about 6.5 years.

New South Wales also shows a significant rise that parallels VIC, QLD and SA, but the rise is more muted such that, over this 6.5 year period, the NSW values generally lie below the level of the other three states.

Western Australia shows a pattern of change that is different from the other states. It shows no significant elevation following September 11 and the only significant change is at Surveys 12/13 when population wellbeing rises to be the same level as the other states. The general rise in wellbeing at this time coincided with the Athens Olympic Games during Survey 12. In the period S19/20, WA has shown a 2.39 point fall. This is far larger than the other states all of which have changed by < 1 percentage point.
From Surveys 12/13 to Surveys 16/17 the wellbeing in all states went down and, once again, there was no difference in wellbeing between the states. Then, at Surveys 18.1/18 VIC>NSW and WA once again.

Conclusions

Our preferred explanation for this general rise in wellbeing following September 11 is that the sense of an external threat caused people to become more socially cohesive. This elevated their satisfaction with the domains of Relationships, Community connectedness and Safety. Satisfaction with Standard of Living also rose. This sense of threat was then maintained by the First Bali Bombing and the start of the war with Iraq. It is not clear why wellbeing in WA failed to also rise at the time of these events. Possible explanations might be:

(a) That, due to the relative isolation of WA, the sense of threat was more real than in the rest of Australia, and a sense of personal fear counteracted the general trend evident elsewhere.

(b) That the explosive economic growth in WA, and the massive influx of new workers and their families, is disrupting the sense of social cohesion.

2.10. Composition of the Personal Wellbeing Index

Tables A2.17 and A2.18 show the regression of 7 and 8 domains respectively on Life as a Whole. This is the criterion test for a domain – that to be included in the Personal Wellbeing Index it must make a unique and significant contribution to Life as a Whole.

It can be seen that in Survey 23 (Table A2.17) all of the original seven domains except Safety make a significant unique contribution. This pattern is maintained for the combined surveys using either the 7-item (Table A2.17.1) or 8-item versions (A2.18.1).

According to Homeostasis Theory, there are two sources of variance causing the domains to share variance with life as a whole as follows:

(a) Homeostatically Protected Mood is an individual difference that causes all of these variables to share variance. This is because the different set-points for individuals within a sample exert a systematic level of positive mood which, in turn, influences the resting level of satisfaction with all of the variables.

(b) The people who have a level of SWB < 60 comprise many who are experiencing homeostatic defeat. In such cases, the control of their satisfaction level has shifted from homeostasis (HPMood) to the agent causing homeostatic defeat. When this condition is experienced, it will exert a stronger source of systematic variance than HPMood.

2.11. Normative Data

Two forms of normative data can be generated as follows:

(a) The scores of individuals can be combined. The variance of the resulting statistic will indicate the degree of variation between individuals and between surveys.

(b) The mean scores of surveys can be combined. The variance from this procedure indicates the extent to which each measure varies between surveys and the range indicates the normative band of values for the mean of any general population group.
2.11.1. Normative Data from Individual Scores

The distribution of values on the 0-10 response scale is given below for the Personal Wellbeing Index using the aggregate data from all surveys S10-S21 (N=29,111, Table A2.5).

![Figure 2.30: Frequency Distribution of Personal Wellbeing Index](image)

The important feature of this Figure is the highly regular normal distribution that involves all of the intermediate scale values. This is strong evidence to support the use of a 0-10 scale. It is also notable that a total of 4.4% of the combined sample fall below 50 points. The value of 50 points is critical in that scores below this are indicative of a high risk for depression.

This is confirmed in the next Figure that shows the frequency of responses to the single item ‘How satisfied are you with your life as a whole?’ (Table A2.4, N=47,758).

![Figure 2.31: Frequency Distribution of ‘Life as a Whole’](image)

As can be seen, the distribution is again highly regular, again reinforcing the reliability of the 0-10 scale. The proportion of people scoring <50 is also very similar to the proportion derived from the Personal Wellbeing Index.

**Personal Wellbeing Index and Domains (individual scores)**

Normative ranges calculated from the sources of individuals are taken from Table A2.21. Each range represents two standard deviations on each side of the mean. It can be seen that while the range of the Personal Wellbeing Index almost exactly matches the range of positive wellbeing (50-100), the range...
for the domains consistently exceed these boundaries. The fact that the Personal Wellbeing Index almost perfectly covers the range of positive wellbeing in an empirical-theoretical match. The highest degree of variability is given by Relationships, which extends over 84.5 percentage points.

These normative values are highly stable, with the variation being no more than 0.1 percentage point from the calculations using the previous data set.

**National Wellbeing Index and Domains (individual scores)**

These values also come from Table A2.21.

These values are all highly stable. The ranges are generally larger than for personal wellbeing and the largest is for Government which is 97.4 percentage points. It is notable that the range of the National Wellbeing Index (58.4 percentage points) is larger than that of the Personal Index (49.6). Moreover, the National Wellbeing Index range does not cover the top 9.2% of the positive range, and the extension of the range magnitude has mainly occurred from the bottom. This is consistent with the idea that distal (national) life aspects are under less homeostatic control, and more cognitive control, than proximal (personal) life aspects (Cummins, et al., 2003).
**Section 2 Personal and National Wellbeing Over Time continued**

**Life as a Whole and Life in Australia (individual scores)**

![Graph showing the norms for Life as a Whole and Life in Australia](image)

Figure 2.34: Normative Range for Life as a Whole and Life in Australia

The ranges and mean scores of these two variables are very similar (Table A2.19).

This does not fit with theory. Here, the distal variable (life in Australia: 82.2) is being rated as higher than the proximal variable (Life as a whole: 77.6), which is against theory. However, it was not always so as the Figure below shows.

![Graph showing Life as a Whole vs. Life in Australia: Survey Means](image)

Figure 2.35: Life as a Whole vs. Life in Australia: Survey Means

It is evident that the ordering of the means was consistent with proximal-distal theory prior to, and immediately following, September 11. Then, six months following September 11 (S3), satisfaction with life in Australia increased by an astonishing 11.0 percentage points and it has remained within a 3.6 point range ever since (81.3 to 84.9 points).

It seems that the September 11 terrorist attacks caused Australians to think more positively about their country. It also caused them to think more positively about themselves, but the change here is less marked, as homeostasis would predict.

Interestingly, however, these two distributions are related to one another. A correlation coefficient applied to the mean scores of each variable across the surveys yields $r=.66$, $p<.001$ (Table A2.13). Thus, when the population as a whole think more positively about themselves, they also think more positively about life in Australia, but the latter is more responsive in measurement terms.
Table A2.6 shows the distribution of Life as a Whole matched to the distribution of the Personal Wellbeing Index, and Table A2.8 shows the distribution of the Personal Wellbeing Index matched to the distribution of life as a whole. The correlation between these two measures is quite modest using individual scores (r = .65) which means they share only 42.3% of their variance. There are many more people scoring very low on life as a whole than on the Personal Wellbeing Index.

2.11.2. Normative Data using Survey Mean Scores as Data (N=23)

Personal Wellbeing Index and Domains (mean scores as data: N=23)

![Graph showing normative range for Group Data: Personal Wellbeing Mean Scores (N=23)]

Since these ranges are based on the use of survey mean scores as data, they reflect the degree of variability in each measure from one survey to the next. As can be seen from Figure 2.36 and Table A2.22, the ranges show modest variation with a 13.6% difference between the top of the highest range (Safety: 81.8) to the bottom of the lowest range (Future Security: 68.2). The ranges also differ in magnitude, from the largest (Safety: 6.5 points) to the smallest (Health: 2.5 points). These ranges are used to judge whether the domain scores produced by the population sub-groups, described later in this report, lie above or below the normal range.

Of particular importance in this regard are the values for the Personal Wellbeing Index. The overall mean (75.1) is remarkably close to the predicted mean for Western populations (75.0). However, the range of 73.7 to 76.6 is just 3.0 percentage points, which is far smaller than the 70 to 80 range that has been previously estimated from the data reported from general reviews of the literature. This figure of 3.0 points is the most accurate estimate of the true range of population values yet published due to the use of consistent methodology between the surveys.

It is quite remarkable to be able to predict the population mean score on subjective wellbeing with 95% confidence to within 3.0 percentage points.
The normative range for the National Wellbeing Index (Table A2.22) calculated from survey mean scores is 5.3 percentage points. This is higher than the range for the Personal Wellbeing Index (3.0 points). This indicates that the National Wellbeing Index is more volatile between surveys than the Personal Wellbeing Index, as predicted by homeostatic theory.

The domains differ widely in the extent to which they have varied across the surveys. The most volatile is Economic Situation, with a range that spans 15.6 percentage points. The smallest is Social Condition (5.2), which makes sense since this domain is highly stable over most of the surveys.

Both the mean score and the normative range of ‘Life in Australia’ are higher than for ‘Life as a Whole’ (Table A2.20). The $\times2$ standard deviation range of 14.1 percentage points indicates that this variable is much more volatile between surveys than is Life as a Whole (range 3.4 percentage points). This is consistent with homeostasis theory.

The correlation matrix showing the relationship between the survey mean scores for the Personal Wellbeing Index, National Wellbeing Index and their constituent domains is shown in Table A2.13. The crucial information in understanding this table is that the correlations do not involve raw data from individuals within surveys. If this was the case then all of the values would be positive, reflecting the power of the SWB set-point to influence all domains in the same direction.
Instead, the data used for these correlations are the mean scores from surveys. Thus, the correlations are a measure of the extent to which these sample mean scores vary together between surveys. The following observations pertain:

1. In terms of the Personal Wellbeing Index domains (top-left quadrant of Table A2.13), the correlations are mainly positive and significant, showing that the domains tend to move together between surveys. This is interesting in showing that there must exist some common force for change in domain satisfaction that is experienced at the level of the whole sample. This could be sampling bias, such as if the samples differed markedly in the ratio to high to low income households, or it could be some common experiential variable, such as national elation at Olympic success. These possibilities require further analysis for their resolution.

Some domains, on the other hand, are showing a high level of independent variation between surveys. These include Health, where only 1/6 of the correlations with other domains is significant, and Achieving and Safety, with only 3/6 significant. All other domains have 4/6 significant correlations with other Personal Wellbeing Index domains.

It is interesting to note that, even though Health is generally unrelated to the movement of the other domains, it is strongly tied to Achieving in Life (r = .57), sharing 32.5% of the variance. It is not clear why this link occurs.

2. The extent of co-variation between the National Wellbeing Index domains is generally much weaker than for the Personal Wellbeing Index domains. This is predicted from homeostasis theory on the basis that they refer to more distal targets, and so contain less core affect. Indeed, all six domains contain just one significant link to another domain.

Of these significant correlations, one of the most interesting is the negative relationship (-.52) between satisfaction with government and satisfaction with the economic situation in Australia.
Dot Point Summary for the Wellbeing of Australians

1. The Personal Wellbeing Index has fallen by a non-significant 0.2 points since Survey 22. Its current value of 76.0 remains one of the highest it has been over the nine years of these surveys. This may be due to part to the sense of relief at Australia having avoided a major depression.

### Major events preceding survey

<table>
<thead>
<tr>
<th>Survey Date</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Apr 2001</td>
<td>a = September 11</td>
</tr>
<tr>
<td>S2 Sep 2001</td>
<td>b = Bali Bombing</td>
</tr>
<tr>
<td>S3 Mar 2002</td>
<td>c = Pre-Iraq War</td>
</tr>
<tr>
<td>S4 Aug 2002</td>
<td>d = Hussein Deposed</td>
</tr>
<tr>
<td>S5 Nov 2002</td>
<td>e = Athens Olympics</td>
</tr>
<tr>
<td>S6 Mar 2003</td>
<td>f = Asian Tsunami</td>
</tr>
<tr>
<td>S7 Jun 2003</td>
<td>g = Second Bali Bombing</td>
</tr>
<tr>
<td>S8 Aug 2003</td>
<td>h = New IR Laws</td>
</tr>
<tr>
<td>S9 Nov 2003</td>
<td>i = Labor Government Elected</td>
</tr>
<tr>
<td>S10 Feb 2004</td>
<td>j = Stock market collapse</td>
</tr>
<tr>
<td>S11 May 2004</td>
<td>k = Fires and floods</td>
</tr>
<tr>
<td>S12 Aug 2004</td>
<td>l = Stock market recovery</td>
</tr>
<tr>
<td>S13 May 2005</td>
<td></td>
</tr>
<tr>
<td>S14 Oct 2005</td>
<td></td>
</tr>
<tr>
<td>S15 May 2006</td>
<td></td>
</tr>
<tr>
<td>S16 Oct 2006</td>
<td></td>
</tr>
<tr>
<td>S17 Apr 2007</td>
<td></td>
</tr>
<tr>
<td>S18 Oct 2007</td>
<td></td>
</tr>
<tr>
<td>S19 Apr 2008</td>
<td></td>
</tr>
<tr>
<td>S20 Oct 2008</td>
<td></td>
</tr>
<tr>
<td>S21 Feb 2009</td>
<td></td>
</tr>
<tr>
<td>S22 Feb 2009</td>
<td></td>
</tr>
<tr>
<td>S23 Apr 2009</td>
<td></td>
</tr>
<tr>
<td>S24 Apr 2010</td>
<td></td>
</tr>
</tbody>
</table>

**Special Surveys:**
- **18.1:** Three months after the change in Government and following several consecutive interest-rate rises.
- **19.1:** Following the Victoria Bush Fires in which 173 people died.

**Note:** In this and subsequent figures, the shaded (blue) area shows the generic normal range of survey means scores for the measure in question (Table A2.22). These blue areas represent two standard deviations around the mean using survey mean scores as data.
Section 2 Personal and National Wellbeing Over Time continued

2. The National Wellbeing Index has fallen by a non-significant 0.2 points since April 2010. It remains at one of its highest level yet recorded.

3. Satisfaction with Relationships has risen by a significant 1.8 points since Survey 22, and is now at its highest level yet recorded.
4. Satisfaction with Safety has fallen by a significant 2.0 points since Survey 22. It is now close to its average level across all surveys.

5. Satisfaction with the Economic Situation in Australia has fallen by a significant 1.5 points since Survey 22 and is now back to the same level it was before the economic crisis.
Section 2 Personal and National Wellbeing Over Time continued

6. Satisfaction with the Natural Environment has risen by a significant 2.9 points since Survey 22 and is now at its highest level yet recorded. It is testimony to the lack of connection between the objective indicators of environmental degradation and subjective perceptions. The current rise is likely a consequence of signs that the drought is breaking and the dominance of climate-change sceptics in the media.
7. Satisfaction with Government in Australia has fallen by a massive 4.6 points since Survey 22. It now approximates the average level recorded for the Howard government.

8. Satisfaction with business in Australia has risen by 1.5 points since Survey 22 and is now at its highest level yet recorded.
9. People who regard the probability of a terrorist attack as 9 or 10/10 (15.5% of the total sample) have lower than normal wellbeing).

10. Using combined data, five states and territories have a level of wellbeing that does not differ from one another, and all are higher than both NSW and WA. However, all levels lie within the normal range.
3. Household Income

We ask: “I will now give you a number of categories for household income. Can you please give me an idea of your household’s total annual income before tax. Please stop me when I say your household income category.”

Table 3.1: Income Frequency (Survey 23)

<table>
<thead>
<tr>
<th>Cumulative (Survey 7-22)</th>
<th>Survey 23</th>
<th>% of respondents to this question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $15,000</td>
<td>3218</td>
<td>11.7</td>
</tr>
<tr>
<td>$15,000 to $30,000</td>
<td>5079</td>
<td>18.5</td>
</tr>
<tr>
<td>$31,000 to $60,000</td>
<td>7515</td>
<td>27.3</td>
</tr>
<tr>
<td>$61,000 to $100,000</td>
<td>6147</td>
<td>22.3</td>
</tr>
<tr>
<td>$101,000 to $150,000</td>
<td>4436</td>
<td>16.1</td>
</tr>
<tr>
<td>$151,000 to $250,000</td>
<td>857</td>
<td>3.1</td>
</tr>
<tr>
<td>$251,000 to $500,000</td>
<td>205</td>
<td>0.7</td>
</tr>
<tr>
<td>$500,000 or more</td>
<td>60</td>
<td>0.2</td>
</tr>
<tr>
<td>Total</td>
<td>27,517</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The data in Table 3.1 are derived from Tables A3.1 and A3.2. The three categories $151-250K, $250-500K and $500K+ were only introduced in Survey 17. It can be seen that the sample for Survey 23 is wealthier than the running average. This trend started being noticeable from Survey 16. The reason is the continued rise in wages. However, since these rises do not reflect increased buying power, due to the matching rise in the cost of living, they are unlikely to systematically bias the whole sample over time. It does mean that people who remain in the lowest income categories have progressively less purchasing power. This should be a progressively negative influence on their wellbeing over time.

As background to the data in this chapter, annual gross incomes are currently as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>&lt;$15,000</th>
<th>$15,000-$30,000</th>
<th>$31,000-$60,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age pension (September 2009) - single</td>
<td>14,815</td>
<td>24,747</td>
<td></td>
</tr>
<tr>
<td>Age pension (September 2009) - couple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth allowance (September 2009) (16-24y) - Single, away from home</td>
<td>9,656</td>
<td>12,652</td>
<td></td>
</tr>
<tr>
<td>Youth allowance (September 2009) - Single, with children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth allowance (September 2009) - Partnered with children</td>
<td>21,206</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment ('New Start') - Single, with no children</td>
<td>11,786</td>
<td>12,750</td>
<td></td>
</tr>
<tr>
<td>Unemployment ('New Start') - Single, with children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment ('New Start') - Partnered</td>
<td>21,268</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal: Minimum full-time wage (July 2009) [$14.31/hr]</td>
<td>27,152</td>
<td>36,400</td>
<td></td>
</tr>
<tr>
<td>Federal: Median full-time wage (July 2006)</td>
<td></td>
<td>65,364</td>
<td></td>
</tr>
<tr>
<td>Federal: Average full-time adult cash earnings (August 2008)</td>
<td></td>
<td>61,100</td>
<td></td>
</tr>
</tbody>
</table>

From the above it is notable that the only people within the social security system who have an income <$15,000 are single people. Other people in this income category may be poorly-paid people in family businesses or other low-income, self-employed people.

When people live with another adult, household income from social security moves into the next income bracket of $15,000-$30,000. This is highly significant for the interpretation of results between these first two categories, since the presence of a partner has a substantial effect to facilitate wellbeing (see Chapter 7). Thus, determining the cause of the below-normal wellbeing experienced by people with household incomes <$15,000 is confounded by (at least) the lack of a partner, disability, unemployment, and single parenthood.

In this light it is somewhat surprising that SWB only rises by about two percentage points as income changes from <$15K to $15-30K (see Figure 3.10).
The income category of $15-30K contains a very mixed group. It includes people on all types of welfare payment who are living with at least one other person. It also includes people living alone who are full-time employed on a low wage. It is not until the income bracket $31-60K that most people on welfare are excluded. Even here, however, it is quite possible for someone on welfare to be living with another person who has a higher income, or to be living in a shared household with other adults.

The influence of these various factors can only be determined by the break-down of data into sub-groups. This is being progressively achieved within this chapter as the combined data-set becomes large enough to support the reliable analysis of these sub-groups.

**Chapter construction**

The results for Household Income is presented in three sections. The first compares Survey 23 against normative ranges generated from Household Income data. That is, income specific normative ranges are generated by using the mean scores of each income group over past surveys as data. This section therefore allows the Survey 22 data to be compared with the average of similar past data.

The second section described each Household Income group averaged across all surveys compared to the generic normal range. For example, all of the $15-30K respondents over all surveys are combined to yield a single group. The mean of this group is then compared to the generic normal range for groups. This comparison shows how, on average, each income group compares against population averages.

The third section compares the average income groups within demographic characteristics.

### 3.1. Survey 22 vs. Income-Specific Normal Range

#### 3.1.1. Personal Wellbeing Index

The data below are taken from Table A3.1 (Survey 22) and A3.35-37 (normative data). The intention of this figure is to show the Personal Wellbeing Index in Survey 22 compared to income-specific normal ranges. The highest income group is missing due to unreliable Ns.

![Figure 3.1: Survey 23 vs Income-Specific Normal Range (Personal Wellbeing Index)](image)

All income groups are within their normal range. The $>$500,000 group is excluded from this figure because the Ns within each survey are too small to be reliable.
3.1.2. **Domain-Level Profile**

These results come from Table A3.1 (Survey 23) and Tables A3.35-A3.37 for the income group specific normal ranges.

![Figure 3.2: $15K in Survey 23 vs. $15K Normal Ranges](image)

For Survey 23 the mean lies very low in its normal range. This is reflective of most domains, especially Health which lies well below its range. However, two domains buck this trend as Standard, which lies slightly above its range, and Relationships, which lies around the average for its domain.

![Figure 3.3: $15-30K in Survey 23 vs. $15-30K Normal Ranges](image)

In sharp contrast to the <$15K group, the $15-30K group have a Personal Wellbeing Index higher than the income-specific normal range for Survey 23. However, their domain profile is quite similar to the <$15K group in being very high for Standard and very low for Health.
Section 3: Household Income continued

Figure 3.4: $31-60K in Survey 23 vs. $31-60K Normal Ranges

All values are within their own income-specific normal range. Health is rather low.

Figure 3.5: $61-$100K in Survey 23 vs. $61-$100K Normal Ranges

All values are within their own income-specific normal range. Standard and Achieving are rather high.
Most values lie close to the bottom of their income-specific normal range. The exceptions are relationships and future security. Relative to their income-specific normal range, this is the worst-performing income group for Survey 23 and constitute 20.1% of the total sample.

All values lie comfortably within their income-specific normal range.
Section 3: Household Income continued

Figure 3.8: $251-$500K in Survey 23 vs. $251-$500K Normal Ranges

All values are comfortably within their income-specific normal range.

No figure is presented for the higher (>500K) group since the number of respondents in the category in each survey is <10 and so the calculations based on the data from individual surveys are not reliable.

3.1.3. Domain Sensitivity to Income

Statistical comparisons between income levels for all Personal Wellbeing Index domains for Survey 23 are reported in Table A3.1, for individual surveys in Table A3.3, and for the combined data set of Surveys 7-23 in Table A3.4. The following observations can be made:

a. While Table A3.4 shows that the personal domains in Survey 23 generally follow the same pattern as the Index, there are a few exceptions. First, Community shows no sensitivity to household income even though it is sensitive to differences between surveys (see left-margin ANOVA Table A3.3). It is interesting that this is the least personalised (the most distal) of the personal domains and so least likely to be affected by personal demographics.

b. It is notable that, among the Personal Wellbeing Index domains, only Achieving shows a significant income x survey interaction (left side of Table A3.3). This was caused by the name change described in Chapter 2 and Section 2.3 below.

c. It might reasonably be expected that Standard of Living would be the domain most sensitive to wealth, but the results are highly variable between surveys (Table A3.4) with no consistently higher sensitivity to levels of income than some other domains. However, the cell numbers in the higher income ranges are not sufficient to ensure reliable comparisons within surveys.

Much more reliable are the cumulative data in Table A3.4. These do clearly show that the domain showing the highest sensitivity to very high income is Standard of Living. This is as might be expected.

d. In terms of the other domains, again relying on the cumulative data (Table A3.4) it is apparent that their sensitivity to income is approximately the same. All of them show their last increment at $101-150K. That is, from these data, there is no reliable increase in the domains (including Standard of Living) beyond a gross household income of about $100,000 per annum.
e. While the within-survey comparisons shown in Table A3.3 are highly variable from one survey to the next, their combined results can be used to generate a useful index of relative domain sensitivity to income. This has been done by observing the number of significant income group comparisons within each domain of Table A3.3 and cumulating those across all surveys from Survey 7 to the present. For example, the total number of significant comparisons within Survey 23 for Standard of Living is 8. These results are as follows:

<table>
<thead>
<tr>
<th>Domain</th>
<th>Total</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>192</td>
<td>31.9</td>
</tr>
<tr>
<td>Health</td>
<td>133</td>
<td>21.4</td>
</tr>
<tr>
<td>Achieve</td>
<td>86</td>
<td>13.8</td>
</tr>
<tr>
<td>Future Security</td>
<td>80</td>
<td>12.9</td>
</tr>
<tr>
<td>Relationships</td>
<td>74</td>
<td>11.9</td>
</tr>
<tr>
<td>Safety</td>
<td>54</td>
<td>8.7</td>
</tr>
<tr>
<td>Community</td>
<td>2</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>621</td>
<td>100.0</td>
</tr>
</tbody>
</table>

This is interesting in demonstrating an enormous degree of difference between the domains in the extent to which they are influenced by household income. Over half of the influence (53.3%) is provided by the two domains of Standard of Living and Health. The contribution of the others is generally unreliable, being present in some surveys but not others except for Community which is insensitive to income.

It is notable that ‘community’ is insensitive to income.

f. Another way to observe the domains as differentially sensitive to income, is to study the degree of change in satisfaction from low to high income.

The actual percentage point differences in the Personal Wellbeing Index domains between the highest income group with reliable data ($251-500K) and lowest (<$15K) income groups within each domain using combined data (Table A3.4) are shown below.

![Figure 3.9: The Influence of Household Income to create differences within the Personal Domains (combined data)](image)

This is a logical sequence, in that the top three domains can be more easily ‘bought’ than the three lowest. Standard of Living is most obviously related to income, while good medical care can also be purchased, and people may gain a sense of future security by having a household income that is higher than average. On the other hand, safety is hard to purchase. People who feel unsafe may not be able to purchase arrangements that make them feel safe. And connection to others, either via relationships or community, requires personal effort rather than wealth.
These results provide important information for interventions designed to enhance wellbeing. Very often such interventions concentrate on the inter-personal domains, and whether these domains are amenable to change through such interventions, when they are not very amenable to change via wealth, is an interesting issue.

The second point worth noting is that this domain order shows a significant relationship with the contribution of each domain to ‘Satisfaction with Life as a Whole’ (Table A2.17.1).

<table>
<thead>
<tr>
<th>Points change with income</th>
<th>Predicting Life as a Whole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>β</td>
</tr>
<tr>
<td>($=&lt;15K to $251-500)</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>14.7</td>
</tr>
<tr>
<td>Health</td>
<td>12.8</td>
</tr>
<tr>
<td>Future</td>
<td>10.5</td>
</tr>
<tr>
<td>Achieving</td>
<td>9.8</td>
</tr>
<tr>
<td>Safety</td>
<td>8.0</td>
</tr>
<tr>
<td>Relationships</td>
<td>8.2</td>
</tr>
<tr>
<td>Community</td>
<td>1.2</td>
</tr>
</tbody>
</table>

The points change come from Figure 3.9.

The Spearman Rank Order coefficient between these two rankings is .625, which is just non-significant (< .05 = .715). This indicates the possibility that the sensitivity of the domains to household income is related to the contribution made by the individual domains to ‘life as a whole’.

### 3.2. Income Group Averages vs. Generic Normal Ranges

#### 3.2.1. Personal Wellbeing Index

The relationship between income and the Personal Wellbeing Index is given in Table A3.1 for Survey 23, for comparative surveys in Table A3.3, and combined surveys in Table A3.4. The range of the Personal Wellbeing Index across income groups is 7.2 percentage points (Figure 3.10).
Section 3: Household Income continued

The * in Figure 3.10 denote a significant increment in wellbeing from the previous level of income. There are four such increments covering the four income levels above <$15,000. The final increment is at $101-150K where wellbeing is higher than it was at $61-100K (Table A3.4). To some extent these determinations of significance are a function of the number of respondents and it is possible that as numbers accumulate in the highest category it will become significantly higher than the $101-150K group. However, the current increment from $101-150 to $151-250 of 0.7 points is not large enough to become significant, and the estimates for the two higher groups are unreliable due to low N. From these current data we must conclude that income loses its ability to reliably raise wellbeing beyond a household income of $100-150K. In the current sample from Survey 23, 33.3% of households have an income that exceeds $100,000 (Table A3.2).

These calculations clearly indicate the diminishing returns with increasing household income. At the lowest income level an additional $15,000 buys 2.5 percentage points of wellbeing, or $6,000 per point. From the $15-30K baseline, it takes an additional $30,000 ($31-60K) to buy 1.5 percentage points, or $20,000 per point. The complete calculation of the cost of a percentage-point rise in the Personal Wellbeing Index at each income level as shown in Table 3.2.

Table 3.3: The Cost of Each PWI Increment

<table>
<thead>
<tr>
<th>Income ($)</th>
<th>$ increment</th>
<th>Points gained</th>
<th>$ per point</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15 to 15-30</td>
<td>15,000</td>
<td>2.5</td>
<td>6,000</td>
</tr>
<tr>
<td>15-30 to 31-60</td>
<td>30,000</td>
<td>1.5</td>
<td>20,000</td>
</tr>
<tr>
<td>31-60 to 61-100</td>
<td>40,000</td>
<td>1.4</td>
<td>28,571</td>
</tr>
<tr>
<td>61-100 to 101-150</td>
<td>50,000</td>
<td>1.4</td>
<td>35,714</td>
</tr>
<tr>
<td>101-150 to 151-250</td>
<td>100,000</td>
<td>0.7</td>
<td>200,000</td>
</tr>
<tr>
<td>151-250 to 251-500</td>
<td>250,000</td>
<td>1.6</td>
<td>147,056</td>
</tr>
</tbody>
</table>

The relationship between income and wellbeing shows the strongest connection at the lowest levels of income. Thus, a rise of $6,000 in gross household income is sufficient to raise average wellbeing by one percentage point. To some extent, however, this also reflects the different composition of the household in terms of disability and unemployment, as previously outlined.

Beyond an income of $15-30, the cost of an additional percentage point of wellbeing is around $20,000-$35,000 up to a gross household income of $61-$100K. Beyond this the cost becomes very much higher by a factor of 7 to 10. However, these high-income figures remain approximations due to the small number of values in these analytic cells.

Figure 3.11: The cost of purchasing a percentage point of personal wellbeing
Two further observations can be made. First, while the extent of significance between income increments (Table A3.35) is N dependent, and therefore likely to change as more people are added to each income category, there is no reason to expect this to change the calculations of percentage-point costings above. These rely only on the reliability of each Personal Wellbeing Index mean score. Here the numbers are large enough to be reliable.

The second observation is that these data confirm, as a reasonable approximation, the upper limit of about 81 percentage points as the maximum for group data Figure 3.10. This is consistent with many other calculations in this report and elsewhere.

It is also notable, however, that the income groups reflect more than simply differences in household income. As shown in Table 3.1, the category of <$15,000 is very over-represented by single people on pensions and people who are unemployed. Since living alone and unemployment are both associated with low SWB, especially for males, these are additional and powerful influences on the low SWB of the <$15,000 group.

3.2.2. Domain Averages vs Generic Normal Ranges for Domains

The data below are taken from Table A3.4 (cumulative means) and Tables A2.21 (generic normative data). The figures that follow show the domains compared with.

![Figure 3.12: Standard of Living vs Generic Normal Range for Standard Satisfaction with Standard of Living](image)

Satisfaction with Standard of Living does not reach normal levels until gross household income reaches $31-60K. This is generally the pattern for the other domains also. The rise in satisfaction with income is pretty linear.

![Figure 3.13: Health vs Generic Normal Range for Health](image)
Most notable is the ceiling reached at $101-150K, and the decreased health satisfaction at the highest income. This decrease may be a function of older age within this group.

The gradual rise in Satisfaction with Achieving continues into the highest income group.

The rise in Satisfaction with Relationships reaches a plateau at $101-150K, but then rises again at $500+K. It appears that very high income people find it easy to make good friends.
Section 3: Household Income continued

The incremental rise in Safety satisfaction does not continue into the highest income group.

All values lie within the normal range and there is no statistical difference between income groups. Satisfaction with Community, does not vary with income.

Satisfaction with Future Security continues to increase with income into the highest income group.
Section 3: Household Income continued

**Summary**

In general, the domains show evidence of a plateau in rising satisfaction after reaching about $101-150K. However, most domains also continue to show an incremental increase in satisfaction including the highest income group. The domains that fail to show this increase are Health, Safety and Community.

### 3.2.3. National Wellbeing Index

The National Wellbeing Index is relatively insensitive to income within each survey. In Survey 23 there are 3 significant differences between the income brackets (Table A3.1) compared with 12 for the Personal Wellbeing Index.

When the sample sizes are increased by combining data across surveys (Table A3.5) then differences emerge between income brackets in a predictable manner, with higher incomes producing significantly higher National Wellbeing Index. However, the National Wellbeing Index remains less sensitive to income change than the Personal Wellbeing Index (Table A3.4). The greater sensitivity of the Personal Wellbeing Index to income is in part a function of a larger difference between income categories (<$15K to $251-500K: PWI = 10.2 vs. NWI = 6.3) but is also a function of smaller variance (e.g. $101-150K: PWI = 9.6 vs NWI = 13.0).

The direction of this difference is counterintuitive according to homeostatic theory. Since the Personal Wellbeing Index is more saturated with HPMood, it should be less sensitive to the effects of income.

One possible explanation is that some people in the lower income brackets are experiencing homeostatic defeat. This, then, is causing the group mean to fall and the variance to rise. If this is so, the differences in variance between the Personal Wellbeing Index and National Wellbeing Index income groups should diminish with higher income. This is tested in Figure 3.19.

![Figure 3.19: Standard Deviation x Income (PWI vs NWI)](image)

In fact, the trend is the opposite of that which is expected. The difference in variance between the two measures is lowest within the two lowest income categories. There is clearly no interaction and both measures have changing variance roughly in synchrony with one another.

These results leave a gap in understanding. While the greater sensitivity of the Personal Wellbeing Index can be explained statistically (larger differences between the group means and lower variance) it cannot be so readily explained theoretically.
3.2.4. National Wellbeing Domains

In terms of Survey 23 data alone, the national domains show a weak change with income, with lower satisfaction within the low income groups.

When the combined data are analysed (Table A3.5) Economic Situation and Business show the greatest income sensitivity between low-income groups as shown in Figure 3.20.

The pattern of change has the same level of sensitivity to income as the Personal Wellbeing Index, in that satisfaction rises up to $101-150K and then plateaus.

3.2.5. Terrorist Attack Probability

We asked people whether they thought there would be a terrorist attack in Australia, in the near future. Those who said yes were asked to rate the strength of their belief (Table A3.1).

In Survey 23, the percent of people who thought an attack likely is higher in the <$15K group, but no other differences are evident. The strength of belief does not differ significantly between the income groups.
3.3. Changes in Income Categories Over Time

3.3.1. Personal Wellbeing Index

There should be a systematic decrease in wellbeing within the lower income categories over time. This is because the margins of the categories are fixed yet incomes are constantly rising to counteract inflation. Thus there should be fewer people in these low income categories over time (assuming constant demographics, such as unemployment rates). Moreover, the people who continue to populate these categories should show progressively lower wellbeing because their household income, on average, has less purchasing power (e.g. $15,000 had more purchasing power in 2001 than it does in 2009).

Table A3.6 shows these results. The income categories >$60,000 have changed at least once over the survey series as we have adjusted to increasing the number of categories at the top of the income range. This is disruptive to the pattern because each change has expanded the top of the category in question, with the addition to that category of people with higher income than the category previously allowed. The lowest three income categories, however, have remained unchanged.

The first observation from Table A3.6 is that the number of people, from each survey, populating these three lowest income categories has been progressively decreasing. There are now approximately half as many people in each category as there were when these surveys started. While this is logical for the lowest category, it is not for the other two categories.

The rate of inflation and the indexation of wages over the nine years of these surveys can not account for these results. Assume inflation at an average about 3% per annum, then a salary would have increased through simple indexation by around $1,000 for a $30,000 salary. This should do no more than to cause an equal number of people to enter and leave the $31-60K category as people move into the bracket from the $51-30K category and move out into the $61-100K category. But this is not evident. Instead, the number of people in the $31-60K category has decreased from around 500 in the first three surveys to around 350 more recently.

This has implications for comparing the overall results of these surveys over time. If the sample is becoming progressively richer, with relatively more purchasing power, then the wellbeing of the sample should rise over time. And that is what we have found Figure 2.1.

Within income categories, however, wellbeing due to the influence of income should be constant between surveys, because the people populating the category have experienced rising income even though their income remains at a low level. This is tested in the figure below.
Table A3.6 provides these results. It is evident that while the wellbeing of the $31-60K people has remained steady, there is a marked decline in the wellbeing of the people with a household income <$15K. This could be due to two kinds of influence. It could be due to the falling purchasing power of this lowest income bracket. It could also be due to the kinds of people who remain in this bracket as being particularly vulnerable people.

Insight into these two possibilities comes from the results already reported in Figure 3.2 which compares Survey 23 data with the $15K specific normative range. It is shown that Satisfaction with Standard of living is very close to its average value. Thus, the falling pattern in Figure 3.21 appears not to be driven by falling purchasing power. Rather, Figure 3.2 shows that the domain of Health is far lower than its cumulative average and Relationships is lower also. This suggests that the decreasing wellbeing in Figure 3.21 is the result of an increasing population of the <$15K income category comprising people who are medically and relationally comprised.

### 3.3.2. Changes Over Surveys Within Domains

Three domains are shown in Tables A3.7 to A3.7.2. These tables are in pairs, with the first showing the data from each survey, and the second grouping surveys within years. The second table in each pair is the most sensitive to change due to its larger N.

Standard (Tables A3.7 and A3.7.1) shows no systematic change over time. This may be due to the changing composition of the lowest income group masking change with high variance. Incomes within the other groups should be generally stable as some new members arrive from lower income brackets, while others leave to join higher income brackets. Thus, this average stability is achieved even though average incomes are constantly rising.

Health (Tables A3.7.1.1 and A3.7.1.2) shows no change over time in the lowest income group, but a significant trend of decreasing satisfaction in the next three income groups. There could be several possible reasons for this as:

1. People with poor health on welfare moving into higher income brackets. While this might be valid for the $15-30K, it would not be true for the $31-60K because the welfare payments are insufficient to reach this range.
2. People in the lower income ranges can buy less health support and services, so experiencing poorer health. Assuming incomes have kept in step with inflation this seems unlikely.
3. That they are lower in the income hierarchy. That is, whereas in 2001 some 20% of people were below the $15-30K group, in 2010 it is down to about 5%. This is speculative but people’s positions in work-place hierarchies is known to relate to health.

Relationships (Tables A3.7.2 to A3.7.2.1) shows a decreased satisfaction in all groups up to $61-100K. This could be due to more people with personal difficulties remaining in the <$15K group, and more single, separated and divorced people making-up the lower income groups. That is, people living with their partner are increasingly likely to have a gross household income that exceeds $60,000.
3.4. Demographics

3.4.1. Income and Gender

The gender distribution of income shows more females in the lower income groupings (Table A3.8). This is mainly a consequence of relative longevity. More females are retired and live in single-pension households.

In terms of Survey 23, both genders show the whole-sample pattern of rising Personal Wellbeing Index with income.

In terms of the combined data the gender differences are shown in Figure 3.22.

![Figure 3.22: Gender x Household Income (combined data)](image)

The shaded income categories indicate a significant gender difference. Females tend to have higher wellbeing at all incomes up to $101-150K. The shape of these slopes are similar. Both genders show a significant and progressive rise in Personal Wellbeing up to $101-150K. Thereafter, increased income provides no reliable increase in wellbeing for either gender. However, this lack of significance is more related to small N values than to the Personal Wellbeing Index mean scores, which continues to rise.

In summary, the higher wellbeing of females is evident only up to an income of $101-150K and both genders conform to the incremental wellbeing increase with rising income shown in Figure 3.10.
3.4.2. Income and Age

The age distribution of income is provided in Table A3.9 for Survey 23 and Table A3.10 for the combined survey data. These show a concentration of low income in the groups aged 66+ years. It can also be seen from the combined survey data that the most elderly group has the highest level of personal wellbeing despite having the lowest household income (Figure 3.22). This indicates a decreased reliance on money, as an external resource. These people have a level of personal wellbeing that is much more highly controlled by internal factors.

The following figure comprises the combined data taken from Table A3.10.

The most obvious feature of this figure is that low household income is seriously compromising the wellbeing of people aged 26-55. The value of 61.9 points at 36-45 years is extremely low and it is clear that these people are living in situations where personal wellbeing is being severely damaged by their life circumstances. The people in such households clearly require assistance.

It can also be seen that:
Section 3: Household Income continued

(a) The effects of low household income to reduce middle-age wellbeing is evident for the two lowest income groups. At an income of $31-60K wellbeing remains within the normal range for all ages.

(b) There is a clear rank-order of wellbeing that reflects household income. This is pretty well maintained at all ages but is most pronounced in the normal working age-range of 26-65 years.

3.4.2.1. Income x Age x Gender

These combined data are taken from Tables A3.11 (Males) and A3.12 (Females).

Figure 3.24: Income x Age x Gender (combined data)

In general it can be seen that the generally higher wellbeing of females is evident. However, there is a curious reversal in the low income groups aged 26-35 years in which females have lower wellbeing than males. This may be due to marital status with more females in this age group being sole parents. Certainly there are more females (N=73) than males (N=48) in this group. This requires further investigation, however the N is not sufficient to do so at this stage.
3.4.3. **Income and Household Composition**

Table A3.13 shows the results for Survey 23 and Table A3.14 shows the combined data, also presented in Figure 3.25. This shows that the general trend across household composition groups is for increased wellbeing with increased income, but some groups demonstrate this more markedly than others. These differences are caused by a combination of social support and financial demands.

![Chart showing income and household composition](chart.png)

Figure 3.25: Income x Household Composition: **Personal Wellbeing Index** (combined Surveys)

The results shown above make three strong points about the management of personal wellbeing as follows:

1. **Living only with a partner is consistently the best option for high wellbeing at all income levels.** If people live only with their partner, in the absence of children, their wellbeing consistently approximates the top of the normal range and varies only 4.4 percentage points across the entire income range. The power of the relationship to support wellbeing is concentrated within the couple.

2. **Having the support of a partner allows the wellbeing of parents living with their child to enter the normal range at an income of $31-60K.** Sole parents do not enter the normal range until they reach an income of $61,000 - $100,000.

This is an important finding because it indicates the crucial relevance of household composition, rather than simply the number of household members, on wellbeing. Economists frequently assume that increasing the number of household members puts increased pressure on household resources (true) which then exerts a parallel and negative influence on wellbeing (false). Clearly, were the economists’ position to hold, a sole parent would have higher wellbeing than a household that contained an additional adult. This is not what these data show.
The management of personal wellbeing is a function of stressors matched against resources. Income provides one form of resource, and social support provides another. If the relative advantage of the social support provided by another adult exceeds the financial demands required for their maintenance, then their presence will have an overall advantage in terms of wellbeing management. This is what has occurred, and a similar argument can be made in terms of the data on people who live alone. They have a lower level of wellbeing than the people who live only with their partner and their wellbeing does not enter the normal range until their income reaches $101-150.

The sensitivity of the living alone option to income has an important implication for the interpretation of the generally low wellbeing of people who live alone. It is apparent from these data that their level of wellbeing is unlikely to reflect some personality deficit, such as low levels of extraversion. Much more likely is that these people have achieved a level of resource, through an income of $101-150K that enables them to effectively buffer their wellbeing in the absence of a partner.

An alternative explanation is that this group of living alone, high income people, comprises a high proportion who have separated from their partner and who have high extraversion. This however, can be dismissed on two grounds. First, it is more likely that the low income groups would contain a greater proportion of people who have separated. This may occur either by income division following separation or the reliance of one partner on social security. The second reason is that people who have never married show the same sensitivity to rising income (Table A3.18).

### 3.4.3.1. Income x Household Composition x Gender

These results are shown for males in Table A3.15 and for females in Table A3.16.

![Figure 3.26: Income x Household Composition x Gender: Personal Wellbeing Index (combined Surveys)](image)

These data indicate higher female than male wellbeing in the lowest income group irrespective of whether they are living with a partner or not. For the people living with a partner, this difference becomes non-significant at higher incomes, whereas for people living alone the gender difference is maintained. It is also notable that while female live-alone wellbeing enters the normal range at $15-30K, males require four times as much income ($101-150K) to enter the normal range. This probably attests to the greater engagement of non-sexual relationships by single females than by single males.

### 3.4.3.2. Composition of the lowest income group: Household Composition x Age (26-55y)

These data are presented in Table A3.17. Several of these cells are too small to be reliable. However, the difference between those with and without a partner is marked. Within the 46-55y group the comparison between those living alone (58.8) and those with a partner (70.4) is 11.6 points. This is remarkable testimony to the power of relationships over wealth.
3.4.4. Income and Relationship Status

Table A3.18 shows both the results from Survey 23 and also the combined data. From the latter it can be seen that defacto generally lie lower than married, and the extent of difference is maximal at household incomes of $15,000 to $60,000. The other groups are also shown below.

Figure 3.27: Income x Relationship Status

This Figure 3.27 depicts well the separate forces of relationships and money to influence wellbeing. People who are married enter the normal range at the lowest level of income (<$15,000). People who are separated do not achieve this level even with an income of $101-150K. People who have never married enter the normal range at $101-150K, while people who have divorced do not enter the normal range even at this high income level.

What these results indicate is two routes to achieving a normative level of personal wellbeing. One is through relationships. If people are married they can achieve normative status even at the lowest level of household income. If, on the other hand, they do not have a partner, then the external resource of money is an alternative means of achieving normative status. In these comparative terms, the presence of a partner roughly equates to about $100,000 per year for people with no partner.

3.4.4.1. Income x Relationship Status x Gender

These data are available for males in Table A3.19 and for females in Table 3.20. Figure 3.28 below shows the combined data.
As expected, the generally higher wellbeing of females is evident throughout.

For the people who have divorced, those with the lowest income both genders have equivalently depressed wellbeing. However, the rising income advantages females far more than males. At $101-150K females have entered the normal range while males have not.

The data for Widows x Gender are shown in Figure 3.29 using results from Tables A3.19 and A3.20.

This shows the expected female advantage in wellbeing at incomes up to $31-60K. Many of these people from both genders would be living alone and this is likely a factor in the lower wellbeing of the males. However, the sudden reversal at $61-100K is unexpected. Perhaps more of the males in this income group have found another partner. This remains to be tested and, as yet, the numbers are too small to do this.

3.4.4.2. Composition of the lowest income group in terms of Relationship Status and Age

These data are provided in Table A3.21. It is quite surprising to find so many people who are Married (22.4%). A pension should take these people above the <$15K range (see Table 3.1). With the exception of the Married, 26-35 group, all other wellbeing values in this table are low, some of them very low.
3.4.5. **Income and Work Status**

These data are found in Table A3.22 for both Survey 22 and the combined results.  

Figure 3.30: **Income x Work Status** (combined data)

Figure 3.30 show that the most spectacular rise in wellbeing through income is for people who are unemployed. This wellbeing rises by 14.9 points from 60.1 at <$15K to 75.0 at $101-150K.  

The fact that fulltime retired have the highest personal wellbeing is a function of their age. However, it is notable that these people achieve normal or above-normal levels of wellbeing on low household incomes and that their wellbeing increases by only 7.4 points between <$15K and $151-250K.
3.4.5.1. Income x Work Status x Gender

These data come from Tables A3.23 and A3.24.

There is no reliable difference in the wellbeing of full-time employed males and females at any level of household income. This is not true, however, for people who are unemployed. Females have a higher wellbeing than males at all levels of household income.

3.4.6. Composition of the lowest income in terms of Age and Work Status

These results are in Table A3.25. Few cells contain enough respondents to be reliable. It is notable that 11.2% of this sub-group are full-time employed, yet earning $<15,000 per year. These people must be self-employed. While their wellbeing is low, it is some 15 points higher than people who are unemployed.
3.5. Regression of PWI Domains against Life as a Whole

Tables A3.26-A3.32 show the regressions of the seven Personal Wellbeing Index domains against ‘Satisfaction with Life as a Whole’ across the range of household income. A summary is provided in Table A3.33. The relative proportion of explained and unique variance is shown below:

![Figure 3.32: The Proportion of Unique and Shared Variance by Income](image)

As can be seen, both trend lines show a gradual increase in the proportion of explained variance up to $151-250K. This indicates that both sources of variance are sharing in the increasing ability of the domains to explain variance in Life as a Whole. Why this trend changes at $251-500K is not clear.

The first conclusion from this is that the Personal Wellbeing Index works well at all levels of household income. The second is that the domains progressively capture rather more unique than shared variance as household income rises. This is shown below where the figure shows unique/shared variance at each level of income.

![Figure 3.33: The Proportion of Unique/Shared Variance by Household Income](image)

Key: U/S = Unique variance divided by shared variance
This indicates that, as income rises, the domains play a larger role in explaining the total variance. This is consistent with the progressive release of domains from the influence of homeostatic failure due to inadequate income.

In order to investigate changes in the individual domain contributions ($\beta$) these are plotted below:

![Figure 3.34: Domain Variance Contributions x Income (combined data)](image)

These results are drawn from Tables A3.26 to A3.32. The really odd feature of these results is provided by the highest income group ($251-500K$). Up to this level all of the domains except Safety contribute unique variance. Then, at this highest level of income the domains of Health, Community and Future Security all fail to provide unique variance, thus leaving only three domains making a significant contribution (Standard, Achieving, Relationship).

However, two other features are notable. First, each of these three remaining domains increases their unique contribution to make the combined unique variance the highest of all the regressions. Second, the shared variance decreases to its lowest level, while the overall variance accounted for remains stable at about 50%.

In other words, the unique variance from three domains and some shared variance has become unique variance within Standard, Achieving and Relationships. Perhaps these are the only domains required when life is easy?

### 3.6. Testing Homeostasis

#### 3.6.1. Wellbeing Variation Within Income Groups using Combined Survey Data

The theory of subjective wellbeing homeostasis predicts that the amount of wellbeing variation within income groups will reflect two kinds of influence as:
(a) The range of genetic ‘set-point’ of subjective wellbeing for each person. This should be constant across the income groups.

(b) The degree to which the external environment impinges on each person to change their SWB levels. This influence is predicted to be greatest for the most vulnerable groups who are either people with constitutionally weak homeostatic systems (low SWB set-points and a vulnerability to depression) or people whose homeostatic systems are placed under pressure through external events that they cannot objectively control. This latter group will include people who are disabled and people who are elderly.

As a consequence, the theory predicts that the Personal Wellbeing Index will show greater variation within the lowest income groups. This is because money is a flexible resource that can be used to defend people against possible stressors. Since people on low incomes have less access to this resource, they are more vulnerable to the vagaries of their daily environment. Table A3.34 shows the standard deviation of the Personal Wellbeing Index within income groups where the data have been combined across surveys.

As shown in Figure 3.35 above, the prediction matches the data. The highest standard deviation (16.3) is found within the lowest income group. This value declines with increasing income until it bottoms-out at $101-150 where it reaches a value of 9.7 and therefore does not change. This result is consistent with homeostatic theory. The fall in the standard deviation represented the reducing proportion of people in each sample who are experiencing homeostatic defeat through their economic circumstances.

In summary, these data are consistent with the predictions of homeostatic theory and show that the tail of the distribution is not being systematically further contracted above an income of $101-150K as an average threshold for the avoidance of financially-dependent homeostatic defeat.

These standard deviations at the highest income levels also give possible insight into the range of set-points. That is, if income ceases to be a factor that exerts a significant influence on wellbeing then the variance is, quite possibly, dominated by genetic variation in set-points between the people concerned. However, of course, it can never be a true measure since other influences besides income will be contributing to this variance.

Nevertheless, an approximate calculation is interesting. It can be seen that the minimum standard deviation in Figure 3.35 is 9.7 points. Moreover, this curve downward is clearly exponential, so it is unlikely to ever get below 9.0 points. How much lower could it get if other experientially-influencing factors were eliminated? I would guess not more than 2 points at the most. This would leave a ‘natural’ standard deviation of 7 points.
The maximum reliable level of wellbeing for groups is probably about 82 points. Thus, two SDs around this defines a normal range for set-points at about 68-96 points. This approximates the range of 60-90 calculated in Chapter 2.

### 3.6.2. Differential Personal-National Income Sensitivity

Why is the Personal Wellbeing Index more sensitive to income than the National Wellbeing Index? At first glance this seems the wrong way around. Since the Personal Wellbeing Index is more strongly influenced by homeostatic control on the proximal-distal dimension, it should be least affected by the relative strength of an external resource. The answer to this conundrum will lie within an examination of the means and variances. The data have been drawn from Tables A3.4 and A3.5 in Report 16.0.

<table>
<thead>
<tr>
<th></th>
<th>&lt;$15</th>
<th>$15-$30</th>
<th>$31-$60</th>
<th>$61-$90</th>
<th>$91-$120</th>
<th>$121-$150</th>
<th>$151+</th>
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</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td></td>
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<td></td>
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<tr>
<td><strong>PWI</strong></td>
<td>71.4</td>
<td>15.7</td>
<td>73.5</td>
<td>13.3</td>
<td>74.6</td>
<td>11.8</td>
<td>78.1</td>
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<tr>
<td><strong>Increment</strong></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>2.1</td>
<td>-2.4</td>
<td>2.1</td>
<td>-1.5</td>
<td>1.7</td>
<td>-1.1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>NWI</strong></td>
<td>59.3</td>
<td>17.4</td>
<td>60.2</td>
<td>15.6</td>
<td>61.2</td>
<td>14.2</td>
<td>62.1</td>
</tr>
<tr>
<td>64.5</td>
<td></td>
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<tr>
<td><strong>Mean</strong></td>
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<tr>
<td><strong>PWI</strong> minus NWI</td>
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<td></td>
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<td></td>
<td>12.1</td>
<td>13.3</td>
<td>13.4</td>
<td>14.3</td>
<td>14.3</td>
<td>16.0</td>
<td>14.1</td>
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<tr>
<td><strong>Mean</strong></td>
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</tr>
<tr>
<td><strong>NWI</strong></td>
<td>-1.7</td>
<td>-2.3</td>
<td>-2.4</td>
<td>-3.2</td>
<td>-3.4</td>
<td>-4.5</td>
<td>-3.8</td>
</tr>
</tbody>
</table>

It is apparent that there are two statistical phenomena causing the Personal Wellbeing Index to be more sensitive to income than the National Wellbeing Index. The mean scores are rising faster and the variance is decreasing more rapidly. The psychological explanation for these changes is as follows.

The Personal Wellbeing Index range is naturally held higher and tighter than the National Wellbeing Index range due to the influence of homeostasis. At the lowest incomes, additional variance is added to the Personal Wellbeing Index range by individuals in homeostatic failure. As the income rises, money used as an external buffer reduces the proportion of the sample in homeostatic failure, such that the mean rises and the SD falls, up to $91-120K when the range effectively stabilizes.

It is interesting to note how this Personal Wellbeing Index range has changed. Using two standard deviations around the mean (Table A3.32), at <$15,000 it is 38.9 to 102.9 points, while at $151,000+ it is 57.9 to 99.3 points. It is notable that the reliable change has occurred at the bottom of the range and that the $151+ range probably represents an approximation of the potential normative set-point range in the population (58-99 points).
3.7. **Normative Values**

### 3.7.1. Normative Data for Individual Scores

Normative data can be created by pooling individual scores within income brackets. The results below are drawn from Tables A3.34.

![Figure 3.36: Personal Wellbeing Index Normative Range Calculated from Individual Scores](image)

It can be seen that there is very little variation at the top of each range (5.7 points). Two standard deviations above the group mean approximates the 100.0 ceiling for each calculation. The bottom of each range, however, is far more volatile, and changes by 22.3 percentage points between the lowest and the highest income bracket. These relative changes are consistent with the use of money as a resource to avoid homeostatic defeat. The major change at the bottom of the range occurs over the income span <$15K to $31-60K (12.8 points). Income increments from $61K to $251-500K add another 9.5 points to the bottom of the range.

The most important aspect of these distributions is the proportion of people lying below a satisfaction strength of 50. Other research (Cook & Cummins, 2004) shows that individuals below this level are at high risk of depression. The level of each vertical bar that lies below the 50 indicates the proportion of that group at risk of depression. Thus, the income brackets lying below $31,000 contain a sizeable proportion of people at high risk of depression. These data also indicate that a strategy for increasing mental health in the Australian population is to increase the income of the people on low incomes.

### 3.7.2. Normative Data for Group Means

The normative data for groups are provided by the survey mean scores (Tables A3.35 to A3.37. When these survey mean scores are used as data they can yield a mean and standard deviation. The mean, of course, will closely approximate the group means calculated from individual scores as above. The standard deviation is more interesting. It reflects the degree to which the income group has varied across the surveys. The result is shown in Figure 3.37.
The bars in Figure 3.37 indicate the PWI normal range for each income group calculated as two standard deviations around the mean. It is evident that the lower and higher income brackets show more between survey variation than the $31-60 and $61-90 groups. Both are probably caused by the relatively low N for each survey making each survey mean score less reliable, and, so, more variable.

The data for Figure 3.38 are drawn from Tables A3.35 to A3.37. The income-specific normative ranges are for groups and based on survey mean scores corresponding to each income range. It can be clearly seen how the base of the range stabilizes at $100K up to $250K, while the top of the range continues to increase. This is consistent with the idea that at an income of $100K few people are homeostatically defeated by matters financial. The increase in the top of the range represents the increasing probability that people can experience the upper portion of their set-point range.

It is notable (from Table A3.34) that 30.6% of the combined survey data come from people with incomes <$31,000 and 40.7% from people with household incomes >$60,000. Thus, in terms of income alone, about one third of the population have a level of household income that exposes them to a high probability of below-normal wellbeing, while about one third have a level that provides a high probability of above normal wellbeing.
3.8. **Average Income Ranges Over Time**

The average household incomes have been drawn from Table A3.38 (cumulative data) and the caption to that table indicates the basis of this calculation.

The following matters can be noted:

1. The average household incomes for Survey 23 are considerably higher than the running average. This simply indicates the rise in average incomes over time.

2. The gender disparity is very evident both for the running average and for both surveys. This is due in large-part to the higher proportion of elderly women than men in the samples.

This trend of higher household income is evident in all demographic groups (Figure 3.40 to Figure 4.33). The least change has occurred for Unemployed (+$7,000) and the most for Full-time Home/Family (+$39,800).
Section 3: Household Income continued

Figure 3.41: Household Structure

Figure 3.42: Relationship Status

Figure 3.43: Work Status (Full-time)
1. Personal wellbeing consistently and significantly rises with income up to $101-150K. The 7.0 point gain over this range is associated with a change in wellbeing from below to well above the normative range. Whether the rise in SWB becomes significant beyond $101-150K will be revealed by the addition of further data. But certainly the rate of increase is much reduced at these higher income levels.

2. The cost of increasing happiness increases with income. One additional percentage point of wellbeing for someone with a household income of $101-150K is an additional $143,000.

3. Income has the largest effect on the domain of satisfaction with Standard of Living. It has no systematic influence on satisfaction with Community Connection.
4. The proportion of people in the lowest income group has steadily diminished over the course of these surveys and the Personal Wellbeing Index of this group has also gone down. The reason seems not so much tied to income but to the fact that the residual people comprising this income category have fragile health and relationships.

5. The personal wellbeing of people aged 26-55 years is highly sensitive to low income.
6. Between the ages of 36-55 years, low income is associated with lower wellbeing for males than for females.

7. (a) Household incomes under $30,000 combined with the presence of children, on average, takes wellbeing below the normal range.

(b) For people who also have a partner, wellbeing enters the normal range at $31-$60K. The wellbeing of sole parents enters the normal range only at an income of $61,000-$100,000.
8. Males who live alone have lower wellbeing than females who live alone. Moreover, whereas females enter the normal range at an income of $15-30K, males require three times as much ($100-150K)

9. The negative effects of separation and divorce on wellbeing can be reduced by a decent household income. However, both groups remain below the normal range.

10. Married males and females have a very similar level of wellbeing. However, divorced males have lower wellbeing than divorced females at all incomes except the lowest.
11. The wellbeing of people engaged in Fulltime home/family care is highly income dependent, from below normal at less than $30,000 to above normal at more than $60,000.

People who are unemployed enter the normal range at $101-150K.

12. Unemployment has a stronger detrimental effect on the wellbeing of unemployed males than females at all levels of household income.
4. Gender

The sample for Survey 23 comprised 983 males (49.9%) and 981 females (51.1%) (Table A4.1).

The results for Gender begin with four comparison sections. The first compares Survey 23 against normative ranges generated from gender data. That is, gender specific normative ranges are generated by using the mean scores of each work group over past surveys as data. This section therefore allows the Survey 23 data to be compared with the average of similar past data.

The second section compares each gender group averaged across all surveys against the generic normal ranges. For example, all of the ‘male’ respondents over all surveys are combined to yield a single group. The mean of this group is then compared to the generic normal range for groups. Thus, in a comparison involving the Personal Wellbeing Index, the PWI mean from all ‘males’ will be compared to the generic normal range for Personal Wellbeing Index mean scores. This comparison shows how, on average, each gender group compares against population averages.

The third section compares the gender differences over time.

The fourth section compares the gender group within demographic groupings.

4.1. Survey 22 vs. Gender-Specific Normal Ranges

These results come from Table A4.1 and Table A4.16.

Figure 4.1: Males in Survey 23 vs. Male Normal Range for Group Data

The male Personal Wellbeing Index lies high in its normal range, as do most domains. While health falls slightly below its range, the margin of change in this domain is very slight.

The largest discrepancy between the two surveys is a 2.8 point fall in Safety. However the new value continues to fall within the normal range.
Similar to males, the Personal Wellbeing Index and most domains fall high within their normal ranges. The largest discrepancy between the two surveys is Relationships, which has risen by 3.2 points since Survey 22. However, the new value continues to lie within the normal range.
4.2. Gender Group Averages vs. Generic Normal Ranges

This section compares each gender group averaged across all surveys with generic normal ranges. It shows the average performance of each gender group relative to population averages.

The most marked differences between the genders are in both domains that concern inter-personal satisfaction. Females have far higher satisfaction with both Relationships (+2.2 points) and Community (+3.0 points) than males, with each gender scoring at opposite ends of the generic normal range.

The two other domains showing a marked gender difference are Achieving (females > males by 1.7 points) and Safety (males > females by +1.6 points).

In summary, the overall higher female average for the Personal Wellbeing Index is predominantly driven by their high ratings on the two interpersonal domains.
Figure 4.5: Gender x Interpersonal Domains (combined data)
4.3. **Gender Differences Over Time**

The Index data are presented for this survey in Table A4.1 and analysed across all surveys in Table A4.2.

4.3.1. **Personal Wellbeing Index**

Over the first 13 surveys, females tended to have higher wellbeing than males (Figure 4.6). Then, over the next nine surveys (14-22) there was no consistent gender difference. In Surveys 19 and 20 the genders significantly separated once again, but in opposite directions. In Survey 23 males have again fallen below females.

![Graph showing gender differences over time in Personal Wellbeing Index](image)

Key: Values above the trend-lines are significantly higher than Survey 1 for males (m) and for females (f).
The female trend-line f2 indicates values higher than S2, S4, S5 and S11.
Shaded boxes denote a significant gender difference.

Figure 4.6: Gender x Survey: Personal Wellbeing Index

While the reason for this changed pattern is not known, it is clear that a single cross-sectional survey could have discovered any result in terms of the existence of a gender difference in wellbeing.

The trajectories for each gender over time has been quite different. Using the reference point of the first survey, the female scores became significantly higher after one year (S3, March 2002) and remained variably higher over the next 2.5 years, up to Survey 12 (August 2004), with 5/10 surveys during this period being higher than Survey 1. Then the female values returned to normal, with the next nine surveys, from Survey 13 in May 2005 to Survey 21 in May 2009, being no different from Survey 1. The most recent two surveys have again been higher than the first survey.

The male scores, on the other hand, first rose to be higher than Survey 1 at Survey 6 (March 2003) and have essentially remained at this higher level ever since. The significant interaction (Table A4.2) between the genders has been mainly caused by changes in male wellbeing.

4.3.2. **Homeostasis**

According to the theory of homeostasis, due to the ceiling imposed by each set-point, an upward movement in the Personal Wellbeing Index as shown in Figure 4.6 should be accompanied by a reduction in the standard deviation. This prediction is made through using the following logic.
Assume some ‘good’ is applied to all members of a population, then an upward shift in the mean could be caused by any of the following:

1. All people in the sample show the same degree of rise. This is obviously impossible due to individual differences in susceptibility.

2. Some people rise while others fall, but the rises outnumber the falls, and so the overall mean of the sample rises. Of itself, this should cause the SD to increase, reflecting the range being pushed up by the higher values.

3. The extent to which people can rise or fall is limited by their set-point range as follows:
   3.1 Assuming most people were within their set-point-range prior to the ‘good’, some small degree of movement is possible within their range.
   3.2 If baseline values were evenly distributed above and below the set-points, the ‘good’ will be more effective in moving wellbeing up to the set-point (congruent with homeostatic forces) than in moving wellbeing above the set point (incongruent with homeostatic forces). Thus, the range of values within the sample will tend to contract and the SD will decrease.
   3.3 For individual values lying below the set-point-range at baseline, the ‘good’ has the potential to move these values into the set-point-range and to re-establish normal range wellbeing for such people. The theoretical magnitude of change in such cases is substantial and, again, this would tend to decrease the standard deviation of the sample.

In summary, the application of homeostasis theory allows the prediction of an inverse relationship between the magnitude of sample mean scores and sample standard deviations.

The data for the following figures come from Table A4.2 and the correlation calculations from Tables A4.17 and A4.18.
Section 4: Gender continued

The magnitude of the correlations is as predicted by theory, with a significant correlation between the Personal Wellbeing Index mean and SD for both genders.

4.3.3. Personal Wellbeing Domains

4.3.3.1. Standard of Living

These results come from Table A4.1. On eight occasions there has been a gender difference (shaded), most commonly with females > males, and on one occasion males > females (Survey 19). The ANOVA shows a significant effect overall for gender (females > males) and an interaction with survey, such that, as with the Personal Wellbeing Index, the male values have risen faster than the female values. All male values since Survey 2 have been higher than Survey 1, some have been higher than Survey 4, and at Survey 23 the values are higher than 2 previous surveys. Female values, on the other hand, showed a one-off elevation at Survey 12 but then returned to show no change until most recently. Only in Surveys 21-23 have female values also risen higher than several previous values. The mean for females in Survey 23 is the highest yet recorded (80.6 points) and higher than 4 previous surveys.
4.3.3.2. Health

These results come from Table A4.2. This is the most stable domain, with a weak trend over surveys (p < .01) and no interaction. However, overall females > males and there have been 4 occasions when individual surveys (shaded) have shown this differences. In Survey 19, males > females, and on all other occasions females>males.

In Survey 20, male health fell 2.8 points since the previous survey. Numerically, but not significantly, that put it at its lowest level yet recorded and 0.2 points below its level at Survey 1. In Survey 19, female health fell to 73.9 points, which put it 0.3 points lower (numerically but not statistically) than its value at Survey 1. Male health satisfaction has been numerically (but not significantly) lower than its level in Survey 1 on two occasions (Survey 20 and 23). Within no survey has either male or female health satisfaction been statistically different from its level at Survey 1. These results are very important in showing that the overall rise in the Personal Wellbeing Index is restricted to just some domains. This, in turn, adds credibility, to the overall rise that has been observed, since a measurement artefact would be expected to involve all domains equally.

4.3.3.3. Achieving in Life

These results come from Table A4.2. This is the most stable domain, with a weak trend over surveys (p < .01) and no interaction. However, overall females > males and there have been 4 occasions when individual surveys (shaded) have shown this differences. In Survey 19, males > females, and on all other occasions females>males.

In Survey 20, male health fell 2.8 points since the previous survey. Numerically, but not significantly, that put it at its lowest level yet recorded and 0.2 points below its level at Survey 1. In Survey 19, female health fell to 73.9 points, which put it 0.3 points lower (numerically but not statistically) than its value at Survey 1. Male health satisfaction has been numerically (but not significantly) lower than its level in Survey 1 on two occasions (Survey 20 and 23). Within no survey has either male or female health satisfaction been statistically different from its level at Survey 1. These results are very important in showing that the overall rise in the Personal Wellbeing Index is restricted to just some domains. This, in turn, adds credibility, to the overall rise that has been observed, since a measurement artefact would be expected to involve all domains equally.
Satisfaction for both genders fell between Survey 10 and Survey 11 reflecting a change in the wording of this item (see Chapter 2). However, despite this, none of the male values differ significantly from Survey 1. Female values, on the other hand, appear to have been gradually falling throughout the series and in Surveys 19 and 20 fell below earlier values. Since Survey 21, however, they have returned to be no different from Survey 1.

There is a significant interaction between survey and gender. The Surveys from Survey 1 to Survey 15 showed higher values for females. Since then, however, there has been no systematic gender difference.

The interaction is significant (p = .01) caused by the more rapid trend of falling female values relative to males after Survey 10.

4.3.3.4. Relationships

This domain also shows a significant interaction between gender and surveys.

Over the first 12 surveys, females had higher relationship satisfaction than males. However, following Survey 12 (Olympics) the pattern dramatically changed, with subsequent surveys showing no systematic gender difference. In fact, the gender difference in Relationships was quite marginal at Survey 1 (2.0 points, \( p = .036 \)) and the values for relationship satisfaction for both genders then returned to be no different from Survey 1. The interaction is significant (p = 000).

The cause of the interaction appears to be primarily the change in female relationship satisfaction that occurred at Survey 13, which was the first survey following the Athens Olympic games. At this survey, the satisfaction of both males (-3.2 points) and females (-5.0 points) significantly decreased. However, while the male decrease took satisfaction to a level no different from most previous surveys, this was not true for females. Here the fall signalled an end to the elevated levels of satisfaction that had occurred from Survey 2 to Survey 12. The new level was no different from Survey 1 and it has remained at this lower level until the current Survey 23. Now it is once again higher than Survey 1.

Thus, the significant interaction has been caused by an elevated period of relationship satisfaction over the period Survey 2 to Survey 12 that was more marked for females than for males.
4.3.3.5. Safety

All of the domains except Safety show an overall higher level of satisfaction for females across the surveys (Table A4.2). Safety, on the other hand, is fairly consistently higher for males and is shown below.

The domain of safety is particularly interesting for a number of reasons as follows:

(a) It is the only domain to be generally statistically higher in males. This has occurred on 14/22 occasions (shaded).

(b) The satisfaction with safety for males remains significantly higher than several previous surveys. Female satisfaction with Safety has also shown a marked and significant rise over the course of these surveys, and is currently at its second-highest level yet recorded.

(c) Safety, split by gender, is the domain that is most sensitive to the changes between surveys. The combined trend lines for both males and females (Figure 4.13) generate 106 significant differences within gender across the surveys (Table A4.2). The next highest is Future Security with 50 significant differences. The maximum ‘safety’ value for females occurred at Survey 20 (80.4 points) which is 5.3 points higher than Survey 1. The maximum value for males (81.6 points) occurred at Survey 17 and is 6.5 points higher than it was at Survey 1. The maximum female value is 4.9 points higher than at Survey 1. This is a remarkable degree of correspondence.

(d) Safety does show a weak survey x gender interaction (p = .01), attesting to the stability of the gender difference over time.

(e) Safety is the only domain that generally fails to contribute unique variance to the prediction of satisfaction with Life as a Whole (see Table A2.17). This consistent result gave rise to a discussion in Report 11.0 as to whether safety should be considered a domain of the Personal Wellbeing Index. However, analysis of data from the International Wellbeing Group (see manual for the Personal Wellbeing Index) indicates that safety does contribute unique variance to ‘life as a whole’ in some other countries. Moreover, it occasionally makes a unique contribution in Australia both for the whole sample (see Survey 21) and for some sub-groups (e.g. Widows). Thus, it may generally be regarded as a ‘sleeper’ domain in Australia.

Figure 4.13: Satisfaction with Safety across all Surveys

The trend line f1 and m1 denotes values higher than S1, S2
The trend line f2 and m2 denotes values higher than S3, S4, S6
Shaded boxes denote a significant between-group difference.
4.3.3.6. Community

These results come from Table A4.2. There are significant main effects showing females > males and a rise over surveys. Despite the fact that the interaction is not significant, the two genders have behaved differently across surveys. The only change for females is the elevation at Survey 12. Otherwise they evidence no change. Males, on the other hand, rose higher than Survey 1 at Survey 12, and this rise has been generally maintained in subsequent surveys. The value at Survey 21 of 71.3 points is the highest yet recorded.

These trend differences show that the genders seem to be gradually converging, but the interaction just fails to reach significance (p = .09).

This domain shows the most consistent record of gender difference, with females showing significantly higher satisfaction in all but three of the surveys.
4.3.3.7. Future Security

The third domain to show a gender x survey interaction is satisfaction with Future Security. This is shown in Figure 4.9 below.

![Future Security Satisfaction Graph](image)

Key: Shaded boxes denote a significant gender difference.

FM-1: Male and female values above this line are significantly higher than S1, S2 and often other surveys as well. For details see Table A4.2.

Figure 4.15: Gender x Survey (Future Security Satisfaction)

The two genders have tended not to differ from one another over this series of measures, with just 3/21 comparisons being significantly different, in each case favouring females.

However, there is a trend of male satisfaction gradually rising through the series. This is the cause of the significant interaction.

The persistent rise in male satisfaction with future security up to Survey 18 may have been due to consistently good economic conditions and the continued presence of terrorist attacks and armed conflict outside Australia. This rising trend may now have returned.

4.3.3.8. Spiritual/Religious

This new domain shows consistently higher satisfaction for females (Table 4.2).
It seems evident from the survey means so far available, that this domain may evidence the most reliable gender difference, with females consistently scoring 6-8 points higher than males.

There is a significant rising trend in Spiritual/Religious satisfaction that is common for both genders.

4.3.4. Domain Stability Across Surveys x Gender

Major shifts in domain satisfaction, defined as a change of greater than 2.0 percentage points between adjacent surveys, are shown in Table 4.2 for each gender. Where each large change has been recorded within one gender (bold) the magnitude of change in the other gender in the same survey is also shown.

Table 4.1: Domain Changes >2.0% Between Adjacent Surveys within each Gender

<table>
<thead>
<tr>
<th>Domain</th>
<th>Surveys</th>
<th>Male</th>
<th>Female</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard of Living</td>
<td>1-2</td>
<td>+4.18</td>
<td>+1.72</td>
<td>September 11</td>
</tr>
<tr>
<td></td>
<td>11-12</td>
<td>+1.90</td>
<td>+3.08</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-1.94</td>
<td>-2.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15-16</td>
<td>+0.89</td>
<td>+2.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18-19</td>
<td>-0.95</td>
<td>-2.25</td>
<td>Labor election</td>
</tr>
<tr>
<td>Health</td>
<td>19-20</td>
<td>-2.77</td>
<td>+0.59</td>
<td>Begin economic slump</td>
</tr>
<tr>
<td>Achieving</td>
<td>1-2</td>
<td>+2.08</td>
<td>+0.12</td>
<td>September 11</td>
</tr>
<tr>
<td></td>
<td>10-11</td>
<td>-2.06</td>
<td>-2.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-1.72</td>
<td>-2.09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18-19</td>
<td>+1.07</td>
<td>-2.99</td>
<td></td>
</tr>
<tr>
<td>Relationships</td>
<td>5-6</td>
<td>+2.69</td>
<td>-1.03</td>
<td>First Bali Bombing</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-3.15</td>
<td>-4.95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19-20</td>
<td>-0.44</td>
<td>+2.33</td>
<td>Begin economic slump</td>
</tr>
<tr>
<td></td>
<td>22-23</td>
<td>+0.40</td>
<td>+3.22</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>4-5</td>
<td>-0.35</td>
<td>-2.32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10-11</td>
<td>+0.53</td>
<td>-2.24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-12</td>
<td>+0.75</td>
<td>+2.88</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-2.04</td>
<td>-3.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14-15</td>
<td>-1.13</td>
<td>-3.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16-17</td>
<td>+2.89</td>
<td>+1.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22-23</td>
<td>-2.77</td>
<td>-1.28</td>
<td></td>
</tr>
<tr>
<td>Future Security</td>
<td>6-7</td>
<td>+1.51</td>
<td>+2.43</td>
<td>Begin Iraq War</td>
</tr>
<tr>
<td></td>
<td>11-12</td>
<td>+0.17</td>
<td>+3.64</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-2.04</td>
<td>-3.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16-17</td>
<td>+2.65</td>
<td>+2.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18-19</td>
<td>-1.60</td>
<td>-2.24</td>
<td>Labor election</td>
</tr>
<tr>
<td></td>
<td>21-22</td>
<td>+1.79</td>
<td>+2.35</td>
<td>Recession recovery</td>
</tr>
<tr>
<td>Community</td>
<td>11-12</td>
<td>+1.07</td>
<td>+3.75</td>
<td>Olympics</td>
</tr>
<tr>
<td></td>
<td>12-13</td>
<td>-2.42</td>
<td>-3.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13-14</td>
<td>+2.46</td>
<td>+0.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19-20</td>
<td>-1.19</td>
<td>+2.26</td>
<td>Begin economic slump</td>
</tr>
<tr>
<td></td>
<td>20-21</td>
<td>+2.74</td>
<td>-0.70</td>
<td>Victoria bushfires</td>
</tr>
</tbody>
</table>

This table is interesting from a number of perspectives as follows:

1. It emphasizes the extraordinary stability of these measures of gender mean scores for domains. With one exception, no domain change between adjacent surveys has exceeded 3.8 points. Of the total 308 comparisons, (2 genders x 22 adjacent survey comparisons x 7 domains) only 32 (10.4%) have varied by >2 percentage points.

2. The outlying value of 4.18% (Standard of Living, Male, Surveys 1-2) is anomalous. There seems no obvious reason for such a marked change in this domain in response to September 11. However, female satisfaction with this domain also showed a substantial 1.72% rise at the same time, which lends some degree of credibility, but no additional explanation, to the result.
3. The changes in both genders for ‘achievements’ between Survey 10 and Survey 11 is an artefact caused by the wording change to this item. It is notable that the change has occurred equally within both genders.

4. Of, these major changes, 18/32 (56.2%) are temporally linked to the period immediately following one of the six major events: September 11 (S1-S2), Bali (S5-S6), the Iraq War (S6-S7), the Athens Olympics (S11-S12), the Labor election (S18-S19), the start of the economic slump (S19-S20), the Victorian bushfires (S20-S21) and the recession recovery (S21-S22) (S22-S23). This is further evidence that the Index changes are more likely as a consequence of these events, rather than simply occurring at random.

5. In terms of linking the specific domain changes with a logical explanation for such change, it is a mixed bag. But maybe too much can be made of this. These values are part of a wave of change that involves all of the domains to some degree. Additionally, we know nothing about the relative sensitivity of domains in particular circumstances, other than what these data can tell us. So the apparent logic of safety and security rising after the Iraq war needs to be balanced against the apparent illogicality of relationship satisfaction changing in opposite directions for males and females following the Bali bombing (S5-S6). More data are needed in order to explain some of these domain level changes.

6. It is notable that the domain of health has shown only one change >2 points between adjacent surveys for either gender. This confirms its status as the most stable domain.

4.3.5. National Wellbeing Index

Both genders have shown rising satisfaction over the course of these surveys and females currently show their highest levels yet recorded.

Since the national domains are under less homeostatic control than the personal domains (they refer to content more distal to the self and so their levels are less determined by HPMood) it is somewhat surprising to see how closely the male and female values across surveys mirror one another. The level of satisfaction is also very similar with only 6/23 surveys showing a gender difference. However, unlike the personal index, these differences tend to favour males (5/6).
4.3.6. National Wellbeing Domains

Only three national domains show a survey x gender interaction. These are Economic Situation, Natural Environment and National Security.

4.3.6.1. Economic Situation

Satisfaction with economic situation is shown below.

Following the remarkable rise in satisfaction with the Economic Situation over the period between Survey 1 and Survey 3, and the slow but steady rise over the next 5.5 years, satisfaction after Survey 18 (October 2007), both genders fell precipitously with the onset of the economic collapse. Interestingly, however, both genders retain a level of economic satisfaction higher than it was at Survey 1. The values for both genders have now recovered their pre-recession levels.

It is also notable that, while at Survey 1 females>males, since Survey 4 the direction of difference has been in the opposite direction. The highest gender difference was at Survey 16 (3.3 points)
4.3.6.2. Natural Environment

Satisfaction with the natural environment shows a significant interaction between gender and survey (p = .007) in the absence of an overall gender difference (p = .114).

![Figure 4.19: Gender x Survey (Environment)](image)

The gender x survey interaction shows a progressive shift in satisfaction with the environment, from predominantly higher values for females over the first 10 surveys, to predominantly higher values for males. This has been due to falling satisfaction for females with no reliable trend for males.

Both genders have risen to their highest levels yet recorded and both are now significantly higher than for all previous surveys except for the most recent Survey 22.

4.3.6.3. National Security

National Security also shows a gender x survey interaction as shown below.

![Figure 4.20: Gender x Survey (National Security)](image)

Key: There are no values for Survey 1.
Shaded boxes indicate a gender difference
Following the initial dramatic rise from Survey 2 to Survey 3 of some 5-6 points, both genders trended upwards together. From Survey 13 to Survey 16 female satisfaction with national security fell while male satisfaction remained stable, causing a gender difference. After Survey 16, satisfaction rose for both genders, taking their satisfaction with national security to its maximum. In Survey 21 female satisfaction fell a massive 4.3 points, while male satisfaction remained unchanged. Both retain a level above Survey 3.

4.3.7. Life as a Whole and Life in Australia

Satisfaction with life as a whole, but not satisfaction with life in Australia, shows an interaction with gender (p = .003) (Table A4.2).

In general, females record higher satisfaction with life as a whole than do males. Over the first 13 surveys, female satisfaction with Life as a Whole was consistently higher than male satisfaction. This changed in October 2005, when the difference became non-significant, and since then there has been no systematic gender difference.

In comparison to their levels of Survey 1, female satisfaction has risen higher on two occasions as Surveys 12 and 23. However, at Survey 15 and Survey 19 the level of satisfaction dropped numerically below (but not statistically) that of Survey 1.

The male values, on the other hand, have been maintained at an elevated level from Survey 6 to the present.
4.3.8. Likelihood of a Terrorist Attack

The proportion of the population who expect a terrorist attack is gradually diminishing, and Table A4.1 shows no gender difference in the perceived likelihood of a terrorist attack. However, Table A4.2 shows a significant interaction between survey and gender, shown below.

While there is no overall gender difference in the perceived likelihood of a terrorist attack, the value for females did significantly exceed that of males at Survey 13, which is a time of no special event, being some 6 months following the Athens Olympics, and males>females at S22.

The significant interaction is caused by the relative, and possibly random, shifts of male vs. female differences. No systematic trend can be discerned. Moreover, given the lack of significant gender differences, this result has little importance.
Section 4: Gender continued

4.4. Gender and Demographics

4.4.1. Gender and Age

Table A4.3 shows only one age related differences between Surveys 22 and 23 for either gender, and that is for males 56-65y where Survey 22 > Survey 23.

Table A4.4 provides the Gender x Age analysis using the entire database from all surveys. The combined PWI data are shown below (minimum N=1,419 for Male 76+y).

For both genders there is a highly consistent age-related change in the Personal Wellbeing Index. The initial rise in wellbeing occurs at 56-65 years, at which age the Personal Wellbeing Index rises higher than the younger age-groups. A second rise occurs at 66-75y, and for females only, a third rise at 76+y. Further discussion of these changes is provided in the chapter on Age.

The pattern of age-related change in the Personal Wellbeing Index is different between genders, with the age x gender interaction being significant ($p = .003$) (Table A4.4). As can be seen from Figure 4.23 there is no gender difference within the youngest group. The systematic change in the gender difference with age is shown in Figure 4.24.
There is a very systematic pattern of gender difference in personal wellbeing that emerges initially, and most strongly, within the 26-35y groups, and thereafter diminishes.

This lack of a gender difference at 18-25y is so anomalous that Table 4.5 presents these data across all surveys for verification. As can be seen, not one survey has produced a significant gender difference at this age.

Report 11.0 investigated whether this marked gender difference for the two youngest groups applies to the individual domains. Figure 4.25 in that report revealed that the apparent simplicity of the sudden increase in the magnitude of gender differences from 18-25 to 26-35 years is not replicated at the level of domains. While three domains (e.g. Standard of Living) show the same pattern as the overall Personal Wellbeing Index, others show no age-related change (Relationships) or even the reverse pattern (Future Security). No simple pattern can be discerned.

The reason for the sudden appearance of a gender wellbeing difference at 26-35 years remains mysterious.

4.4.2. Gender x Age: Domains

These results come from Table A4.4.

4.4.2.1. Standard of Living

![Figure 4.25: Gender x Age: Standard of Living (combined data)](image)

With the exception of the youngest group, females tend to be more satisfied with their standard of living than males. However, the age-trends for standard of living are very similar for both genders (Table A4.4) and the gender x age interaction is significant (p = .015). From an initial value of about 79 points, satisfaction for both genders falls significantly to reach a low at 36-45 years. It does not significantly rise until 56-65 years, at which age it reaches a level of equivalent to the 18-25y group. The level of satisfaction continues to increase until, at 76+ years, it exceeds both the 18-25y level and the 56-65y level.

This pattern is remarkable in the extent to which it is the reverse of household income. The middle-age groups have the highest income, and the oldest groups have the lowest income. It may reflect disposable income but this cannot be determined from the current data. Whether this pattern is caused by child-related expenditure is worthy of future investigation.
4.4.2.2. Health

Satisfaction with health shows a significant gender \(\times\) age interaction \(p=.000\). At 18-25 years satisfaction with health is higher for males (Table A4.4: \(p=.001\)). Thereafter the two genders show a very different pattern of change.

Male health satisfaction shows continuous drop between 18-25 and 46-55 years. Thereafter it stabilizes, only to fall significantly again at 76+ years.

Female satisfaction, on the other hand, remains steady over the 18 to 45 years, until falling sharply at 46-55 years. From that age it gradually decreases, also at about 1 percentage point per decade.

The reason for the drop in female health satisfaction at 46-55 years may be associated with the onset of menopause. The reason for the fall in male satisfaction up to 46-55y may reflect decreasing physical fitness which affects males more than females over this age-range. From 66 years and older there is no gender difference in health satisfaction.

4.4.2.3. Achieving in Life
The interaction is significant ($p = .017$) such that the gender differences are only significant up to 56-65y.

### 4.4.2.4. Relationships

![Graph showing gender x age interaction for relationships](image)

**Key:** Values above the trend-lines are significantly higher than the designated age groups for males (m) and for females (f). Shaded boxes denote a significant between-group difference.

Figure 4.28: Gender x Age: Relationships (combined surveys)

Even though the gender difference is significant at each age group, there is also a significant interaction ($p = .000$). It is apparent that the gender difference diminishes with age.

### 4.4.2.5. Safety

![Graph showing gender x age interaction for safety](image)

There is a significant gender x age interaction ($p=.005$) reflecting convergence between the genders with increasing age. Gender difference in satisfaction with safety does not occur beyond 66-75 years.

Across the ages, both genders show their lowest level of safety satisfaction quite late in life, at 56-65 years for females and 66-75 years for males. This trend then reverses, with safety rising for the oldest groups.
4.4.2.6. Community

The other gender x age interaction occurs for Community ($p = .000$) and is shown below.

![Graph showing gender x age interaction for Community](image)

**Key**: Values above the trend-lines are significantly higher than the designated groups for males (m) and females (f). Shaded boxes denote a significant between-group difference.

Figure 4.30: Gender x Age: Community Connection (combined surveys)

While both genders show increasing satisfaction with Community Connection as they get older, there is no gender difference within the 18-25y group. Moreover, whereas females show a marked +2.9 point increase in satisfaction from 18-25 to 26-35, males show no change (-0.5 points). Over the following decade, however, male satisfaction increases by 3.3 points.

In sociobiological terms, it is possible that the 18-35y period covers the ‘breeding years’ during which men are more concerned with providing for their immediate family while females are more concerned with creating mutually supportive ties with other mothers for the purpose of joint child care and protection. Thus, the initial rise in satisfaction with Community Connection is delayed in males with respect to females. It could also be tied to an earlier age for marriage by females.

4.4.2.7. Future Security

![Graph showing gender x age interaction for Future Security](image)

Figure 4.31: Gender x Age: Future Security (combined surveys)

It is notable that, in contrast with all of the other domains, the two genders do not differ from one another at any age, and the gender x age interaction is not significant.
Section 4: Gender continued

### 4.4.2.8. Spiritual/Religious

These values come from Table A4.4 and show a significant gender effect (females > males), a significant age effect (satisfaction increases with age), and a significant interaction (satisfaction increases with age faster for females than it does for males).
4.5. Gender and Household Composition

Table A4.6 indicates the results for both Survey 23 and for the combined data. The combined data show higher personal wellbeing for females who live alone, with their partner, and with their partner and children. However, males who are sole parents have higher wellbeing than female sole parents ($p < .01$).

Wellbeing is above the gender-specific normative range (Table A4.16) for both males and females living with their partner only and for females living with their partner and children.

The type of household composition that has one of the strongest differential gender effect is living alone, as shown below.

![Figure 4.33: Gender x Living Alone: PWI (combined)](image)

While both males and females who live alone experience a relatively low level of wellbeing, the level for females lies almost within their normal range. This is not so for males who live alone. Their Personal Wellbeing Index value is 2.8 points below their normal range and 3.6 points below the level of single-living females. This low level for males indicates a higher than normal risk of depression.

While both male and female sole parents have below normal wellbeing, the deficit in relation to the gender-specific normal range is much larger for females.

![Figure 4.34: Gender x Sole Parents: PWI (combined data)](image)
Section 4: Gender continued

The normative range results come from Table A4.16 and the Sole Parent results from Table A4.6. Whereas male wellbeing is -1.0 points below their normative range, it is -3.8 points below for females. This is probably a consequence of higher household incomes for males.

4.5.1. **Gender x Household Composition x Age**

These results come from Table A4.7 (males) and A4.8 (females).

Of special interest is the relative wellbeing deficit suffered by those groups that average <70 points. These have been separated by age as follows.

4.5.1.1. Sole Parents

While there are more female than male sole parents in each age grouping, the highest disparity in wellbeing (4.5 points) occurs in the 26-35y group. It is possible that the males have higher household income. After the age of 66 years, however, the experience of single parents changes. This is probably due to a role-reversal as the children take care of their parents.

4.5.1.2. Lives Alone

The only age at which males have a wellbeing advantage (1.9 points) is at the youngest age. This trend then progressively reverses until at 36-45 years it is the females who have a 4.8 point advantage. Thereafter the females continue to have higher wellbeing than males.
4.5.1.3. Other Adults

The two genders follow much the same trajectory, with their lowest point at 36-45 years. It is likely that many of these people are recently divorced or separated and with low income.
4.6. Gender and Relationship Status

Reliable gender differences, favouring females, appear for people who are married and defacto (Table A4.9).

This might be taken to indicate that females benefit more from marriage than do males. However, this is not so as shown by rating against the gender-specific normative mean scores (Table A4.16).

Relative to their normative range, married males are 0.6 points above their normal range, while females are 0.6 points above theirs. Thus, males and females benefit equally from living with their partner in marriage.

It is notable that people in defacto relationships have somewhat lower personal wellbeing than do people who are married (males –2.6 points; females –1.8 points). This difference from married is significant for both genders.

There is no gender difference in the wellbeing of people who have never married or are separated or divorced (Table A4.9). However, relative to their gender-specific normative ranges, females tend to do less well than males as Never Married (male -0.8, female -2.1) and separated (male -4.5, female -5.6). There is no gender difference relative to the gender-specific normative range for people who are divorced (male -4.4, female -4.9).

Widowhood shows a distinct advantage to females. The direct gender comparison is significant (+2.4 points) and female widows actually lie at the top of the female normative range, whereas males lie -1.8...
points below the top of the male normative range. Notably, however, both male and female widows have normative levels of wellbeing.

4.6.1. Gender and Relationship Status x Household Composition

These results come from Table A4.10 (males) and A4.11 (females).

4.6.1.1. Married

There are two living situations in which married females do better (>2 points) than married males. One is when they live alone (+7.2 points) and the other is living with parents (+2.2 points).

4.6.1.2. Divorced

Only one group of divorcees lie within the normal range as females living only with their new partner. This does not apply to males, which is interesting. It may be that the males are being damaged by the payment of maintenance to their previous spouse whereas the females are the recipients of such maintenance, but this is entirely speculative.

It is interesting to note how few divorcees find a new partner to live with (Partner only; Partner and Children) as 6.0% of divorced males and 3.6% of females. This is an unexpected finding.
The lowest wellbeing for divorcees is suffered by males living with their parents (62.5 points).

### 4.6.1.3. Never Married

These results come from Tables A4.10 and A4.11 show almost no gender difference in wellbeing of people who have never married between the different household composition groups. The largest difference is 1.0 points for never-married sole parents, but this is not significant. This is quite a curious result given the much larger gender differences apparent when the whole sample of people making up these household composition groups is used.

It is also evident that people who have never married and are living with their partner and children have a high level of wellbeing. Thus, there are very substantial wellbeing differences within the Never Married group, depending on who they live with.
4.7. Gender x Work Status

These results come from Table A4.12.

Given that there is an overall 1.0 percentage point advantage to females in the Personal Wellbeing Index (Table 4.1), it can be seen that this is generally carried-over into the various work-status groups. However, full-time employment reduces the female advantage in personal wellbeing to a non-significant +0.0 points as shown below:

![Diagram showing the comparison of male and female wellbeing under full-time employment](image_url)

From this figure it can be seen that, relative to gender norms, full-time employment favours the wellbeing of males, taking them to within -0.7 points of the top of the male normative range. Females, on the other hand, are relatively disadvantaged by fulltime employment. Their wellbeing lies -1.7 points below the top of the female normative range.

This is interesting in its own right, but also indicates that this one-third of females in the surveys are diminishing the overall gender difference. Clearly, therefore, some other force is at work making the overall wellbeing of females higher than males.

It is also notable that this lack of gender difference for the full-time employed for Survey 23 (Table A4.12). Given that the full-time employed people constitute about one half of the total sample of males and one quarter for females, this equality would have contributed to the overall pattern for the Personal Wellbeing Index.

Other matters of interest are as follows:

(a) The gender breakdown of full-time volunteers (N=141) shows the presence of far more females (37% vs. 104%).

(b) Males (N=223) who are engaged in full-time home or family care are in the minority of all home carers (1911 female). They have a level of wellbeing that lies just below the normal range (71.2) and it is 3.5 points below the level for those who are employed (75.7). In contrast, females in fulltime home care have a level of wellbeing (75.3) that is well within the female normal range and only -0.4 points lower than females in fulltime employment.
Section 4: Gender continued

Figure 4.43: Fulltime Home or Family Care x Gender: Personal Wellbeing Index

Summary

(a) Males gain more wellbeing by being fulltime employed than both fulltime employed females and males engaged in fulltime home care.

(b) Females who are fulltime employed have no reliable wellbeing advantage over females engaged in fulltime home or family care.

(c) The gender difference in the Personal Wellbeing Index between the various fulltime groups is reported below.

Figure 4.44: Work status (F/T) x Gender Differences (PWI: Combined data)

It is evident that the gender difference between fulltime work-status positions varies considerably. Assuming that a 1.8 point difference is the level at which statistical significance can be achieved with sufficient numbers of respondents, there is no gender difference in people who are employed, semi-retired, retired, volunteers, or studying. The other groups show a female advantage of at least 3.0 points (home care and unemployed).

In summary, the general finding in our surveys that the Personal Wellbeing Index of females is higher than that of males can be limited to those people who are full-time home care or unemployed. Together, these people constitute 13.3% of the total sample; but 5.9% of the total males and 22.0% of the females. Thus, the overall gender advantage to females rests largely on their higher proportional representation within these two groups.
4.7.1. Gender x Fulltime Work Status x Survey

These results come from Table A4.12.1.

The interaction between gender and survey is significant, showing a reverse trend for each gender over the surveys. Whereas the wellbeing of male full-time workers has increased over this time (p = .000), female wellbeing has remained more stable (p = .023) or even trended down.

These trends may go some way to explain the pattern of convergence between the genders in Figure 4.6.
4.8. **Gender x Age x Work Status**

4.8.1. **Gender x Age x Employed (Full-time)**

These results come from Table A4.13.

Only the gender difference at 56-65y achieves significance (Table A4.13) and indicates a disadvantage to females. However they remain within the age-specific normal range. It is evidence that elderly people (66y+) who are employed have high wellbeing. This may well be because they are full-time employed through personal preference rather than necessity.
### 4.8.2. Gender x Age x Unemployed

These results come from Table A4.14. They show the more devastating effect of middle-age unemployment on males than on females.
4.9. **Normative Data Based on Individual Scores**

These results come from Table A4.15.

4.9.1. **Personal Wellbeing Index**

The normative data for individuals on the Personal Wellbeing Index are presented below derived from the individual values of 21,178 males and 22,809 females.

![Figure 4.48: Gender Normative Data for Individuals: Personal Wellbeing Index](image)

The vertical bars represent two standard deviations around the mean. The two groups have approximately the same degree of difference at the top of their distributions (1.1 points) as at the bottom (0.9 points). This is also reflected in the mean score difference (1.0 points) indicating a symmetrical advantage to females throughout the distributions.
Section 4: Gender continued

4.9.2. Age Norms (individual scores)

These normative data are taken from Table A4.4.

4.9.2.1. Male Norms x Age

It is apparent that there is greater gender variation at the bottom of these normative ranges than at the top. The following two figures show this in more detail.
Section 4: Gender continued

In relation to these two figures the following observations can be made:

1. The top and bottom of the distributions change with age in quite different ways. The top of the ranges gradually increases with age (Figure 4.50). The bottom of the ranges shows a bi-phasic pattern, where the range extends downward to 46-55 years, after which it rises (Figure 4.51.)

2. The decrease in the bottom of the distribution starts at (36-45y). Two age cohorts of males (36-45, 46-55y) lie below the threshold (50%) that signals increased risk of depression, compared with just one age cohort (46-55y) for females.

3. These patterns are consistent with the mean age-related gender differences shown in Figure 4.23. In general, the top of the female range is higher (Figure 4.50) and the bottom of the female range is higher (Figure 4.51). This reflects the overall higher Personal Wellbeing Index score for females over the intermediate age ranges.

4. These distributions also inform the lack of a gender difference in the Personal Wellbeing Index of the youngest group. As can be seen, at the lower range margin there is a consistent slight advantage to females (Figure 4.51). However, at the top of the ranges, the youngest group shows a marginally higher level for males than for females (Figure 4.50).

5. The lack of a consistent gender difference across the age groups makes it unlikely that the overall gender differences in the Personal Wellbeing Index represent a more positive female
response bias. It also indicates that the drop in the lower range margin of the distribution between 26-55 years is likely to be experientially introduced. It is notable that this range coincides with the child-care years. A future analysis should split this analysis into people living with or without children.
4.10. **Normative Data based on Survey Mean Scores**

These results are taken from Table A4.16.

4.10.1. **Personal Wellbeing Index and Domains**

Combined survey mean scores (N=23).

![Figure 4.52: Normative PWI and Domains (based on survey mean scores)](image)

The interesting feature of Figure 4.52 is the magnitude of the 2SD range. This indicates the extent of variation over the course of the 22 surveys and, so, shows the relative volatility of the gendered domains to world events. These ranges are presented in Table 4.2 below.

### Table 4.2: Range (2SD) of Personal Wellbeing Mean Scores over Surveys, 1-21

<table>
<thead>
<tr>
<th></th>
<th>PWI</th>
<th>Standard of Living</th>
<th>Health</th>
<th>Achieving</th>
<th>Relationships</th>
<th>Safety</th>
<th>Community</th>
<th>Future Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3.7</td>
<td>5.4</td>
<td>3.3</td>
<td>3.6</td>
<td>5.4</td>
<td>6.3</td>
<td>4.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Female</td>
<td>3.4</td>
<td>4.9</td>
<td>3.2</td>
<td>4.6</td>
<td>6.0</td>
<td>7.2</td>
<td>4.2</td>
<td>5.9</td>
</tr>
</tbody>
</table>

**Difference M-F**

|       | +0.3 | +0.5 | +0.1 | -1.0 | -0.6 | -0.9 | +0.3 | -0.2 |

In relation to these values and Figure 4.52 the following observations can be made:

1. The pattern of domain volatility across surveys is similar for males and females.
2. For both genders, the most volatile domain is safety, with a 2SD range of 6.3 points (males) and 7.2 points (females).
3. For both genders, most stable domain is ‘health’ (3.2 points).
Section 4: Gender continued

4.10.2. Normative: Gender x Age (survey mean scores)

These results are drawn from Table A4.19 (males) and Table A4.20 (females) (N=22)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age Group</th>
<th>PWI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>18-25</td>
<td>71.1</td>
</tr>
<tr>
<td>Female</td>
<td>26-35</td>
<td>70.8</td>
</tr>
<tr>
<td>Male</td>
<td>36-45</td>
<td>73.2</td>
</tr>
<tr>
<td>Female</td>
<td>46-55</td>
<td>72.6</td>
</tr>
<tr>
<td>Male</td>
<td>56-65</td>
<td>71.6</td>
</tr>
<tr>
<td>Female</td>
<td>66-75</td>
<td>72.3</td>
</tr>
<tr>
<td>Male</td>
<td>76+</td>
<td>71.4</td>
</tr>
</tbody>
</table>

Figure 4.53: Normative Gender x Age (survey mean scores)

This figure confirms that the gender difference in wellbeing only develops after 18-25 years.

The magnitude of each normative range shows the extent of Personal Wellbeing Index volatility between surveys. This is shown below.

Figure 4.54: Magnitude of Each Normative Range: Gender x Age (Personal Wellbeing Index) using Survey Mean Scores

It is evident that there is much higher volatility between survey mean scores among the youngest and oldest groups. This may be due to the fact that these extreme age groups have lower Ns and so less measurement reliability.
Dot Summary Points for Gender

1. The 1.0 point higher PWI for females is caused by their higher values on the two interpersonal domains of relationships and community.

2. Using the combined data, females have a 1.0 point higher PWI than males. However, this is survey-dependent. There is no systemic gender difference over the 4.0 year period Survey 14 to Survey 23.

3. Relationships shows a significant interaction between gender and survey. It seems possible that the sense of threat over surveys 2 (September 2001) to 12 (August 2004) increased the level of relationship satisfaction for both genders, but more so for females than males.

Over the period of Surveys 13 (May 2005) to 22 (September 2009) the satisfaction of females returned to Survey 1 baseline, while the satisfaction of males shows a gradual rise. In Survey 23 female satisfaction has shown a sudden 3.2 point rise.
4. The only personal domain to be mainly lower for females is safety. This dropped lower following September 11 for females but not for males. These differences were maintained up to October 2007 (S18). Since then the gender differences have been unpredictable.

5. The National Wellbeing Index is at its highest level for both genders. Males tend to score higher than females showing that the Personal Wellbeing Index difference is not due to gender response bias.

6. Satisfaction with the Economic Situation in Australia has received its pre-recession levels.

7. Satisfaction with the natural environment has risen to unprecedented levels for both genders. This may be a consequence of both climate-change denial and the breaking of the drought in most of Australia.
8. Gender differences in personal wellbeing only emerge at 26-35 years of age. They then progressively decrease with increasing age. The reason for this is not understood.

9. The gender difference in satisfaction with relationships is most pronounced in the youngest groups. Males are lower than females.

10. Males who live alone have lower personal wellbeing than females.
11. Female wellbeing does not significantly differ between full-time employed and full-time home care. Male wellbeing is higher for full-time employment than full-time home care.

12. Since Survey 9, the wellbeing of male fulltime workers has increased while the wellbeing of females has remained steady or even decreased.

13. Unemployment has a more devastating effect on the wellbeing of males than on females.
14. In terms of the lowest margin of the normal distribution, the risk of depression (scores <50) is highest in males aged 36-55 years and females aged 46-55 years.

The age of highest risk for depression is 46-55 years.
5. Age

The sample for Survey 23 is well represented in all age groups (Table A5.1). The minimum number of respondents is in the 18-25y group (N=110) and the maximum in the 46-55y group (N=426).

Introduction

The results for Age begins with four comparison sections. Section 5.1 compares Survey 23 against normative ranges generated from Age data (Tables A5.10.1 to A5.11.8). That is, age specific normative ranges are generated by using the mean scores of each age group over past surveys as data. This section therefore allows the mean scores derived from Survey 23 to be compared with the average of similar past mean scores for Age.

Section 5.2 compares each age group, averaged across all surveys, against the generic normal ranges (Table A2.21). This comparison shows how, on average, each age group compares against general population averages.

Section 5.3 compares the age-group differences over time.

Section 5.4 compares the age groups within the demographic characteristics.

5.1. Survey 22 vs. Age-Group Specific Normal Ranges

The purpose of this section is to show the results for Survey 23 compared with the average of similar data for each age group. As will be seen, the age groups differ markedly from one another on all measures, so this section compares current survey data with equivalent data from past surveys.

The results for the PWI and domains are shown in Figure 5.1. The results from Survey 23 come from Table A5.1 and the normative data for groups from Table A5.10.1 to A5.10.10.

The following points are notable:

Patterns concerning ages:

(a) Comparing the age groups the most obvious feature of the PWI pattern is the larger ranges within the youngest and oldest groups. These larger ranges indicate greater volatility of survey mean scores which is mainly an artefact of the smaller Ns within these age groups (A5.1) making their means less reliable and more volatile than the larger N middle-age groups.

(b) All values within Survey 23 lie within their age-specific normal ranges.

(c) In general, the results for Survey 23 are higher than they were for Survey 22. This is uniformly true of standard across all age groups.

(d) Satisfaction with relationships is at the top of the range for all age groups except the oldest.

(e) Relative to their normal range, the oldest group has the lowest profile for Survey 23. Health lies very low within their age-group range.

Summary:

In the previous Survey 21.0 (April, 2009) the two groups that seem to be evidencing signs of distress were the 36-45y and 66-75y groups. On several domains as Health, Achieving, and Future Security, they were at levels that were either very low, or even below, their age-normative ranges. This pattern could have been tied to emerging economic stress and uncertainty for people raising families and for self-funded retirees.
These gloomy predictions are negated by the results from Survey 22 (September 2009) where all groups had normal or very high values across all domains. This trend has been continued in Survey 23.
Figure 5.1: Personal Wellbeing Index and Domains FOR Survey 23 vs. Age-Specific Normal Ranges
Section 5: Age continued

5.1.1.1. Life as a Whole

The following observations can be made:

(a) All current survey values at the top half of their normative mean scores with the exception of 76+y, which lies in the lower half.

(b) The U-shaped pattern across ages in Survey 23 is evident. The lowest values are for the 46-55y group.

5.1.2. National Wellbeing Index

These results are shown in Figure 5.3 and the following observations can be made.

(a) It is clear that the scores for all ages and all domains tend to be higher in Survey 23. This is quite uniform for Economic Situation, Environment, and Business. While two of these probably reflect the improved economic situation in Australia, the increased satisfaction with Environment may be a consequence of the climate-change sceptics gaining media dominance.

(b) Higher wellbeing for the oldest groups is less uniform across the domains, and is most noticeably lower than Survey 22 for Government. Survey 23 (April, 2010) was conducted at the end of the period of Rudd government.

Conclusions:

The Survey 23 values for national wellbeing are generally high. The main exceptions are Economic Situation and Government for the older age groups.
Section 5: Age continued

Figure 5.3: National Wellbeing Index and Domains for Survey 23 vs. Age-specific Normal Ranges
5.1.3. **Government**

The following observations can be made:

(a) In the previous Survey 22 (September 2009) all age groups younger than 65y expressed a level of satisfaction at the top or higher than their normal range. This has now changed, with all values falling back to within the top half of their normal ranges except for the 56-65y group. This now joins the 66-75y and 75+y groups in having a level of satisfaction in the lower portion of their normal range. Their level of satisfaction for these two groups fell in Survey 19 by 4.5 and 8.7 points respectively and this has been maintained.

![Figure 5.4: Satisfaction with Government x Age (18-25y; 76+y)](image)

These are drawn from Table A5.3 and the following observations pertain:

1. Following Survey 2, satisfaction with Government for the oldest group (76+y) rose significantly, and remained higher up to Survey 15. It then suddenly dropped in Survey 16. The reason for this is not known. The national environment was quite uneventful at that time. Satisfaction then rose to its highest level in Survey 19 (66.6 points) and has shown a downward trend ever since. It is now -2.0 points lower than its level at Survey 2.

2. The youngest group (18-25y) showed a slight downward trend from Survey 2 to Survey 17. It then started to rise and has maintained higher levels ever since.

3. The two age groups were no different from one another in Survey 2. This changed over Surveys 3-15 when the 76y+ had higher satisfaction with Government. At Survey 16 this changed again, with the two age groups not differing from one another, and this lack of difference has been maintained.

4. The degree of variation for the oldest group (range 12.4 points) is much the same as for the youngest group (range 15.7 points), but they tended to move in opposite directions until Survey 18, when they rose together. This trend of moving together has continued.

**Summary for Government x Survey:**

The differences between the youngest and oldest age groups in satisfaction with Government are perplexing. They are clearly systematic in that over one block of several years they show a difference from one another, and over another block of years they show no difference. Why this pattern has occurred is not clear.
5.1.4.  Life in Australia

The following observations can be made:

(a) All groups lie in the upper portion of their normative range.

5.1.5.  Terrorist Attack Likelihood and Strength of Conviction

5.1.5.1. Percent Who Consider an Attack Likely

Table A5.4 shows the percentage of each survey, from 9-23, who considered a terrorist attack likely. Over the six surveys Survey 9 to Survey 14 there was no reliable age-related difference in the perceived likelihood of a terrorist attack. In Survey 15 a difference emerged for the first time (Table A5.4) and this has been sustained.

Figure 5.6: The percentage of people who consider that a terrorist attack in the near future is likely (Surveys 22 and 23).

The following observations can be made:

(a) In Survey 22, conducted at a time coinciding with September 11, all groups showed a very marked ‘September 11 effect’ with a heightened perception that an attack is likely.

(b) The present Survey 23 shows a return to low values for the youngest group, but the maintenance of progressively higher values as age increases.
Section 5: Age continued

5.1.5.2. Strength of Conviction

The strength of conviction that an attack will take place is shown in Tables A5.5 to A5.5.3. The first of these shows the age-related distributions from Survey 23 and Table A5.5.1 shows the distribution for the combined data.

Table A5.5.2 shows the means and standard deviations calculated for individual surveys x age, and also summary statistics within each age group.

Table A5.5.3 shows the normal range for the strength of conviction by age. This is the normal range for group scores calculated from the mean scores from past surveys. These results are shown in Figure 5.7.

![Figure 5.7: Strength of Estimated Probability by people who consider a terrorist attack likely in the near future](image)

All groups show a strength of conviction that is close to, or below, their normative mean value.

Only one group (26-35y) shows a value for Survey 23 that is below its normative range.

It appears that the believers maintain an average strength of conviction in the range of 60-70 points despite the number of people with this belief varying quite markedly between surveys and age groups (see Figure 5.6).
5.2. **Age-Group Averages vs. Generic Normal Range**

The age-group data come from Tables A5.10.1 to A5.11.8.

- **Mean age group average using combined data**

**Figure 5.8: Personal Wellbeing Index and Domain Averages vs. Generic Normal Ranges**

Australian Unity Wellbeing Index, Survey 23, Report 23, April 2010
The following observations pertain:

1. The U-shaped pattern across age groups, that is characteristic of the Personal Wellbeing Index, is shared by only two of its domains (Standard and Future Security). It is interesting that standard is highest at the age when household income is lowest. This exemplifies the difference between objective and subjective data. Elderly people adapt to their generally modest, but stable, financial circumstances.

2. Two domains show a falling trend with age (Health and Safety). It is clear that ‘Satisfaction with Health’ can not be used as a proxy measure of SWB.

3. Three domains show a rising trend with age (Achieving, Relationships, Community). It is curious that ‘satisfaction with what you are achieving in life’ rises to its maximum levels in old age.

5.3. **Age-Group Differences Over Time**

5.3.1. **Age x Surveys**

Figure 5.9 shows the changes in Personal Wellbeing Index that have occurred for the youngest and the oldest group (Table A5.2). These are the most volatile age groups over time.

The most notable feature of Figure 5.9 is that the 18-25y group remains higher than it was in 14 previous surveys (Table A5.2):

1. The pattern of differences between these two groups has shown three phases as:
   (a) Survey 1: No difference
   (b) Surveys 2-16: 76+y > 18-25y
   (c) Surveys 17-23: No difference

2. The youngest, but not the oldest, group is significantly higher than it was at Survey 1 (Table A5.2).
3. The oldest group has shown remarkable stability since Survey 2, varying by just 4.1 points (Survey 2 = 76.4 points; Survey 10 = 80.5 points).

4. The youngest group also showed remarkable stability over the first 21 surveys, varying by just 4.3 points over the whole eight year period (Survey 18 = 77.1 points; Survey 16 – 72.8 points). Now, however, this range has expanded to 6.4 points.

5. These are the two age groups to have shown the most change over the course of these surveys. The scores for the middle-range age groups have shown sporadic changes but, as shown in Table A5.2, only marginally significant changes over time.

6. Possible reasons for the rise in the wellbeing of the oldest group are as follows:

(a) The first involves reminiscence regarding the Second World War, the fact of survival, and the mateship of that time.

(b) The second involves heightened arousal. Both interest and anxiety are stimulated by terrorist atrocities and Australia at war. If the anxiety can be dampened, then positive arousal dominates.

Anxiety may be quelled if the Government message, that ‘our side’ is winning the ‘war on terror’, is seen as credible. Moreover, elderly people are generally more receptive to such propaganda. They have a stronger positive regard for Government than younger people (Table A5.1), and fewer elderly people consider the terrorist risk in Australia to be high (Table A5.1). As one consequence, the continued media presentation of overseas terrorist activities may have caused the heightened sense of wellbeing in elderly Australians.

(c) There is evidence from other research that older people are better at accentuating the positives and ignoring the negatives. However, this explanation does not account for the finding of no age-group differences prior to September 11.

(d) It is possible that older people, having more established personal and community relationships, can draw on these more effectively during times of threat to buffer the negative impact of world events. It may also be that the sense of threat caused these people, many of whom live alone, to bond and connect more strongly with their peers, and that these enhanced relationships have persisted, maintaining the elevated sense of wellbeing.

While any of these explanations are possible, they do not account for the fact that the wellbeing of this oldest group has remained elevated over the seven years following September 11.

Of course, none of these explanations can be used to account for the rise in the wellbeing of the youngest group since Survey 11.

What the oldest and youngest groups do have in common is that a lower proportion than the other age groups regard a terrorist attack as likely (Table A5.4) and, of the believers in an attack, the strength of their belief is lower (Table A5.5.3). However, how this could be used as an explanation for change in wellbeing is not clear.
5.3.1.1. The Oldest Group

Change over surveys in the two domains of Health and Relationships for the 76+ year group are illustrated in Figure 5.10.

Both of these domains have shown substantial change, with a range of 9.5 points for health and 9.7 for relationships.

The significant rises in health satisfaction at Survey 6 and Survey 9 are remarkable because, for the population as a whole, this domain has been the most consistent showing no significant change between surveys (Chapter 2). However, over the past 7.0 years it has remained at a level not statistically different from Survey 1.

The rise in relationship satisfaction has been more persistent and has remained fairly consistently above Survey 1. Its value in the current survey is no different from Survey 1.

These trends are further discussed in Report 15.0.
5.4. **Age x Demographics**

5.4.1. **Age and Household Composition**

The cumulative data from Surveys 9-22 are presented in Table A5.6. The trends in personal wellbeing are shown below in the context of the age-specific normative range (Table A5.10.1).

![Age x Household Composition (cumulative data)](image)

What is most striking from Figure 5.11 is the very small number of data-points that lie within the normative range. This indicates a broad dichotomy within the population as people who live with a partner and people who do not. While this dichotomy is less clear cut in the youngest group (18-25y) and people older than 66 years, it applies very strongly to the middle age groups. It appears that having a partner to live with, between the ages of 26-65 years, is a crucial ingredient for personal wellbeing.

Other observations in relation to Figure 5.11 are as follows:

(a) People living with their partner alone, or living with their partner and children, are statistically indistinguishable up to age 56-65. However, at 66-75y (N=75) the addition of children reduces wellbeing towards the bottom of the normal range. People aged 66-75y living with their partner and children constitute 4.3% of this age group. This is a curious result because the oldest group living with children show a significant rise in wellbeing. It is possible that for the oldest group the burden of care has shifted to the children whereas at 66-75y the older adults are still
responsible for providing the care, commonly in a low-income household since both older adults will likely have retired from work.

(b) Living alone is a poor option for people younger than 66 years. It is likely that people with low wellbeing live alone either because they have recently broken from a relationship or because they cannot find a partner to live with them. The former reason could account for the very low levels of wellbeing in people aged 36-65 years who live alone.

(c) Living with parents is a good option for people aged 18-25, but not generally thereafter. In our society it is relatively unusual for people older than 26 years to be living with their parents. This group will include people who are unable to find a cohabiting partner, who lack the financial or other resources to move elsewhere, or who have returned to their parents following a broken relationship. However, the situation changes quite dramatically at 56-65y at which age the wellbeing of this group re-enters the normal range. It could, possibly, coincide with the parents moving to live with their adult children.

(d) People who live with other adults who are neither their partner nor their parent, have consistently low personal wellbeing at ages <65 years. These people may have low income and would prefer a different form of accommodation.

(e) Sole parents have very low wellbeing until 66-75y when their wellbeing enters the normative range.

Overall, it is extraordinary to observe the dramatic change that takes place after 66 years. The differences between groups become far less and they all approximate the normal range. Whether this increasing homogeneity is due to selective death or the common post-retirement experience is uncertain at this stage.
5.4.2. Age and Relationship Status

The cumulative data from Surveys 9-23 are presented in Table A5.7 and Figure 5.12. Key observations are as follows:

(a) Once again, this Figure exemplifies the importance of living with a partner for middle-age people. This does not apply to people aged 18-25 or older than 66 years, whose wellbeing appears much less dependent on the presence of a partner.

(b) The consistency of wellbeing across age for people who live with their partner is extraordinary. The variation across the full age range for people who are married is just 2.3 percentage points.

(c) The decrease in the normal range of wellbeing in middle age (see Figure 5.12) is not due to the people with partners, but to the people without a partner.

(d) Whether subjective wellbeing ‘naturally’ rises with age seems uncertain from these data. The most stable group are those who are married, and the rise from 18-25 years to 76+ years is a modest 2.2 points. What seems more clear is that not having a partner in middle-age is generally quite catastrophic for personal wellbeing.
(e) Defacto couples have a consistently lower level of wellbeing than couples who are married up to 66-75y at which age they are statistically equivalent. Perhaps this is due to greater uncertainty and lower commitment in defacto relationships.

(f) The wellbeing of people who have become divorced or separated is low as expected.

(g) The wellbeing of widows is interesting since this rises with age to reach very high levels (79.0) at age 76+ years. This possibly supports the proposition that happy people live longer.

(h) The majority of people aged 18-25 years who have never married (81.3%), have normal levels of wellbeing (75.3). However, in later age-groups the relative size of this group relative to each age cohort falls markedly (Table A5.6) and, as it does so, group wellbeing systematically falls up to the 46-55 year group (Figure 5.12). Following this, however, wellbeing progressively rises, to enter the normal range at 66-75y.

One way this pattern of data could come about is through the selective death of the most unhappy people after 56 years of age. If this is correct it would support the hypothesis that the fall in the wellbeing of the never-married group up to 46-55y is caused by the most unhappy people failing to find a partner.
5.4.3. Age and Work Status

While most groups lie within the age-normative range (Table A5.8), the following are exceptions:

(a) People who are unemployed lie marginally within the normative range at 18-25y. Beyond that age their personal wellbeing shows a marked deterioration and remains well below normal up to 56-65y. Beyond this age, people without paid employment would usually describe themselves as retired rather than unemployed.

(b) The wellbeing of full-time students is normative provided they are young (18-35y). Thereafter their wellbeing lies below the normal range.

(c) Early retirees (36-55y) have below normal wellbeing. This may be due to the forced nature of their retirement due to poor health or other circumstances beyond their control.
5.5. **Normative Data Generated from Individual Scores**

Table A5.9.1 has been constructed by averaging the Personal Wellbeing Index values of all individuals who fall within each age-range across all surveys. These results are shown in Figure 5.14.

There are three interesting features of these data as follows:

(a) They are very regular in two respects. First the range of two standard deviations for the entire database (N=45,245) conforms almost precisely with the theoretical normal range of 50-100 points. The top of the empirical range (Table A5.9.1) averages 99.9 points and the bottom averages 49.5 points. Second, the differences between the extent of the ranges of the seven age groupings is just 5.6 points (from 46.4 : 18-25y to 51.8 : 46-55y). The correlation between the mean and standard deviation across the seven age groups is .198 (NS).

(b) The base of the ranges show a dip in the 36-55y age groups. This indicates a downward extension of the Personal Wellbeing Index and indicates a higher than usual (compared with the other age groups) proportion of the sample experiencing homeostatic failure (individual values <50). This is due to the people without partners within this age range. Following 55 years this dip disappears, and of particular interest is the lack of any downward range extension within the oldest group (76y+). This indicates that homeostatic failure, producing lower Personal Wellbeing Index scores, is no more common among the most elderly sample than among the younger age groups. This attests to rugged maintenance of homeostatic control within the most elderly group and is consistent with the decoupling hypothesis presented earlier.

(c) The top of the range shows a gradual but persistent rise. This is quite different from the rise in the Personal Wellbeing Index calculated using survey mean scores, which shows the sudden emergence of higher scores at 56+ years (Figure 5.1). In Figure 5.14, the data from individuals show a gradual rise across all age groups. Beginning with the 18-25y group, the increment between adjacent age ranges is 0.0%, 1.2%, 0.6%, 0.8%, 0.6%, 0.8%. One explanation for this rise is homeosis (Renner, 2003). It is possible that, as people get older, they learn to adapt more effectively to potentially stressful situations. As one consequence, an increasing proportion of people within the older groups maintain their set-point and the gradual rise in the top of the wellbeing range reflects this process. It is also consistent with progressive decoupling of wellbeing from illbeing.
5.6. **Normative Domain Scores (raw data)**

Tables A5.9.2 to A5.9.8 show the accumulated data for the Personal Wellbeing Index domains.

It is evident that most of the variation with age occurs mainly at the lower margin of each normative range. The upper range of health varies by just 2.4 percentage points (113.0 to 115.4) across the seven age ranges, which is evidence of remarkable stability. The upper range for relationships varies by 6.5 percentage points (117.0 to 123.5). In contrast, the variation across age in the lower range for health is 15.3 points (27.6 to 42.9) and relationships are 13.6 points (33.0 to 46.6). These are remarkably similar degrees of change. The correlation between these lower margins for health and relationships is -.79. This is consistent with the idea of domain compensation, where a decrease in one domain is compensated by a rise in another in order to maintain a steady state of SWB.
Dot Summary Points for Age

1. With the exception of the oldest group, all other ages lie at the top of their normal ranges.

2. After the PWI being significantly different between the youngest and oldest groups over Surveys 2-16, the youngest group has sustained its rise to be statistically no different from the oldest group. The reason for this change is not known.

3. While Health Satisfaction remains high for the youngest group, this is not so for the other ages.
4. Satisfaction with Business is now very high for all ages.

While Satisfaction with Government remains high for the younger groups, it is very low for people aged 56 years and older. This was the period around the end of the Rudd government.

5. Satisfaction with National Security is very high within the younger groups, but average for the older groups.
6. In their middle age, people who do not live with a partner are at risk of low wellbeing.

7. Living with your children as a sole parent from 66 years and older is good for your wellbeing.

8. The average wellbeing of married people varies by 2.3 points across the age-range. The wellbeing of people who are divorced varies by 6.3 points, is lowest at 46-55, and never enters the normal range.
9. Unemployment has a devastating effect on personal wellbeing beyond 25 years of age.
6. Household Composition

6.1. Data Distribution

The data for this chapter were derived from the following question:

"I am going to ask who lives in your household. Please indicate from the list I will read who lives with you.

<table>
<thead>
<tr>
<th>Household Composition</th>
<th>Survey 23</th>
<th>%</th>
<th>Combined Surveys</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No one, you live by yourself</td>
<td>329</td>
<td>17.3</td>
<td>16.7</td>
<td></td>
</tr>
<tr>
<td>You live with your partner (only)</td>
<td>629</td>
<td>33.0</td>
<td>31.4</td>
<td></td>
</tr>
<tr>
<td>With partner and child</td>
<td>640</td>
<td>33.6</td>
<td>31.1</td>
<td></td>
</tr>
<tr>
<td>With one or both of your parents (only)</td>
<td>78</td>
<td>4.1</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>With adults who are neither your partner nor parent (only)</td>
<td>52</td>
<td>2.7</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Sole parent</td>
<td>110</td>
<td>5.8</td>
<td>6.9</td>
<td></td>
</tr>
</tbody>
</table>

The proportions for Survey 23 are similar to the combined survey data (Table A6.1). The largest difference is +2.5% Partner and Child. Tables A6.30.1 to A6.30.15 show the proportion of each household group for each survey since Survey 9. There is no obvious trend for change in any group.

In terms of the combined data, it is notable that the highest proportion of respondents (62.5%) live with their partner either as a couple alone (31.4%) or with one or more children (31.1%). The third most common form of household composition is people living alone (16.7%).

6.2. Introduction to Sections 6.3 and 6.4

Section 6.3 compares the current data from Survey 23 with the most relevant past data. That is, Survey 23 is compared against specific normative ranges generated from Household Composition data. These Household Composition specific normative ranges are generated by using the mean scores of each Household Composition group over past surveys as data. This section therefore allows the Survey 23 data to be compared with the average of similar past data.

Section 6.4 compares the averages for each Household Composition group against the generic normal ranges. For example, the average satisfaction for health within the sole parent group is compared to the generic normal range for health satisfaction. This comparison allows each household group to be compared against general population averages.

6.3. Survey 22 vs. Specific Normal Ranges for Household Composition

The results for Figure 6.1 come from Table A6.2 for Survey 23 and Tables A6.31 to A6.36.
6.3.1. **Personal Wellbeing and Domains**

\[ \text{x Value for Survey 23} \quad \uparrow \text{Specific normative ranges for household groups} \]

The Personal Wellbeing Index of all groups lies within its specific normal range. This also applies to the domains with a few minor exceptions.
6.3.2. National Wellbeing and Domains

These generally follow the same pattern as shown by the National Index (Table A6.3). Satisfaction with Government is shown below. The Household Composition specific normative data come from Tables A6.3 to A6.4.1.

\[ x \text{ Value for Survey 23} \]

\[ ^\dagger\text{Specific normative ranges for household groups} \]

The National Wellbeing Index for all groups lies within its specific normal range. This also applies to the national domains with a few minor exceptions.

Figure 6.2: NWI Specific Normal Ranges for Household Groups

The National Wellbeing Index for all groups lies within its specific normal range. This also applies to the national domains with a few minor exceptions.
6.3.3. Life as a Whole and Life in Australia

The figures below show the values for Survey 23 (Table A6.2) in relation to the normative range for each household group (Tables A6.30 to A6.41).

![Figure 6.3: Household Composition: Life as a Whole](image1)

![Figure 6.4: Household Composition: Life in Australia](image2)

Most groups have high satisfaction with Life as a Whole and Life in Australia at the time of Survey 23 relative to their own specific normal range. Only Sole Parents lies in the lower portion of their range.

The pattern of inter-group differences is similar between the two measures. However, the substantially higher scores recorded for Life in Australia than for Life as a Whole (around 5-10 points higher) seems to have attenuated the extent of the household differences. While the highest and lowest groups differed by 10.4 percentage points on the Life as a Whole, this is reduced to 3.8 points for Life in Australia and 6.5 points for the National Wellbeing Index. It may be that ‘Life in Australia’ evokes some common abstract patriotism that becomes weakened when the item refers to some more specific aspect of national functioning, as in the national domains. Maybe this abstract dimension could be better tapped by asking ‘How satisfied are you with Australia as a whole?’
6.3.4. National Survey-Specific Aspects: Terrorist Attack

These results are drawn from Table A6.2 (Survey 23) and A6.43 (Household Composition specific normal range).

As expected, the trend for a decreasing percentage of people who are expecting an attack is evident for most groups.

The strength of belief of those who believe an attack is likely is shown below. Results are drawn from Table A6.2 (Survey 23) and A6.44 (Household specific normative data).

The following observations pertain:

1. The ‘Other adult’ group has varied between these surveys more than the other groups as shown by the extent of the normal range. The least variation is within people living only with their partner. To some extent this is due to differential sample size.

2. There is little relationship between people’s estimates of the current probability of an attack (Figure 6.5) and the strength of their beliefs, which have not changed since the previous survey.
3. There is little evidence of adaptation. The current strength of the feeling that an attack is likely remains within 2.0 points of the mean value and some lie slightly higher. Thus, even though over time, fewer people regard an attack as likely, those that do have a strength of belief little different from previous surveys. Clearly, therefore, there is no simple relationship between the proportion of people with this belief and the strength of this belief among the ‘believers’. It is as though the threshold belief strength to answer ‘Yes’ to this question remains constant over time, but the number of people whose strength of belief meets that threshold decreases over time.

6.4. Comparisons With Generic Normal Ranges for Household Groups

6.4.1. Personal Wellbeing Index

The figure below relates the Personal Wellbeing Index calculated from combined data (Table A6.1).

Several aspects of this figure can be noted as follows:

(a) The normative range has been calculated from the survey mean scores (Chapter 2). It represents the range within which we have 95% confidence of finding the mean of any future general population survey.

(b) The ‘Threshold for depression risk’ is set at a value of 70. This is an approximate value derived from other research which shows that groups that fall below this level have a higher proportion of people who are depressed than groups that lie within the normative band. It can be seen that sole-parents (6.9% of the sample) have a mean score which lies at this threshold.

(c) There is a 7.0 percentage point difference between the highest and the lowest groups. This is a substantial range.

(d) The groups with the highest wellbeing are those people living with their partner in any combination with other people. Heading this list is Partner Only (77.5 points) and Partner and Parents (77.4 points). In respect of the latter group, it is interesting that only 0.4% of the total sample live in these circumstances, indicating the extraordinary dominance of the nuclear family.

(e) The presence of children has a variable effect on adult wellbeing, depending on the other people present in the household and household income (see also Chapter 3).
With no other adult present, the influence of children is somewhat negative, with the wellbeing of single parents (single adult: plus children: 70.5) being into the territory of high risk for depression. Their wellbeing is 1.4 points lower than people who live alone. The wellbeing of both groups however, is highly income dependent (Chapter 3).

In the presence of a partner, parents or other adults the additional influence of children is non-significant.

In summary, as a simple demographic, the addition of children to a household has little impact on parental wellbeing except in the case of single parents. This is, however, powerfully moderated by income (Chapter 3).

- Of the six ‘partner’ groups, three lie above the normative range (76.6). Living with other adults in addition to partner reduces wellbeing by 1.7 percentage points over living with partner alone. Whether this is due to reduced relationship resources or financial resources cannot yet be reliably determined.

- Living with parents allows normative range wellbeing except when other adults also live in the household. This reduces wellbeing by 0.4 percentage points from living with parents alone.

- Living with other adults who are neither a partner nor parent is generally bad for wellbeing. Of the six relevant groups three lie well below the normative range. The presence of a partner counteracts this tendency.

- People who live alone have a level of wellbeing that lies 1.7 points below the normative range. However, this is gender-dependent with females having higher wellbeing than males (see Chapter 4).

6.4.2. Personal Domains

The results in this section are drawn from Table A6.3 (combined data), and the combined whole surveys normative data (Table A2.21).
6.4.2.1. Live Alone vs. Generic Normal Range (combined data)

Figure 6.9: **Live Alone** vs. Generic Normative Ranges

It can be seen that the domains values for the people who live alone are generally low and even below the normative ranges for the population. Overall, the Personal Wellbeing Index lies 1.7 points below the normative range. The major deficits among the domains are with relationships (-8.3 points) and health (-3.0 points). Satisfaction with relationships is so severely deficient for the people in this group it is probably pulling satisfaction with the other domains down. In particular, this may be causing minor health issues to seem important through the lack of close friend or partner with whom such matters can be discussed.

However, three of the domains do not differ from population norms (safety, community and future security).

6.4.2.2. Live with Partner vs. Generic Normal Range (combined data)

Figure 6.10: **Live with Partner Only** vs. Generic Normal Range

It can be seen that the personal wellbeing of people living with their partner alone is higher than the generic population normal range. This also applies to most of the domains, with the most pronounced advantage being with Relationships. Two domains (Health, Safety) lie within the generic normal range.
6.4.2.3. Sole Parent vs. Generic Normal Ranges

In sharp contrast to the people who live with their partner alone, sole parents have a level of personal wellbeing lower than the generic range on the Personal Wellbeing Index and most domains. Only safety just makes it into the bottom of the generic normal range. It is an interesting reflection on our society that we fail to offer sufficient resource assistance to these families.

6.4.2.4. Partner and Children vs. Generic Normal Ranges

People who live with their partner and children generally have high wellbeing. They are above the generic range for Health and Relationships.
6.4.2.5. Live with Parents vs. Generic Normal Ranges x People who live with their Parents

These people have generally low wellbeing despite having high satisfaction with Standard, Health and Safety. Three domains lie at or well below the generic range as Achieving, Relationships and Community.

6.4.2.6. Other Adults vs. Combined Survey Mean Scores

The domain values for people living with other adults are generally low with two exceptions. Health and Future Security are just within the normal population range, probably due to the generally young age of this group. Safety is also in the normal range and this domain seems generally quite resistant to change.
6.4.2.7. Partners in the Presence and Absence of Children

An interesting comparison is in relation to the people living with their partner in the presence or absence of children. This is shown below.

![Figure 6.15: Live with Partner in the Absence/Presence of Children (combined data)](image)

The overall pattern shows that living with a partner is generally advantageous to wellbeing, but that the addition of children diminishes that advantage. While this is significant but fairly trivial in terms of the Personal Wellbeing Index (-0.7 points), it is also significant in the case of two domains as Living Standard (-2.7 points) and Relationships (-2.6 points). However, this is different for the domain of health satisfaction. Here, the partner alone causes no change from the population average, whereas partner and children causes a significant rise in satisfaction (+2.2 points). It may be the case that the responsibility of child care causes parents to be more positive about their own health. In any event, it is this domain that prevents the overall Personal Wellbeing Index from being significantly different between the two groups. It also appears to be an example of Domain Compensation involving the domain of Health.

This overall pattern indicates that, while the partner plus children have normal-range wellbeing, this is more fragile than the partners living alone. This latter group have higher levels of satisfaction in the two key domains that reinforce homeostasis (money and relationships). Moreover, the domain showing an advantage for the parents plus children is health. So if this domain fails it would be expected that it may have serious consequences for the overall wellbeing of these people.

6.4.2.8. Living with Partner Only vs. Children Only (Sole Parent)

The next comparison of interest shows that partners and children are not fungible. The contrast between someone living only with their partner or only with children is very stark and shown in Figure 6.16. This is based on results shown in Tables A6.31 and A6.33.
The advantage of living only with a partner is most obvious in the domain of relationships. Here the two groups are separated by 18.5 points. Couples also have much higher satisfaction with their Standard of Living and Future Security.

It is notable that the most affected domain for sole parents is relationships rather than Standard of Living, even though most are on very low incomes (see Chapter 3). This is consistent with the view that the most important factor missing from these people’s lives is an intimate relationship with another adult.

6.4.3. National Wellbeing Index – Generic Normal Range

These results come from Table A6.3

It is notable that only the sole parents fall at the bottom of the normal range. The three groups living with a partner or parents have a higher National Wellbeing Index than all of the other three groups (Table A6.3).
6.5. **Combined Household Composition and Marital Status**

Table A6.4 provides the comparative data (combined surveys).

![Table with data for Household Composition and Marital Status](image)

Figure 6.18: Household Composition x Marital Status: Personal Wellbeing Index

(a) People who are married have higher wellbeing than people in defacto relationships. In the absence of children the advantage is +2.2 points and in the presence of children +2.3 points. In the absence of children, the married group has the highest SWB (77.9 points) of any of these groupings. Thus, the addition of children, as a drain on household resources, has more potential to reduce this exceptionally high wellbeing towards the normal range (-0.9 points). However, this is income dependent (see Chapter 3).

(b) Widows living either alone or with other adults have high wellbeing. These people tend to be elderly with a low but secure income through either a pension or superannuation. However, widowed sole parents lose -3.4 points over widows who live alone, to lie at the bottom of the normative range.

(c) People who have never married and who have moved away from their parents without a partner, have low wellbeing. It does not make much difference whether they live alone (69.4) or with other adults (71.9).

(d) As expected, people who are separated or divorced have low wellbeing. However, it is interesting that, compared with living alone, the wellbeing of both groups marginally decreases still further in the presence of children (separated -2.1 points; divorced -1.4 points).
6.5.1. Income x Household Composition x Marital Status

These Household Composition x marital status groups are separated by income in Tables A6.5-A6.12.

6.5.1.1. Live Alone x Marital Status x Income

While the Never married, Divorced, and Separated show much the same trajectory with increasing income, widows are very different. Even at the lowest income their wellbeing falls within the normal range. This is mainly due to their older age.

The lack of any substantial difference between the three other groups is interesting. It goes some way to answering the question of whether the low wellbeing of Never Married is due to some personality difference. These data indicate otherwise. The fact that the Never Married and the other two groups who were previously married do not differ, indicates the dominating influence of income. In other words, the commonly reported finding that people who have never married have low wellbeing is primarily a function of their low household income. Their wellbeing enters the normal range at an income of $101-150K. The divorced group, on the other hand, remain well below the normal range even at $101-150K.
6.5.1.2. Sole Parent x Relationship Status x Income

The sole parents who are married do much better than the other groups. This may be due to respite arrangements with their spouse.

**Conclusion**

Being a sole parent is generally harmful to adult wellbeing. However, there are two caveats as:

1. A major factor is low household income. Married enter the normal range at $31-60K, Widowed enter at $15-30K. Projecting the trend lines above, it is expected that at a gross household income in excess of $100,000, sole parents who are never married or divorced would also enter the normative range.
2. Widows do better than the other three non-partnered groups, probably because they are older and are living with adult children.
3. Sole parents who remain married tend to have higher household incomes than other sole parents. These people may retain the emotional security of marriage, and even perhaps some instrumental support, even though they regard themselves as sole parents. Clearly this group of sole parents do very well and they constitute 22.3% of all sole parents (Table A6.4).

6.5.1.3. Partner plus Children x Relationship Status x Income

Figure 6.21: **Partner plus Children** x Relationship Status x Income

The normative range is shown for comparison. The chart indicates that marital status and income have a significant impact on personal wellbeing. Married parents generally fare better than those in other relationship statuses, especially with higher incomes.
It is notable that the defacto lag by a couple of percentage points at each level of income. In terms of the Partner plus Children group it is notable that the ceiling of about 81-82 points is evident.

6.6. **Household Composition x Work Status**

6.6.1. **Household Composition x Unemployment**

The data on people who are unemployed (Table A6.13) are shown below:

![Graph showing PWI for different household compositions](image)

The protective element of having a partner is very evident here. Both of the partner groups are within 2 points of the normal range. This is in sharp contrast to people who live alone. Indeed, this group of unemployed people living alone have one of our lowest levels of wellbeing on record (60.1 points) and 22.9% of the unemployed people in our samples live in this circumstance.
6.6.2.  Living Alone x Work Status

The data for full-time work status are given in Table A6.13 and for part-time in Table A6.14.

The apparently best circumstances for someone living alone, if they are not retired, is to be engaged in part-time volunteer work. However, it does not resolve the issue of causation. Do people with normal levels of wellbeing seek voluntary work whereas people who have low levels do not? It is notable that full-time voluntary work is less effectively linked to higher wellbeing than part-time voluntary work.

It is also interesting to note that the activities of paid work and study are unable, of themselves, to raise wellbeing to normal levels.

The normal-range wellbeing of people who are Full-time retired is consistent with their older-age.
6.6.3. **Sole Parents x Work Status**

Data are from Tables A6.13 and A6.14.

![SOE PARENTS](image)

The strongest protective factor for Sole Parents seems to be retirement. These people are one of the very few sub-groups of sole parents whose wellbeing lies in the normal range. It is likely that they are elderly, on secure but modest incomes, and perhaps caring for grandchildren.

The second sub-group who are doing relatively well, lying just below the bottom of the normal range, are parents in full-time work, or who are mixing Part-time work with Part-time volunteering. They are likely to have a higher household income than the other groups.

In terms of part-time activity, there is no difference in the wellbeing of sole parents who are employed or engaged in volunteer work. Both groups lie 3-4 points below the normative range.
6.6.4. Sole Parents x Part-time Work Status x Income

These results are found in Tables A6.16-A6.23.

It appears that part-time work, volunteering and study are similarly related to levels of wellbeing. At $61-100K both groups enter the normal range. Income is a strong determinant of wellbeing for all groups.

6.6.5. Live Alone x Part-time Work Status x Income

For people who live alone, the part-time activity that is most consistently associated with normal levels of wellbeing is volunteering. Curiously, rising income has no systematic effect to raise the wellbeing of this group.

Part-time study is associated with consistently low levels of wellbeing for people who live alone, and again this is not much influenced by income.

Part-time work, on the other hand, shows a clear relationship between wellbeing and income, such that wellbeing approximates the bottom of the normal range at $61-100K.
In summary, people who live alone and with part-time activities show a weak relationship between income and wellbeing. The missing ingredient in their lives is probably a personal relationship.

6.7. Regressions

Tables A6.24-A6.28 show the regressions of the seven domains against ‘Life as a Whole’ for people who live alone and have never married. These tables depict the results from different income ranges.

<table>
<thead>
<tr>
<th>Domain</th>
<th>All combined data sr² (n=1461)</th>
<th>Live alone – never married</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$&lt;15,000 $15,000-$30,000 $31,000-$60,000 $61,000-$100,000 $101,000-$150,000</td>
<td></td>
</tr>
<tr>
<td>1. Standard</td>
<td>4.1 4.6 6.8 3.6 3.2</td>
<td>8.7</td>
</tr>
<tr>
<td>2. Health</td>
<td>1.0 0.7 0.9 1.2 0.5</td>
<td>1.1</td>
</tr>
<tr>
<td>3. Achieving</td>
<td>8.2 8.6 7.1 8.6 15.0</td>
<td>10.4</td>
</tr>
<tr>
<td>4. Relationships</td>
<td>0.4 0.0 0.2 1.5 0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>5. Safety</td>
<td>0.0 0.1 0.0 0.1 0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>6. Community</td>
<td>0.8 0.7 0.8 1.1 1.2</td>
<td>3.9</td>
</tr>
<tr>
<td>7. Future Security</td>
<td>0.5 0.3 0.1 0.5 1.3</td>
<td>2.4</td>
</tr>
</tbody>
</table>

| Unique          | 14.8 15.0 15.9 16.7 19.7 | 26.6 |
| Shared          | 41.1 49.6 27.9 39.1 30.7 | 10.1 |
| R² (adjusted)   | 55.9 64.6 43.8 55.8 50.4 | 36.9 |

Shade = significant contribution

The sr² statistic represents the proportion of unique variance contributed by each domain. It is calculated as the square of the ‘Part’ statistic that can be requested from SPSS in association with a multiple regression. When this value is multiplied by 100 it gives the percentage of unique variance contributed by the item. Thus, for the <$15K group, satisfaction with standard of living contributes 4.1% of unique variance within the total 56.4% explained variance for this sample.

Observations of this table are as follows:

1. There is a tendency for the amount of unique variance to increase with income.
2. The proportion of shared variance shows a tendency to decrease with rising income.
3. The strongest contributory domain is most commonly Achieving in Life rather than Standard of Living.
4. Relationships tend to make a weak contribution.
6.8. **Specific Normative Ranges for Household Composition Groups**

The normative ranges from individuals are calculated by combining all of the raw scores within each category into a single combined sample. Two standard deviations on either side of the mean then defines the normal range. The magnitude of this range indicates the degree of heterogeneity within each combined sample.

6.8.1. **Specific Norms using Data for Individuals**

The above results come from Table A6.37. The outstanding domain for the Live Alone group is Relationships, which has a low mean (69.0 points) and a very large normative range (109.4 points). This clearly points to the high heterogeneity within this group. The highest domain is Safety (78.0 points) which also shows the smallest range (76.7 points).

The above results come from Table A6.31. The experience of living with a partner has a homogenizing effect on people’s reported domain satisfaction. The normative ranges are all lower than the lowest range for the live alone group. They range from 77.5 points (Health) to 60.4 points (Relationships).
Figure 6.29: Sole parent: Specific normative data for individuals

The above results come from Table A6.33. This profile is similar to Live Alone. The largest normative range is Relationships (109.7 points) and the smallest are Standard of Living (77.2 points) and Safety (76.9 points). These high ranges are indicative of a highly heterogeneous sample.

Figure 6.30: Live with partner and children: Specific normative data for individuals

The above results come from Table A6.36. The experience of Living with a Partner and Children homogenises the domain satisfactions even more than it does for people Living with their Partner Only. The largest range is 72.1 points (Community) and the smallest is Standard of Living (60.9 points).
Figure 6.31: Live with parents: Specific normative data for individuals

The above results come from Table A6.3. As might be expected the most variation occurs within Relationships (89.7 points) and the smallest in Standard of Living (68.0 points).

Figure 6.32: Live with other adults: Specific normative data for individuals

The above results come from Table A6.39. The most variation occurs within Relationships (97.5 points) and the smallest is Safety (71.6 points).

6.8.2. Specific Normative Ranges for Household Composition Groups for Groups

The following normative ranges have been calculated by treating survey mean scores as data. The ranges indicate the extent of variability between surveys. All are based on N=15 survey mean scores.
The above results come from Table A6.31. The most variable domain is Relationships (range 12.1 points), just as it was for the normative range calculated from the individual scores. Similarly, Safety (range 3.2 points) is the least variable domain. The rank-order of the domain ranges is shown below:

<table>
<thead>
<tr>
<th>Domain</th>
<th>Individual scores</th>
<th>Survey mean scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Health</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Achieving</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Relationships</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Safety</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Community</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Future</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

It can be seen that the rankings are very similar, which is interesting. It implies that the same forces that cause within-sample variation in the domains also causes between-sample variation between surveys. While this is intuitive in that the scores from individuals comprise each survey mean score, it also implies some commonly-felt influence on the individuals making up each sample, rather than fluctuations due to random changes between individuals.

It also implies that, while this common influence affects all domains, it affects them equally in that their natural ranking with respect to one another is maintained as they move to higher or lower values.
The above results come from Table A6.35.

The above results come from Table A6.37.

The above results come from Table A6.39.
These results above come form Table A6.41.
Dot Point Summary for Household Composition

1. The highest levels of personal wellbeing are achieved by people living with their partner. The lowest personal wellbeing is found among sole parents. Their low wellbeing puts many of them at risk of depression.

Living with a partner is most conducive to enhance wellbeing.

2. People who live alone have a major loss of wellbeing in terms of relationships and health. The relative lack of buffering caused by poor relationship availability makes the person more vulnerable to life stressors. Thus, minor health issues may seem important due to the lack of a close friend with whom such matters can be discussed.

CHILDREN

3. For a couple living together, the presence of children reduces two domains (Standard of Living, Relationships) and enhances one domain (Health). This may be an example of domain compensation involving perceived health. The net result is little difference between these groups in the overall Personal Wellbeing Index. However, since money and relationships are the most important domains for overall wellbeing, the relative deficit in these for partners with children may make them less resilient to additional stress, particularly if this is caused by poor health.
4. The domain that is most deficient for sole parents is Relationships. It is particularly notable that this disparity in satisfaction is far higher than it is for Standard of Living even though the Sole Parents are a very low income group. It seems evident that the major factor missing from the lives of Sole Parents is an intimate relationship with another adult.

The major factor missing from the lives of sole parents is another adult.

5. For people who live alone, those who are married, and widows have above normal range Personal Wellbeing Index.

People who live alone who are also married or widowed have high wellbeing.

6. With the exception of widows, the Personal Wellbeing people who live alone is highly income-dependent. The wellbeing of Never Married and Separated enters the normal range at an income of about $101-150K. However, the wellbeing of people who are divorced remains below the normal range at this level of income.

The wellbeing of people who live alone is highly income dependent.
7. Sole parents who are widowed or married have normal-range wellbeing at $61-100K. Those who have never married or who are separated or divorced require $101-150K to achieve normative range wellbeing.

8. One key to wellbeing for people who are unemployed is to live with a partner. The presence of children diminishes wellbeing to some extent, but only among low income couples.

9. For Sole Parents, part-time work is associated with only marginally higher wellbeing than part-time volunteering. Both groups enter the normal range at $61-100K.
7. Marital Status

7.1. Data Distribution

*I am going to ask you about your marital status. Please indicate any of the following categories that apply to you at the present time.

<table>
<thead>
<tr>
<th>Status</th>
<th>Survey 23</th>
<th></th>
<th>Combined Surveys 9-23</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Married</td>
<td>1,200</td>
<td>62.8</td>
<td>16,526</td>
<td>58.2</td>
</tr>
<tr>
<td>Defacto or living together</td>
<td>128</td>
<td>6.7</td>
<td>2,149</td>
<td>7.6</td>
</tr>
<tr>
<td>Never married</td>
<td>246</td>
<td>13.0</td>
<td>4,624</td>
<td>16.3</td>
</tr>
<tr>
<td>Separated but not divorced</td>
<td>51</td>
<td>2.7</td>
<td>891</td>
<td>3.1</td>
</tr>
<tr>
<td>Divorced</td>
<td>146</td>
<td>7.6</td>
<td>2,179</td>
<td>7.7</td>
</tr>
<tr>
<td>Widowed</td>
<td>139</td>
<td>7.3</td>
<td>2,007</td>
<td>7.1</td>
</tr>
<tr>
<td>Total</td>
<td>1,910</td>
<td>100.0</td>
<td>28,376</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The proportion of respondents in each category for Survey 23 (Table A7.1) closely reflect the proportions from the combined surveys (Table A7.2) with all percentages matching to within 4%.

7.2. Introduction to the Chapter

The results for Marital status begins with two comparison sections. The first compares Survey 23 against normative ranges generated from marital status data Tables A7.25 to A7.30. That is, marital-group specific normative ranges are generated by using the mean scores of each marital group over past surveys as data. This section therefore allows the Survey 23 data to be compared with the average of similar past data.

The second section compares the averages for each marital status group again the generic normal ranges Table A2.21. For example, the average satisfaction for health within the married group is compared to the generic normal range for health satisfaction.

7.3. Survey 23 vs. Specific Normal Ranges for Marital Status

7.3.1. Personal Wellbeing

In Survey 23 values come from Table A7.1 and the marital-status specific normative values from Tables A7.25 to A7.30. The figure shows the level of wellbeing for Survey 23 compared to the normal range separately calculated for each specific marital group.
Values for the Personal Wellbeing Index in Survey 23 are quite similar to those in the previous survey, and all lie within the normal range.

This similarity of responding also applies to most of the domains and all values lie within their domain-specific normal ranges.
7.3.2. National Wellbeing

The Survey 23 values come from Table A7.1 and the marital-status specific normal values from Tables A7.25 to A7.30.

In general the marital groups have scores higher on national wellbeing in Survey 23 than on the previous survey. This may be due to the improved economic outlook for Australia.
The strongest performing marital group, relative to their own normal range, is Never Married. Their Personal Wellbeing Index is above range, as are three of their domains as Environment, Social Conditions and Business. This may reflect the generally high values of young adults in this survey.

Satisfaction with the Environment is a very strong performer, as is also Social Conditions and Business.

7.3.3. **Likelihood of Terrorist Attack**

The percentage of people who consider a terrorist attack in the near future rose markedly for all groups at Survey 22. The apparent reason for this was the coincidence of data collection for this survey with the anniversary of September 11. However this explanation now seems in doubt since the percentage for some groups remain high in Survey 23.

![Figure 7.3: Marital Status x % Expecting an Attack](image)

For those people who consider an attack likely, the strength of their belief in an attack is shown below.

![Figure 7.4: Marital Status x Perceived Likelihood of a Terrorist Attack (from 0-100)](image)

The strength of belief rose during Survey 22 due to the coincidence of timing explained above, but these values have generally subsided in Survey 23. Certainly the previously high values shown by defacto, separated and divorced have become little different from the other groups.

7.4. **Marital Status Averages vs. Generic Normal Ranges**

The results in this section come from Table A7.2 and show the comparison of each marital status group averaged across all surveys against generic normal ranges. It shows the average performance of each work-group relative to overall population averages.
7.4.1. **PWI Specific Normal Ranges for Marital Status**

![Graphs of PWI Specific Normal Ranges for Marital Status]

All values lie within their normal ranges.

Figure 7.5: **Full-time Employed Average** vs. Generic Normal Range (PWI)
Section 7: Marital Status continued

7.4.2. *PWI and Domain Means Compared Between Marital Status Groups (cumulative data)*

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>PWI</th>
<th>Standard of Living</th>
<th>Health</th>
<th>Achieving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>77.4</td>
<td>79.6</td>
<td>76.8</td>
<td>75.2</td>
</tr>
<tr>
<td>Defacto</td>
<td>75.4</td>
<td>77.2</td>
<td>76.0</td>
<td>72.7</td>
</tr>
<tr>
<td>Never married</td>
<td>72.0</td>
<td>76.4</td>
<td>76.1</td>
<td>70.1</td>
</tr>
<tr>
<td>Separated</td>
<td>68.4</td>
<td>&gt; all below</td>
<td>71.5</td>
<td>&gt; separated, divorced, widow</td>
</tr>
<tr>
<td>Divorced</td>
<td>68.8</td>
<td>&gt; all below</td>
<td>69.3</td>
<td>&gt; divorced</td>
</tr>
<tr>
<td>Widowed</td>
<td>76.3</td>
<td>79.8</td>
<td>71.8</td>
<td>74.8</td>
</tr>
</tbody>
</table>

Population normative range: 73.6

Normative range for Standard of living: 75.3

Normative range for Health: 73.6

Normative range for Achieving: 71.9
Figure 7.6: Personal Wellbeing Index and Domain Means Compared Between Marital Status Groups (cumulative data)

People who are married have a 2.3 point advantage over people living in a defacto relationship. This may be due to any of the following factors:

(a) Increased satisfaction with all of the personal domains with the exception of Health and Safety.
(b) Married are older.

(c) Married are wealthier.

(d) Unhappy married people have separated from one another.

People who are married or widowed have a higher personal wellbeing than all other groups (Table A7.2).

Defacto are higher than all three lower groups, and never married are higher than divorced and separated.

It is interesting that the people who have never married lie below the normal range. This is, however, age dependent, with people in the youngest group and those over 65y having normal-range personal wellbeing (Section 5.4). Marriage is a gamble. People who do not take a chance on this union do not typically experience the wellbeing extremes that marriage and separation can bring.

The high Personal Wellbeing Index of widows is certainly influenced by the fact that many are elderly and the effect of widowhood is also age dependent (Section 5.4). People widowed younger than 56 years have lower than age-normative wellbeing Figure 5.12. As a total group their wellbeing lies at the top of the normal range.

The Defacto group have a 2.3 point deficit in the Personal Wellbeing Index compared with the married group. This short-fall is evident mainly in Achieving (-3.3 points), Relationships (-3.6 points) and Community (-4.9 points). Curiously, Safety is 2.4 points higher for the defacto group. Overall, this group is either in or above the population normal range on all domains.

The Never Married group have normal range Personal Wellbeing Index but two domains lie outside the population normal range. Most obviously Relationships lies -8.4 points below the range, indicating the relative lack of inter-personal connection for this group. As some slight compensation, health is +1.2 points higher than the range, perhaps due to the high proportion of young people within the never married group.

The Separated group have the lowest overall wellbeing. The most deficient domain is relationships which lies -17.9 points below the population normal range. The only domain lying within the normal range is Safety.

The Divorced group have a similar profile to the separated group. However, the crucial domain of relationships while still very low (-10.4 points below the normal range) is substantially higher than the separated group.

One of the most surprising groups are Widows, shown for the Personal Wellbeing Index and domains below.

Despite having a Personal Wellbeing Index at the top of the normal range, the level of satisfaction with health for widows is below normal. This exemplifies the relative unimportance of health as a determinant of SWB provided that other domains can compensate. Here, the most strongly compensating domains are Standard, Community and Future Security. Of these, Community Connection shows the highest level above the normal range for this domain (3.2 points).

Unusually in Survey 22, the domain of relationship is very low. This is a highly atypical result; satisfaction with relationships for this group is usually high. The results have been verified and the reason for this anomaly is not known.
Section 7: Marital Status continued

7.4.3. **Life as a Whole**

![Graph showing Life as a Whole](image)

Figure 7.7: Marital Status: National Wellbeing Index

7.4.4. **National Wellbeing Index**

Figure 7.8 shows the combined data from Table A7.2.

![Graph showing National Wellbeing Index](image)

It is notable that all groups lie within or close to the population normal range on this, more distal, variable. However, the overall pattern of differences is similar to the Personal Wellbeing Index

7.4.5. **National Wellbeing Domains**

The national domains (Table A7.2) show a significant pattern of difference that resembles Figure 7.8 with the exception of Government and National Security.

![Graph showing Government](image)

Figure 7.9: Marital Status: Government (combined data)
It is evident that the champions of Government are married and widowed. Older age, conservatism, and security may contribute to this.

For the domain of National Security, the Never Married group are relatively higher, such that they do not differ from the Married and Widowed (Table A7.2). The reason for this differential domain sensitivity is not known.

The comparisons for Government are shown below:

### 7.4.6. Life in Australia

Married and widowed have higher satisfaction with Life in Australia than the other groups, and Widows have higher satisfaction than married (Table A7.2). There is a remarkable lack of variation between these groups (5.2 points) compared with the Personal Wellbeing Index (9.0 points).
7.5. **Marital Status x Full-Time Work Status**

The pattern of wellbeing for people in full-time employment is shown in Table A7.3 both Survey 23 and for the combined. The figure below shows the combined data.

![Graph showing wellbeing by marital status and full-time employment status](image)

**Note:** The widowed results for S23 are omitted due to low numbers of respondents.

Figure 7.12: Marital Status x Full-time Employment (combined surveys)

The following observations can be made as:

1. The values for Survey 23 tend to lie above the combined surveys.
2. The fact of full-time employment is not of itself sufficient to bring the wellbeing of people who are separated, divorced or never married into the normal range.
3. Widows engaged in full-time work have a level of wellbeing well below the widows as a total group. This is probably because they tend to be younger than the average widow, with less time elapsed since the death of their partner, and may also be employed due to necessity rather than choice. It is notable that using the combined data (Table A7.2) only 8.0% of the widowed group are full-time employed compared with 41.8% of the married group (Table A7.3).

The data presented in Table A7.3, also show how the negative effects of unemployment are somewhat buffered through marriage (Figure 7.13). The combination of divorce or separation and unemployment is devastating for personal wellbeing. Loss of income must be part of the reason for their extremely low scores.

![Graph showing wellbeing by marital status and employment status](image)

Figure 7.13: Marital Status vs. Employed/Unemployed: **Personal Wellbeing Index**
Clearly the negative effects of unemployment on wellbeing are far less severe for people who are married, whose wellbeing lies close to the lower margin of the normative range. This is due to the buffering influence of marriage as both an emotional and a financial resource.

Subjective wellbeing in relation to full-time home or family care (Table A7.3) is shown below.

![Figure 7.14: Marital Status vs. Full-time Home or Family Care (cumulative data)](image)

This Figure shows the largest range of personal wellbeing (15.3 points) of any marital status comparison. The two groups with partners and widows lie within the normal range. All other non-partner groups are very low indeed, with values that indicate a high probability of depression.

### 7.6. Part-time Work Status

#### 7.6.1. Volunteering

The figure below compares the whole combined samples of each marital status group (Table A7.2) with the marital groups that contain a part-time volunteer (Table A7.4).

![Figure 7.15: Marital Status x Part-time Volunteering (PWI: Combined sample)](image)

Across all groups, part-time volunteers have marginally higher wellbeing than the total comparison group. The largest effect (+4.4 points) is for people who have separated, which is almost sufficient to take them into the normal range. This may represent a novelty effect if more people in this group have recently adopted volunteering due to a recent separation. It is notable that the relative advantage is much reduced for people who have divorced (+2.3 points).
This difference, between the separated and divorced groups is very interesting. The 2.3 point advantage for the divorced group is consistent with the 1-2 point advantage for the other groups. But the 3.9 point advantage for the separated group is very much more substantial.

An explanation for these overall results may be as follows:

(a) People with high SWB set-points tend to volunteer. Thus, the general 1-2 point advantage across the marital groups reflects this difference.

(b) The impact of volunteering on wellbeing is greatest in the early stages. At this time new relationships are forming and positive feedback is likely to be highest. Thus, the additional 3.9 points displayed by the separated group shows the novelty effect of volunteering.

If this interpretation is correct, the implication is that, in order to maximise their wellbeing, people engaged in part-time voluntary work should change the group to whom they are offering their services on a regular basis.

The proportion of each marital group (Table A7.4 vs. A7.2) who engage in part-time voluntary work is as follows:

<table>
<thead>
<tr>
<th>% of part-time volunteers (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married 14.3</td>
</tr>
<tr>
<td>Defacto 7.7</td>
</tr>
<tr>
<td>Never married 8.9</td>
</tr>
<tr>
<td>Separated 10.9</td>
</tr>
<tr>
<td>Divorced 13.8</td>
</tr>
<tr>
<td>Widowed 20.8</td>
</tr>
</tbody>
</table>

The following conclusions may be drawn:

(1) The Separated group, who gain most from volunteering, have a relatively low proportion of part-time volunteers.

(2) There is no simple association between the probability of volunteering and having or not-having a partner.

(3) People in a married relationship are about twice as likely to be part-time volunteers as people in defacto relationships. This may be because the married group is older.

(4) Widows have the highest proportion of part-time volunteers. Again this is likely due to their older age.
Section 7: Marital Status continued

7.6.2. Part-time Study

These data are found in Table 7.2 (total sample) and Table A7.4 (part-time status).

Of all the groups, the positive effects of part-time study are most evident for people who are widowed (+3.0 points). However, these people are a small minority of the total widowed group (2.6%) and so are likely differing from the majority of the group in other respects as well, such as being wealthier or more out-going.

7.7. Marital Status x Full Time Work Status x Income

These data have been drawn from Tables A7.5 to A7.12.

7.7.1. Divorced

For people who are divorced and Fulltime Employed, income has little impact. Even with an income of $101-150K their Personal Wellbeing Index lies only marginally within the normal range. This is interesting since it indicates that above-average household income does not necessarily ensure high wellbeing. However, if these people also have dependents and are single parents, then maybe they need even more income to meet their resource needs.
Divorced people engaged in fulltime home care and people who are unemployed are seriously below the normal range with an income of $15-30K, while divorced people who have retired enter the normal range $31-60K. Presumably the resource needs of the latter group are much less and they are likely to be older.

### 7.7.2. Never Married

These results are limited by cell-size, with only those cells containing at least 20 cases being included. For the most part, however, it appears that work status is a more powerful influence on SWB than is income. Two groups do show a substantial rise with income. For people who are unemployed, SWB rises by 11.4 points from <$15K to $61-100K. Full-time students show a 4.2 point gain over this income range.

#### 7.8. Regressions of Personal Wellbeing Index Domains Against Life as a Whole

These regression are presented in Tables A7.13 to A7.18 (combined surveys)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Normative (S22) sr(^2)</th>
<th>Married sr(^2)</th>
<th>Defacto sr(^2)</th>
<th>Never married sr(^2)</th>
<th>Separated sr(^2)</th>
<th>Divorced sr(^2)</th>
<th>Widowed sr(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Standard</td>
<td>5.2</td>
<td>6.8</td>
<td>5.2</td>
<td>4.3</td>
<td>4.7</td>
<td>6.1</td>
<td>5.9</td>
</tr>
<tr>
<td>2. Health</td>
<td>0.3</td>
<td>0.6</td>
<td>1.0</td>
<td>0.9</td>
<td>0.1</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>3. Achieving</td>
<td>5.2</td>
<td>4.0</td>
<td>4.9</td>
<td>7.7</td>
<td>4.8</td>
<td>4.6</td>
<td>2.5</td>
</tr>
<tr>
<td>4. Relationships</td>
<td>3.2</td>
<td>3.5</td>
<td>3.0</td>
<td>1.4</td>
<td>3.4</td>
<td>2.2</td>
<td>2.3</td>
</tr>
<tr>
<td>5. Safety</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
</tr>
<tr>
<td>6. Community</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
<td>0.4</td>
<td>0.1</td>
<td>0.2</td>
<td>0.6</td>
</tr>
<tr>
<td>7. Future Security</td>
<td>0.3</td>
<td>0.4</td>
<td>0.5</td>
<td>0.4</td>
<td>0.8</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Unique</td>
<td>14.6</td>
<td>15.5</td>
<td>14.9</td>
<td>15.1</td>
<td>13.9</td>
<td>12.8</td>
<td>12.4</td>
</tr>
<tr>
<td>Shared</td>
<td>38.4</td>
<td>32.9</td>
<td>32.7</td>
<td>36.8</td>
<td>30.6</td>
<td>37.9</td>
<td>29.8</td>
</tr>
<tr>
<td>R(^2) (adjusted)</td>
<td>53.0</td>
<td>48.4</td>
<td>47.6</td>
<td>51.9</td>
<td>44.5</td>
<td>51.7</td>
<td>42.2</td>
</tr>
<tr>
<td>N</td>
<td>18,772</td>
<td>2,400</td>
<td>5,230</td>
<td>988</td>
<td>2,435</td>
<td>2,249</td>
<td></td>
</tr>
</tbody>
</table>

| Shade = significant |

The sr\(^2\) statistic represents the proportion of unique variance contributed by each domain. It is calculated as the square of the ‘Part’ statistic that can be requested from SPSS in association with a multiple regression. When this value is multiplied by 100 it gives the percentage of unique variance contributed by the item. Thus, for the normative sample, satisfaction with standard of living contributes 3.9% of unique variance within the total 55.4% explained variance for this sample.
Survey 20 results are drawn from Table A2.18.

Points to note are as follows:

1. The most deviant group are Separated. Only four domains make a significant contribution.

7.9. **Normative Scores**

7.9.1. **Normative Ranges from Individual Values**

These combined survey data are provided in Tables A7.19 to A7.24.

![Figure 7.19: Marital Status Normative Ranges for PWI (Cumulative: individual data)](image)

These ranges are consistent with homeostatic theory. In conditions of no systematic threat to wellbeing (Married, Defacto, Widow) the distribution approximates the positive range from 50 to 100. However, in the presence of systematic threat (Never Married, Separated, Divorced) the top of the range remains intact at about 100, while the bottom of the range falls substantially below 50. This indicates the presence, within each of these distributions, of people who are resilient and who continue to hold their wellbeing within their set-point range, thereby keeping the top of each range normatively close to 100. Also within these distributions, however, are people whose SWB homeostasis has failed and who have low wellbeing as a consequence. These people extend the tail of the distributions down to lie below 50.

7.9.2. **Normative Ranges from Survey Mean Scores**

These data, comprising the mean values from 13 surveys, are found in Tables A7.25 to A7.30. The results for the Personal Wellbeing Index are shown below.

![Figure 7.20: Marital Status Normative Ranges for PWI (Cumulative: survey mean scores)](image)
The extent of variation in these ranges indicates the relative stability of each group mean between surveys. This stability is a function of two forces. One is the sample size, with larger sample sizes giving greater stability. The other is the degree to which each group is affected by general factors such as world or national events.

The two groups that are most different from one another are married (range 2.3 points) and separated (range 8.5 points). The top of these two ranges differ by 5.6 points while the bottom of the ranges differ by 12.2 points. In other words, there appears to be a systematic propensity for the separated group mean score to vary between surveys more than the married. Here, the differences between the top and the bottom of both ranges is a statistical artefact caused by the expansion of the separated range on either side of its mean score. This may indicate a differential group response to public events.
Dot Summary Points for Marital Status

1. People who are married have a significantly (2.3 point) higher wellbeing than people in a defacto relationship. In part this may be due to lower household income for the defacto group.

Widows have an average level of wellbeing that lies at the top of the normal range. This is despite low income for this group.

People who have never married have a level of personal wellbeing that lies between people who remain married and those who have separated or divorced. However, this is age dependent and is only evidenced by people aged between 26-65 years. Younger and older people who have never married have normal levels of wellbeing. See Chapter 5 for a full discussion.

2. Widows have relatively low health satisfaction. This is probably due to the burden of accumulated medical condition, that yield pain, such as arthritis. And in Survey 22 they have low relationship satisfaction.

Despite this, their overall wellbeing lies at the top of the normal range. This is due to compensating high levels in other domains.

3. The fact of full-time employment is not, of itself, able to bring all marital status groups into the normal range.
4. The negative effect of unemployment on wellbeing is partially buffered through marriage. However, the combination of separation/divorce and unemployment is devastating, yielding one of our lowest group mean scores for personal wellbeing (58.9).

5. Part-time volunteers have higher wellbeing than non-volunteers. The group to benefit most are people who are separated. This, may imply that the positive effect of volunteering is most evident in the early stages and dissipates as the activity become routine.

6. Even though people who are divorced and have a full-time well-paid job, their average level of wellbeing remains below the normal range.
7. For people who have never married, those who have retired require only $15-30K to enter the normal range. This does not occur for Fulltime students until their household income reaches $61-100K, while those in Fulltime employment require $101-150K. These differences are strongly influenced by effects due to age.
8. Work Status

“I am going to ask about your work status. Please tell me which of the following categories best applies to you at the present time. Are you ---

<table>
<thead>
<tr>
<th>Survey 23</th>
<th>Combined Surveys 9-23</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Full time paid employment</td>
<td>826</td>
</tr>
<tr>
<td>Full time retired</td>
<td>464</td>
</tr>
<tr>
<td>Semi retired</td>
<td>51</td>
</tr>
<tr>
<td>Full time volunteer</td>
<td>5</td>
</tr>
<tr>
<td>Full time hours</td>
<td>124</td>
</tr>
<tr>
<td>Full time study</td>
<td>62</td>
</tr>
<tr>
<td>Unemployed</td>
<td>123</td>
</tr>
<tr>
<td>Total Part-time</td>
<td>721</td>
</tr>
<tr>
<td>Total sample</td>
<td>2,000</td>
</tr>
</tbody>
</table>

Note: The % for Survey 23 are calculated against the whole sample of 2,000.

Please tell me whether either of the following part-time categories applies to you at the present time. Are you ---

<table>
<thead>
<tr>
<th>Survey 23</th>
<th>Combined Surveys 9-23</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Part time paid work</td>
<td>252</td>
</tr>
<tr>
<td>Part time voluntary work</td>
<td>298</td>
</tr>
<tr>
<td>Part time paid &amp; voluntary work</td>
<td>40</td>
</tr>
<tr>
<td>Part time study</td>
<td>131</td>
</tr>
<tr>
<td>Total sample</td>
<td>2,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Looking for Work?</th>
<th>Survey 23</th>
<th>Combined Surveys 9-23</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>% Yes/No</td>
<td>N</td>
</tr>
<tr>
<td>Yes</td>
<td>250</td>
<td>12.5%</td>
</tr>
<tr>
<td>Total sample</td>
<td>2,000</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The above data, taken from Tables A8.1, A8.2 and A8.3 indicate a high degree of congruence between the proportion of people in each work status category in Survey 23 and the combined data from Surveys 9-23. The largest discrepancy is 3.0% more people who are unemployed in Survey 23 than the running average.

Introduction

The results for Work Status begin with three comparison sections. The first compares Survey 23 against normative ranges generated from Work Status data. That is, work-group specific normative ranges are generated by using the mean scores of each work group over past surveys as data. This section therefore allows the Survey 23 data to be compared with the average of similar past data.

The second section compares each work-status group averaged across all surveys against the generic normal ranges. For example, all of the ‘Full-time employed’ respondents over all surveys are combined to yield a single group. The mean of this group is then compared to the generic normal range for group mean scores. Thus, in a comparison involving the Personal Wellbeing Index, the PWI mean from all ‘Full-time employed’ will be compared to the generic normal range for Personal Wellbeing Index mean scores. This comparison shows how, on average, each work-status group compares against population averages.

The third section involves comparisons of work-status groups within demographic characteristics.
8.1. Survey 23 Compared with Work-Group Specific Normal Ranges

The results in this section show the comparison of each work-group in Survey 23 against its own normative range calculated from survey mean scores.

8.1.1. Personal Wellbeing Index

This shows the performance of the group in Survey 22 in comparison to the work group’s average performance. The results below come from (Table A8.4) for Survey 23 and Table A8.18.1 in relation to their group-specific normal range.

All groups in Survey 23 are comfortably within their own normal range, tending towards the upper portion of their own normal range. This is particularly evident for Unemployed. The normal range for volunteers is so large because each survey only picks up <10 of these people, so the mean scores from each survey are unreliable and show high variation.

The following figures show the domain-level profile for each full-time work group for Survey 23 (Table A8.4) in relation to each work-status group normal range (Tables A8.18.1 to A8.18.8).

The domain profile for Full-time Employed is as follows:
Figure 8.2: Work Status: Full-time Employed in Survey 23 vs. Full-time Employed Normal Range

All values are comfortably within their normal range, with the poorest performers being Health and Relationships.

Figure 8.3: Work Status: Full-time Retired in Survey 23 vs. Full-time Retired Normal Range

For the second survey in a row Standard is high, showing no effect of the recent economic downturn. In this survey, Relationships is also high.
Figure 8.4: Work Status: Semi-retired in Survey 23 vs. Semi-retired Normal Range

All values are within their own normal ranges. While Relationships and Standard are high, three domains are quite low as Health, Community and Future Security.

Full-time Volunteers

The domain profile for the Full-time Volunteers has not been provided. Due to the small number of such people recruited into each survey (Table A8.1) the results from individual surveys are not reliable. The results derived from the combined data for this group ar available from Table A8.5.

Figure 8.5: Work Status Full-time Home or Family Care in Survey 23 vs. Home/Family Normal Range

Most values lie within the top half of their own normative range. The exception is Safety, which is lower.
All values lie within the top-half of their normal range except for Safety, which lies below.

Most values lie at the top of their own range, with Standard lying 0.5 points above its range. In general, these values are far higher than found in the last survey and, curiously, there are over twice as many people in this unemployed group. The reason for these changes is not known.

**Summary**

In general the Work Status group profiles for Survey 23, measured against their own norms, show that all groups are doing very well.
Section 8: Work Status continued

8.1.2. National Wellbeing Index

This shows the performance of the group in Survey 23 in comparison to the work group’s average performance. The results below come from (Table A8.4) for Survey 23 and Table A8.18.1 in relation to their group-specific normal range.

All groups in Survey 23 are comfortably within, or at the top of, their own normal range.

The following figures show the domain-level profile for each full-time work group for Survey 23 (Table A8.4) in relation to each work-status group normal range (Tables A8.18.1 to A8.18.8).

The domain profile for Full-time Employed is as follows:

People who are fulltime employed in Survey 23 have a very benevolent view of the nation. Comparative to their own normal range, their values are all high, or slightly above the range. Only Economic Situation and Government score mid range.
Section 8: Work Status continued

Relative to their own normal range, the full-time retired are also viewing the nation as positive, with the stark exception of Government, which is actually below range.

This group is not performing as well as the fulltime employed. Relative to their own normal range, most domains are upper-middle, with health in the lower portion of the range.

The domain profile for the Full-time Volunteers has not been provided. Due to the small number of such people recruited into each survey (Table A8.1) the results from individual surveys are not reliable. The results derived from the combined data for this group are available from Table A8.5.
Figure 8.12: Work Status **Full-time Home or Family Care** in Survey 23 vs. Home/Family Normal Range

Most domains lie within the top half of their own normative range. The exception is Social Conditions which lies above range.

Figure 8.13: Work Status **Full-time Students** in Survey 23 vs. Full-time Student Normal Range

All domains lie within the top-half of their normal range.
Section 8: Work Status continued

Australian Unity Wellbeing Index, Survey 23, Report 23, April 2010

Compared to their own normal range, people who are unemployed have a positive view of Australian
conditions, with all domains high in their ranges.

8.2. Work Group Averages Against Generic Normal Ranges

The results in this section show the comparison of each work group averaged across all surveys (Table A8.5) against generic normal ranges (Table A2.21). It shows the average performance of each work-group relative to overall population averages.

8.2.1. Personal Wellbeing Index

The domain profile for Full-time Employed is as follows:

The Personal Wellbeing Index lies at the top of the generic normal range, however the responses to
domains are highly variable. While health lies 0.9 points above the generic range, both domains that
involve associations with other people (Relationships and Community) are low compared to the
population at large.
Section 8: Work Status continued

The Personal Wellbeing Index of this group lies at the top of the generic normal range, while Health lies substantially below. This, however, is counteracted by four domains that lie above the range (Standard, Relationships, Community and Future Security). This is a good example of the fact that the domain of health is relatively unimportant in the maintenance of SWB provided that the other domains can compensate.

The profile of this group resembles that of the fulltime retired. They have a high Personal Wellbeing Index despite low Health satisfaction, with compensation coming from Standard, Community and Security.
Figure 8.18: **Full-time Volunteer** vs. Generic Normal Range (PWI)

Their wellbeing lies above the normal range and the most outstanding domain is Community, which is massively higher than the normal range for the general population.

Figure 8.19: **Full-time Family Average** vs. Generic Normal Range (PWI)

The Personal Wellbeing Index lies in the lower portion of the range. The worst domain is ‘Achieving’ which lies below the range and Standard is also very low. These are compensated by high levels of Health, Relationships and Community relative to the general population.
Students have mid-range wellbeing, but the two domains concerning other people (Relationships and Community) are below the range. Compensation comes from Health, Achieving and Safety.

This domain profile is quite different from all of the others. Relative to the generic data, all domains are substantially below normal with the exception of Safety.

8.2.2. Work Status: Full-time only vs. Full-time plus Part-time Volunteer

These results come from Tables A8.5 and A8.13. The figure below shows, for each work group, the overall group Personal Wellbeing Index (Table A8.5) compared with the sub-group of people who also engage in part-time voluntary work (Vol) (Table A8.13).
Section 8: Work Status continued

It can be seen that the only groups to show a reliable increase in their Personal Wellbeing Index associated with volunteering are full-time employed (+2.0 points) full-time retired (+2.2) and unemployed (+1.8 points). The association with volunteer work has no reliable effect for people in semi-retirement, full-time home or full-time students. It may be that the semi-retired people would prefer not to be retired and find volunteer work, which they have adopted as a less rewarding substitute activity. Full-time home may be fully engaged with their family. Full-time students, on the other hand, may be so engaged in their studies and social life that volunteer work makes no additional contribution to their wellbeing.

8.3. Work Status Groups within Demographic Characteristics

This section shows the domain profile of each work status group, using combined data, against the generic ranges for each domain.

8.3.1. Unemployed x Household Income

The aim of this section is to track the changes in the Personal Wellbeing Index for people who are unemployed at different levels of household income. They use combined data from Table A8.7 and the generic normal ranges from Table A2.21.

The domain profile for people who are unemployed with a household income <$15K is as follows.
Despite the fact that the Personal Wellbeing Index and most domain scores are much lower than the general population normative range, the domain of Safety remains almost within the normal range.

![Figure 8.24: Unemployed x $15,000-$30,000 (PWI)](image)

While the Personal Wellbeing Index has risen by 4.3 points, the domains have contributed very unevenly as:

- The most spectacular rise is Relationships (+10.3 points) followed by Achieving (+4.1) and Living Standard (+5.0).

- The other three domains increased by <3 points.

![Figure 8.25: Unemployed x $31,000-$60,000 (PWI)](image)

The Personal Wellbeing Index has risen by a further +5.1 points and the same four domains have shown the largest rises as Relationships (+8.0 points), Achieving (+5.8), Health (+8.7) and Living Standard (+7.7) and they have been joined by Safety (+3.2).
The two domains of Community and Future Security have changed by about 3 points or less.

The Personal Wellbeing Index has risen by a further 2.2 points and the profile of domain rises has changed as:

- The domains to continue a strong improvement of >3 points are Health (+5.1 points), Safety (+5.8 points), Community (+3.3 points).
- All other domains have changed by 3.0 points or less.
- The most notable deficit is in Achieving which remains 9.6 points below its normal range. This attests to the feelings of worthlessness that are such a negative feature of unemployment. This also points to the kinds of interventions likely to assist people who are unemployed to regain their wellbeing.
The Personal Wellbeing Index now lies within the normal range, as do most of the domains. The domain that remains below the normal range is Achieving. However, Health has risen to lie above the generic range.

**Summary**

1. Household income has a very strong influence on the Personal Wellbeing Index of people who are unemployed, as it does on all groups.

2. While the negative influence of unemployment is diminished by high household income, unemployment continues to exert a strong negative influence on key domains. Chief among these are Achieving in Life and Relationships, which remain below the normal range even with a household income of $61-100K. Clearly, these two domains are a particular source of vulnerability for people who are unemployed.

3. For people with low household income, the other domains that show the greatest increase with higher household income are Living Standard and Health. The first of these is intuitive, the second one is not. The strong rise in health satisfaction may be due to increased access to health care, although with Medicare this should not be a major factor. It may also be linked with the easing of psychosomatic symptoms as daily life becomes financially easier.

**8.3.2. Looking for Work Personal Wellbeing Index**

Tables A8.8 and A8.9 show the Personal Wellbeing Index and distribution of people looking/not looking for work. Tables A8.10 and A8.11 show these data for people either in full-time work or unemployed.

![Looking for Work: Personal Wellbeing Index (combined data)](image)

Figure 8.28: **Looking for Work**: Personal Wellbeing Index (combined data)

It is evident that the 8.9% of people who are employed full time and looking for work have a level of personal wellbeing that is 2.2 points below the normative range and 4.5 points below those not looking at work.

It is also notable that whether people who are unemployed are actually looking for work or not makes no reliable difference to their subjective wellbeing. These two mean Personal Wellbeing Index values are not significantly different.

**8.3.3. Personal Wellbeing Index Domains**

Figure 8.29 shows the domain performance of fulltime employed who are or are not (Table A8.10) looking for work. The people employed full-time who are not looking for work have normal-range
domains. For people who are looking for work, only the domain of Safety remains within the normal range.

Figure 8.29: Work Status: Full-time Employed Looking/Not Looking for Work (combined data)

By far the largest disparity is for the domain ‘Achieving in life’ which differs by 8.6 points between those looking, and not looking, for work. No doubt this is one of the main reasons these people are seeking to change their employment. It also signals that the low value for this domain may be central in driving the other domains, and therefore the PWI, down below normal. Many employed people gain a great sense of ‘purpose in life’ from their employment, and having a sense of purpose is central to wellbeing.

This domain profile may be diagnostic of employees who are likely to take an alternative job if the opportunity arises.

The figure below compares people who are unemployed and either are looking (49.6%) or not looking (50.4%) for work (Table A8.11).
Section 8: Work Status continued

A notable feature of this comparison is that, while the two groups do not differ in their Personal Wellbeing Index, they do significantly differ in Health and Achieving. The people who are looking for work have higher health satisfaction, and it may be that their better health allows them to actively look for work. However, they have lower satisfaction with achieving in life.

8.3.4. Employment Status x Gender

These results come from Table A8.14.

There are three situations in which the SWB of females significantly exceeds males. These are in full-time retirement (+1.1 points), full-time home (+4.1 points) and unemployment (+3.9 points). The most important of these is unemployment since, while both genders lie well below the normal range, males are very severely affected.

8.4. Regressions

Tables A8.16.1 to A8.16.7 present multiple regression analyses for each of the work-status groups. These analyses reveal considerable differences between the groups. The total explained variance, unique variance and shared variance is shown in Figure 8.32.
There is considerable variation between these groups in the extent to which the Personal Wellbeing Index domains explain variance in Life as a Whole. The $R^2$ range is 16 percent, from 40% (Volunteer) to 56% (Semi-retired).

The variation is mainly due to differences in shared variance with a range of 14 percent, from 28 (Volunteer) to 42 (Unemployed). The variation in the unique variance is only 6.1 percent, from 12 (Unemployed) to 18 (Study).

What this means is that the domains are very constant, across these groups, in the extent to which they are collectively able to capture unique variance in Life as a Whole. This is probably the predominantly cognitive component.

The shared variance is the effective component provided predominantly by MPMood. However, in difficult living circumstances, affective variance is also supplied by the negative emotions attached to the homeostatic failure of some group members.

If this explanation is correct, there should be a simple relationship between the extent of shared variance (Table A8.16.1) and the downward extension of the group specific normal range for individual scores (Table A8.17.1). This is shown in Table 8.1.

Table 8.1: The relationship between shared variance and the negativity of the downward extension group-specific normal range

<table>
<thead>
<tr>
<th>Group</th>
<th>Rank order</th>
<th>Bottom of the range</th>
<th>Shared variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployed</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Home</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semi-retired</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Paid</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Fulltime Volunteers have not been included because the sample size is so small. There is not a good fit with the prediction.
8.5. **Demographic Changes Over Time for the Full Sample**

The purpose of this section is to document the proportion of the whole sample (N = 2,000) made-up of each designated demographic group. This will allow a correction-factor to be calculated which determines the extent to which changes in the proportion of each sub-group are responsible for between-survey fluctuations in the Personal Wellbeing Index.

<table>
<thead>
<tr>
<th>Survey</th>
<th>Full-time Work Status</th>
<th>Paid employment</th>
<th>Retired</th>
<th>Semi-retired</th>
<th>Volunteer</th>
<th>Family</th>
<th>Study</th>
<th>Unemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
</tr>
<tr>
<td>9</td>
<td>683</td>
<td>34.2</td>
<td>490</td>
<td>24.5</td>
<td>47</td>
<td>2.4</td>
<td>9</td>
<td>0.0</td>
</tr>
<tr>
<td>10</td>
<td>750</td>
<td>37.5</td>
<td>517</td>
<td>25.9</td>
<td>39</td>
<td>2.0</td>
<td>13</td>
<td>0.1</td>
</tr>
<tr>
<td>11</td>
<td>759</td>
<td>38.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>5</td>
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**Note:** Percentages are % of people within the whole Survey (n = 2,000).

**Paid Employment:** The percentage have varied from 34.2% (S9) to 46.0% (S14). Current is 41.3%, which is average.

**Retired:** The percentage has varied from 16.5% (S15) to 32.7% (S12). Current is 23.2%, which is average.

**Semi-Retired:** The percentage has varied from 1.9% (S21) to 3.4% (S13). Current is 2.6%, which is average.

**Volunteers:** The total number of full-time volunteers per survey has varied from 5 to 14. The current number of 5 is very low.

**Family:** The percentage of full-time home/family has varied from 5.6% (S18) to 7.9% (S9). Current is 6.2%, which is low.

**Study:** The percentage of full-time study has varied from 3.1% (S23) to 6.0% (S22). It is currently at its lowest level.

**Unemployed:** The percentage of unemployed has varied from 1.2% (S16) to 7.0% (S9). Current is 6.2%, which is high.
Table 8.3: Demographic Changes in Part-Time Work Status Over Time

<table>
<thead>
<tr>
<th>Survey</th>
<th>Part-time Work Status</th>
<th></th>
<th></th>
<th>Paid and Volunteer</th>
<th>Study</th>
</tr>
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<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td></td>
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<tr>
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<td>298 14.9</td>
<td>40 2.0</td>
<td>131 6.6</td>
<td></td>
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</tbody>
</table>

Note: Percentages are the % of each total sample (N = 2,000).

The proportion of the sample in part-time paid and volunteer positions seems to have decreased over the past few years. The proportion in part-time study seems not to have shown any systematic change.

Table 8.4: Demographic Changes in Looking for Work

<table>
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</thead>
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<td>N</td>
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</tr>
<tr>
<td>23</td>
<td>250</td>
<td>1712</td>
</tr>
</tbody>
</table>

Note: Percentages are the % of people within each survey (N=2000).

There appears to be no systematic change over time.

8.6. Normative Data

8.6.1. Normative Data Based on Individual Scores

These values have been taken from Table A8.17.1 and represent the accumulated data from Surveys 9-23. These ranges are very similar to those of the general population (Table A2.19) with three exceptions. The first two are the Full-time volunteers and full-time home whose distributions extend down to <50. In the case of Volunteers, their mean score (77.0 points) actually lies above the normal range and the fact that the lower margin of their range extends to <50 most likely reflects the increased standard deviation due to a small sample (N=141). However, this cannot be said in relation to the Full-time Home group, and their extension to <50 indicates a proportion of people at risk of depression.
The other abnormal distribution, as expected, comprises people who are unemployed. The Unemployed mean is far below normal and the normal range extends well into the levels <50 with heightened probability of depression.

8.6.2. Normative Data Based on Survey Mean Scores

These results are taken from Table A8.18.1.

Note: Full-time Volunteers are not represented as the number of such people in each survey is too small to be reliable.

These ranges reflect the extent of variation from one survey to the next and so are mainly measures of reliability.
Dot Point Summary for Work Status

1. Compared to their work group normal range, all groups are within range for Survey 23.

2. The profile of Full-time Employed shows that in Survey 23 they are doing very well in all domains except health.

3. The profile of Unemployed for Survey 23, matched against their own normative range, shows the domains to be generally high, with above normal satisfaction with Living Standard.
4. The personal wellbeing of most work-status groups falls in the generic normal range. People who are full-time retired lie above the normal range while people who are unemployed fall below.

5. Even though full-time retired have lower than normal health satisfaction, their personal wellbeing is above the generic normal range (see above). This emphasises that measures of subjective health are invalid as measures of overall wellbeing.

6. Even though full-time employed have a level of wellbeing at the top of the generic normal range, both domains that concern associations with other people (Relationships and Community) are low.

7. Full-time students have below-normal satisfaction in both domains that indicate connection to other people (relationships and community). This likely makes students more vulnerable to the effects of misfortune. On such occasions, inter-personal relationships constitute a major buffer. Future Security is also very low.
8. People who are unemployed have lower than normal wellbeing for all domains except safety.

9. Of those people full-time employed, the 10.0% who are looking for work have lower than normal wellbeing. This is most particularly evident in the domain of Achieving. This domain pattern may be diagnostic of employees who are functioning poorly in their current employment.

10. Whether people who are unemployed are looking for work or not makes no significant difference to their low personal wellbeing. On a domain basis, people not looking for work have higher satisfaction with Achieving and Future Security.
11. Engaging in part-time volunteer work has a marginal relationship with higher wellbeing for people who are unemployed. It does not bring their wellbeing into the normal range.

12. Relative to gender-specific norms, fulltime employment favors the wellbeing of males slightly more than females.

13. Males who are engaged in fulltime home or family care are positioned below their normative range. Their wellbeing is -3.5 points below males who are fulltime employed. The wellbeing of full-time home care females is -0.6 points below employed females. Thus, compared to Fulltime employment, males in full-time home care have a relatively greater wellbeing loss than females.
9. **Life Events**

9.1. **Occurrence of Personal Life Events**

9.1.1. **Frequency of Life Events**

Prior to any mention of terrorist attacks or war, people are asked “Has anything happened to you recently causing you to feel happier or sadder than normal?” If they answer ‘Yes’, they are then asked whether this was a happy or a sad event, and to ‘rate its influence on a 0 to 10 scale, from very weak to very strong’.

If people were to be severely interrogated along these lines virtually everybody would recall an event of some kind that made them happier or sadder than normal. The time frame is loose (‘recently’) and the point of reference (‘normal’) is open to interpretation. But respondents are not interrogated, and if they answer that they have experienced no such event, the interviewer proceeds to the next item. Because of this, the item is either measuring people’s sensitivity to the positive and negative events in their lives, or the extent to which people are willing to identify such events. In either case it is measuring the direction of people’s attention to the positive or negative side of their life.

On average across the surveys, about half of the people sampled state they have experienced such an event (Table A9.1). The proportion, of people reporting a personal life event has previously peaked twice (Figure 9.1). The proportion at S6 (pre-Iraq war) (54.6%) is almost the same as that immediately following September 11 (55.0%). However, the proportion of 61.7% for Survey 18 (Pre-election of Labor government) eclipses by far all previous and subsequent estimates. The current proportion of 48.9% is close to average.

There seems to be two possible reasons for a high proportion of the population to recall a significant personal event. One is the presence of an event that is personally meaningful but external to their immediate personal experience. The above-named events of September 11, the Pre-Iraq war and a change of Government, may be considered as examples of this. Such events may act to increase the arousal-level of the population, thereby making them more sensitive to the events in their lives.
The other reason for the population to score high on this measure is that a higher-than-normal proportion of people have, in fact, experienced an event of unusual magnitude in their lives.

One possible way to test between these two possibilities would be to see whether the people reporting an event have a change in their Personal Wellbeing Index. Presumably, if the change in reporting is due to elevated arousal then the Personal Wellbeing Index should remain stable. If, however, it is due to a personal event of unusual strength, then the Personal Wellbeing Index would be vulnerable to change. This will be tested later.

9.1.2. Happy vs. Sad Events

Due to the rapidity of adaptation to positive events or happenings, it is unlikely that the population as a whole would experience an unusual level of positive events. Granted this could happen, through such occasions as the end of a war, nothing like this happened prior to October 2007 (S18). The only obvious event at this time was the forthcoming election. However, two previous elections had no influence on life events and, anyway, the electorate would be about evenly divided as to the probability of the electoral outcome. It is also notable that even events such as the Athens Olympics failed to substantially change the proportion of people experiencing a major life event.

This is not true of negative events. A strongly-felt negative event will have a more persistent influence on the individual than a positive event. Therefore, it might be expected that the most likely scenario is for the increased proportion of people reporting a life event to be dominated by people reporting a negative event. The results are shown below.

The breakdown into happy and sad events (Table A9.3) is presented below:
The construction of Figure 9.2 follows the same procedure as Figure 9.1. The mean happy event percentages from each survey, and the mean sad event percentages from each survey (Table A9.3), produce a mean, SD and 2 x SD range (Table A9.4).

As can be seen, the patterns for happy and sad events are very different from one-another. Moreover, they are clearly not reciprocal. While an approximately equal proportion of people reported happy or sad events at most times, the increase in the incidence of people reporting happy events at Survey 6, and sad events at Survey 2 and Survey 18, did not result in an unusually low proportion of people reporting sad or happy events respectively. The correlation between the happy and sad percentages across surveys in Table A9.3 is -.06 (Table A9.4), which is non-significant.

9.1.2.1. Happy Events

The most unusual occasion of people reporting a happy event coincided with the period immediately prior to the commencement of the Iraq war (S6: 28.4%). This is marginally significant since it exceeds the upper margin of the normal range of values. It is notable that the significant rise in population wellbeing at Survey 12 (Athens Olympics) did not cause a concomitant change in the reported incidence of happy personal events.

One explanation of the pre-Iraq rise in happy events is that the looming war induced a state of activated positive affect as a defense against anxiety. The war differs from the terrorist attacks in that it had not yet taken place, and so was an anticipated event. Thus, to think of reasons why the war is unlikely to take place, or that it is morally justified, is one way people could stave-off the personal impact of dark thoughts of war. In doing this, they may shift their threshold for the recognition of positive events in their lives and, as a consequence, more people report the occurrence of recent happy events.

Another possibility is that the prospect of war and the threat and danger it involves sharpens people’s appreciation of life. But this does not explain why a comparable rise failed to occur following the terrorist attacks.

9.1.2.2. Sad Events

In terms of negative events, as predicted from theory, abnormally high levels have been recorded on two occasions. One of these occurred immediately following September 11 (S2: 35.4%) and the other at Survey 18 (37.0%).

There are at least two potential causes for the jump in the experience of sad events at Survey 18. One was the new IR (Industrial Relations) legislation, which had been in operation for about a year at the time of the survey. This legislation caused many employees to negotiate an individual contract with their employer, rather than through collective union bargaining, as had previously been the case. The result was that many workers suffered reduced conditions of employment and remuneration.

Against this explanation is the fact that some six months later, at Survey 19, the percentage of people reporting a negative event had returned to normal and the work-place conditions had not changed. However, a few months after Survey 18 the new government did repeal the IR laws and union-power was on the way to being restored. So perhaps the anticipation of restorative change was responsible for the return to normality in this measure.

Perhaps a significant proportion of people had been adversely affected and they recorded this as their negative event. The other possibility is general dissatisfaction with the incumbent government, which resulted in a land-slide victory for the opposition one month later. Notably, however, this dissatisfaction did not translate into a fall for either the Personal Wellbeing Index or National Wellbeing Index, and neither did it cause dissatisfaction with ‘Government in Australia’.
Summary interpretation

The proportion of people reporting a recent happy event in their lives has been remarkably stable over the 18 surveys. The maximum degree of variation has been 9.2% (from 19.2% at S4 to 28.4% at S6). This is probably just random variation—since none of the values exceed the boundaries of the normal range.

The proportion of people reporting a recent sad event has been much less stable. The maximum degree of variation is 13.7% (from 23.3% at S4 to 37.0% at S18). While variations below the overall mean (27.6%) are likely to be random, two of the values above the mean are significant. While one of these (S2) may be attributed to September 11, the cause of the rise at Survey 18 is unclear but could have been due to the impact of the IR legislation or the impending change of Government in the following November election.

9.1.3. Gender and Life Event Frequency

Females show a stronger tendency than men to report that something has happened to them recently causing them to feel either happier or sadder than normal (see total % events: Table A9.5: Figure 9.3). Using the gender percentages from each survey as data, the overall gender difference is significant (Table A9.6).

The current values at Survey 23 seem unremarkable. In historical terms the following can be noted:

- At Survey 18, values were maximal for both genders. The female value of 65.6% was 6.9 higher than any previous female score, while the male value of 57.8% was 3.3% higher than any previous male score. The percentages have subsequently fallen dramatically.

The generally greater volatility of female scores is shown by the standard deviations of the gender-specific total scores across surveys (Table A9.6: Males = 3.0, Females = 4.7).

- The two surveys showing the maximum degrees of gender separation are Survey 16 (11.6%) and Survey 9 (10.7%). There is no obvious reason for this. While the Survey 9 data were collected following the initiation of the Iraq war, the Survey 16 data were collected during an uneventful period for Australia.
• On only one occasion (S6: Pre-Iraq war) has the incidence of events within males (54.6%) slightly exceeded that within females (54.3%). This was caused by a far more substantial rise in the proportion of males experiencing a personal event (7.4% above average for males) than for females (1.7% above average for females).

• Both genders experienced their lowest incidence of life events at Survey 4 (12 months following September 11). The timing of their highest incidence of life events occurred at Survey 18.

• It is notable that the percentages of happy and sad events across surveys do not correlate for either males (.02) or females (.07) (Table A9.6).

In Summary, there is a tendency for about the same proportion of males and females to report an event, and about the same proportion to report a happy event (Table A9.6). Females, however, are more likely to report a sad event in their lives.

Figure 9.4 shows the cumulative data (Table A9.6) of the percentage of people reporting happy or sad events x gender.

While there is no difference between the genders in terms of the reported frequency of happy events, females report significantly more sad events.
In order to further investigate these gender differences across surveys, Figure 9.5 has been prepared from data in Table A9.5.

Figure 9.5: Event x Gender x Survey (% of a total of gender in each survey)

In Survey 22, while the % of both happy and sad events has remained quite stable since the previous survey.

It is apparent that there is considerable normal variation in the percentages shown in Figure 9.5. This may reflect the relative small numbers in some cells (minimum N=158). However, from the figure it can be seen that these within-group normative ranges (Table A9.6) have been significantly breached on five occasions and all these have occurred at the top of their respective ranges. They are as follows:

1. Immediately following September 11 (S2) and prior to the October 07 election (S18), a higher than normal proportion of both males and females reported the recent experience of a recent negative personal event.

2. During the period immediately prior to the Iraq war (S6) a higher than normal proportion of males, but not of females, reported the experience of a recent positive personal event.
Summary

This can be diagrammatically represented as follows:

![Diagram]

Figure 9.6: Diagrammatic Representation of Changes in the Incidence of Personal Events & Gender

The following points can be noted:

(a) Five percentages, or \( 5/88 = 5.7\% \) lie outside the gender-affect-specific normal range represented by two standard deviations. This is quite close to the 5% that would be expected to occur by chance.

(b) Against these being chance events is the following:

(i) On 4 of these 5 occasions, males and females have responded in the same way.

(ii) The breaches are not evenly split between the two types of affective experience. Four of the five have involved negative events.

(iii) None of the breaches have occurred below the normal range.

It is concluded that these breaches most likely represent a systematic influence on the population at the time of the surveys. The nature of this influence is as yet uncertain.

The other feature of Table 9.5 that is interesting is the range covered by the four mean scores as a group (gender x valence) at each survey. These ranges are shown below.
It might be presumed that the disparity between these four mean scores within each survey (reporting a happy or sad event) would be lowest in times of perceived stability by the population. That is, in times of great stability people are as likely to report happy as sad events and males are as likely to report events as females. These data are consistent with this view. A very low range was recorded prior to September 11 (Survey 1), the maximum range was reported immediately following September 11 (Survey 2). However, the next highest value is Survey 8, with no major event attached.

The value of 9.7 for Survey 23 is unremarkable.

9.1.4. Life Event Frequency x Age

Table A9.7 reports the effects of age on life events both for Survey 23 and the combined samples. As can be seen, the probability of reporting a personal event that made the person feel happier or sadder than normal decreases steadily after 55 years of age. However, the relative experience of happy and sad events changes dramatically between 26-35 years and 36-45 years. Whereas the proportion of people reporting a happy event dominates in the two youngest-groups, beyond 36 years the majority of people who report an event in their lives report a negative event.

These data patterns are highly consistent between surveys (Table A9.7). It is difficult to reconcile these data with the finding that the PWI scores increase with age (Chapter 5), but there are two previous findings that may make this possible. First is the progressive dissociation between pain (representing negative experience) and SWB. Second is the ability of homeostasis to negate negative events. Thus, SWB may be more strongly related to the strength of positive events than the frequency of either happy or sad events.
It is also notable that the reported intensity of happy events shows a major change between 26-35y and 36-45y. The explanation for these patterns is not clear.

### 9.1.5. Income and Life Event Frequency

![Graph showing Income: Life Event Frequency](image)

The data for Figure 9.9 are drawn from Table A9.8. It can be seen that the income trends for the two life events are opposite. As income increases, the frequency of people reporting sad events decreases, and the frequency for happy events increases up to an income of about $61-100K.

This is consistent with a published review of the function of money in relation to wellbeing (Cummins, 2000). It is proposed that money is a flexible resource which allows people to avoid many aspects of life which have a negative effect on wellbeing. This permits rich people to maximise their potential for personal wellbeing to a greater extent than people who are poor. It also implies that rich people are less exposed to negative life events and more exposed to positive events, as indicated by these present data.

The incidence of sad events shows no systematic change with increased income beyond $61-100K until it reaches $251-500K. At this level of household income, sad events fall still further and happy events substantially increase. This is consistent with the view of money as a protective resource, as stated above, and that the level of $61-100K up to $151-250K represents a threshold. People at this level of income can use their money to reduce the impact of normal negative events, such as their car needing to be repaired. Because their financial resources are sufficient to pay for such repairs without experiencing personal hardship, they are less likely to recall this as a major negative event.

However, there are some negative events that cannot easily be ameliorated through the use of money, such as the death of a close relative or difficult interpersonal circumstances. So it is that the incidence of these unavoidable negative events continues at about the same level at incomes above $101-150K, with about 22% of the sample reporting such an event.

The frequency of happy events also shows a steady increase as household income increases up to $101-150K. This makes sense in that wealthy people can reward themselves with nice experiences which they purchase, such as a holiday or a new car.

Because the essential causes of relative frequency of happy and sad events is so different, it would be expected that there should be no dependent relationship between the frequency of each type of event. This is confirmed by Table A9.4 which reports a correlation of -.06 (non significant).
9.2. Perceived Intensity of Life Events

People who have experienced a life event are asked, “how strong would you rate this influence?” Table A9.9 shows the distribution of happiness/sadness intensity from 0-10 for Survey 23. The differences in the distributions of sad and happy events are informative. Far more people are likely to report that they have experienced a life event that made them slightly more sad then normal, than they are to report a low-level positive event. From this table, 16.8% of people report a 0-4 strength sad event, compared with 12.5% of people reporting a 0-4 strength happy event. This is consistent with a large literature showing that people attend to and remember negative events more strongly than positive events.

Table A9.10 shows the intensity of happy and sad events across surveys.

![Figure 9.10: Intensity of Recent Personal Events](image)

Most obviously from these data, the perceived strength of a happy event exceeds that of a sad event. For example, using the data from Survey 6, t(1072)= 10.19, p<.001. This is an example of the positive bias that pervades our thinking, and which is part of the homeostatic device that maintains subjective wellbeing as positive (Section 1.2).

More remarkable, however, is the stability of the experienced strength of happy, positive life events. Across the surveys it has varied between 79.3 and 85.4, a range of just 6.1%. It is also evident that following September 11, it was trending upwards. This trend peaked at Survey 8 (3 months following the Iraq war) and Survey 10 (nine months following the Iraq war). From Survey 11 to Survey 22 it remained no different from the intensity at Survey 1.

The intensity of sad events also showed an upward trend up to Survey 9. This intensity remained consistently higher than the level at Survey 1 from Survey 7 to Survey 22. Now at Survey 23 the intensity of positive events has fallen to be no different from Survey 1. The reason for this trend is not clear.

The correlation between the perceived intensity of happy events with the Personal Wellbeing Index is significant and positive for individual scores within surveys (Table A9.10). The correlation for the intensity of sad events with the Personal Wellbeing Index is generally not significant. When the survey mean scores for event intensity are correlated with the survey mean scores for the Personal Wellbeing Index, males show a strong negative correlation for the intensity of sad events (Table A9.11; r = -.75, p = .001) but much less correlation with the intensity of recalled happy events. For females (Table A9.12) neither of the correlations are significant.
9.2.1. Household Income and Life Event Intensity

Table A9.13 reports the influence of income on life event intensity. There is a significant decrease in the experienced intensity of happy events at the highest level of income. This is consistent with expectation from Adaptation Level Theory. So, rich people are buying more positive events but experience less relative happiness from each experience.

There is no effect of income on the intensity of sad events.

Table A9.14 reports the correlations between life event intensity and the Personal Wellbeing Index (domains) for Survey 23, while Table A9.15 reports these correlations for the whole sample.

No systematic income group differences in intensity have been found. This is interesting because income has such a marked effect on the proportion of people reporting positive and negative events (Figure 9.9). This may imply that the experienced intensity of events is under high levels of genetic control.

From the combined data (Table A9.15) can be seen that consistently, through each income group (<$15K to $101-150K), the strength of happy, but not sad events, correlates positively with the Personal Wellbeing Index with coefficients ranging from .17 to .23 ($p < .01$). This is interesting as follows:

(a) The reported strength of positive events is some 10-15 points higher for happy than for sad events (Table A9.13; Figure 9.10).

(b) The reported strength is based on the estimated current impact on a past event. It is, thus, as likely to be a reflection of current mood state as it is a reflection of the event to influence that mood state. Indeed, if the perception of the event’s impact is coloured by the rosy glow of homeostasis, then positive events may be experienced as more positive than they actually were when the event first happened. In this case, current (positive) mood is driving the perception of the event’s impact. Moreover, due to different set-points, the strength of the rosy glow will be an individual difference which will account for the positive correlation.

(c) The reason that the strength of sad events fails to correlate with the Personal Wellbeing Index is due to the role of homeostasis in altering such perceptions from initially negative to neutral or even positive. Thus, over time, the strength of negative events, within the bounds of normal experience, has no impact on Personal Wellbeing because such perceptions have been negated.

(d) There is no systematic change in the strength of association (Table A9.15) between positive events and Personal Wellbeing Index with increasing income as shown below:

![Figure 9.11: Relationship Between Strength of Positive Event and Personal Wellbeing Index Between Income Groups (combined data)](image-url)
This is consistent with no systematic change in happy event intensity being present between the income groups (Table A9.13).

(e) The relative frequency of particular domains being significantly associated with the strength of happy events is shown below (Table A9.15):

### 9.2.2. Gender and Life Event Intensity

The gender difference for the intensity of both happy and sad events is significant (Female > Male) (Table A9.16) with no interaction. This is a consistent finding across surveys.

![Figure 9.12: Intensity of Happiness/Sadness to a Personal Life Event (combined data)](image)

This familiar pattern of increased emotional responsiveness in females occurs for both happy and sad events (Table A9.16). It is also notable that the strength of felt sadness for both genders approximately the same value of 70% as is found for people’s levels of sadness when recalling terrorist attacks (see Reports 2-8).

It is also interesting that these two mean values of life event intensity (happy = around 80, sad = around 70) approximate the calculated normative range of 70-80 points for personal wellbeing (see Chapter 1). It seems possible that these are related and that people perceive happiness and sadness as being represented by the margins of the normative range.

### 9.2.3. Age and Life Event Intensity

In order to examine closely the relationship between age and the experience of life event intensity, Table A9.17 shows the results for individual surveys and combined data. This analysis shows a significant influence of age for the intensity of happy but not sad events, and no interaction between age and surveys. The result for happy events (Table A9.17) is shown below.

![Figure 9.13: Intensity of Happy Events x Age (combined data)](image)
This is a curious pattern, with maximum intensity experienced at 26-35 and 76+ years. The reason for this pattern is not clear.

9.3. **Days of the Week**

Table A9.18 shows these results for Survey 22 and Table A9.19 for the combined data.

![Daily Personal Wellbeing Index (Combined data)](image)

It is evident, that across the whole sample, there is no systematic change in wellbeing between the days of the week.

Table A9.20 splits these data according to work status. Again, there is no systematic change in wellbeing for any of the work-status groups.
Dot Point Summary for Life Events

1. On average, about half of the sample consider that a recent life event, that has happened to them, has made them feel happier or sadder than normal.

2. Both males and females were more likely to report a personal sad event in the period immediately following September 11 and just prior to the electoral defeat of 2007. More males than normal, but not females, reported a personal happy event immediately prior to the Iraq war.

3. Females are more likely to recall the experience of a sad than a happy event in their lives.

4. Young adults are more likely to report the experience of happy than sad events in their lives. This changes at 36-45 years. At this age and older, people are more likely to report the occurrence of a sad event.

The recall of happy or sad events is age-sensitive.
5. The recalled frequency of sad events is income sensitive up to an income of $61-100K. The recalled frequency of happy events continues to rise with income at least up to $151-250K.

6. Females experience the intensity of both happy and sad events more strongly than males. This represents a pattern of enhanced emotional responsiveness for females.

7. An investigation into changes in Personal Wellbeing Index across the days of the week detected no systematic effects. This is true irrespective of work-status.
10.  Children

We asked:  ‘Do you have any children?’

[If yes]  “How old is your youngest child?

‘How would you rate this child’s happiness with life in general?’

‘Do you think this child’s life is going to get better or worse?’

‘If you had the choice of being any age, how old would you want to be?’

10.1.  Do you have children?

![Figure 10.1: Do you have Children](image)

On average, having children is associated with 1.4 points higher wellbeing (p = .03) (Table A10.1).

In terms of the Personal Wellbeing Index domains, this significant advantage holds for Achieving (+2.0 points), Relationships (+5.2 points), and Community (+2.7 points) (Tables A10.2 to A10.9). It is interesting that the two sociability domains are higher for people who have children.

10.1.1.  Gender

Table A10.11 shows that the association between having children with higher wellbeing applies only for males.

![Figure 10.2: Has Children x Gender](image)
The group that stands out are the males with no children, who have a level of wellbeing at the bottom of the generic normal range. These people constitute 12.0% of the total sample.

### 10.1.2. Age

These results are shown in Table A10.12, truncated in Table A10.12.1, and Figure 10.3 below:

![Chart showing Personal Wellbeing Index (PWI) by age and presence of children](chart)

The only age group where the Personal Wellbeing Index is affected by the presence of children is 36-65 years. Within this group wellbeing is not enhanced by having children since the value of 75.8 points lies well within the normal range. It’s not having children within this age group that is associated with below-normal wellbeing.

While the number of respondents is not sufficient to reliably break these cells down further, it seems almost certain that these people with no children are predominantly living alone and have never married. If so, it is probably these factors, rather than not having children, that are responsible for the low wellbeing.

It is also interesting to note that having children has no systematic effect on the wellbeing of the younger group (18-35y) or the older group (65y+). Thus, the idea that having had children is good for wellbeing in old age is not supported by these results.

### 10.1.3. Household Composition

Table A10.13 shows no significant differences between the has/not have groups.

### 10.1.4. Marital Status

Table A10.14 shows only that the Never Married group with children have lower wellbeing than the Never Married with no children.
10.1.5. Fulltime Work Status

Table A10.15 shows that Fulltime Retired have higher wellbeing if they have children.

This is an interesting result since the 66+y group as a whole (See Figure 10.3) shows no such advantage. Moreover, about the same number of males and females respond that they are full-time retired (Table A8.14), so the difference is unlikely to be gender-based. It may be the case that people who have retired from paid work are at risk of losing their sense of life purpose, but that purpose can be found in their children, or their children’s children.

10.1.6. Looking for Work

Table A10.7 shows very low wellbeing for people with children who are looking for work.

The whole survey contains only 120 people who are unemployed (Table A10.15), yet the ‘Yes: Looking for Work’ category in Figure 10.5 contains the responses of 153 people. Clearly, therefore, about one-third of those who are looking for work are also employed.

The unemployed group with children (N=91; Table A10.15) has a Personal Wellbeing Index of 70.7 points, which is almost identical to the larger group of 153 people (Table A10.17) who are looking for work (71.0 points). Therefore, the sub-group that is employed – with children – looking for work, must also have a Personal Wellbeing Index of about 71 points. So the fact of being employed or unemployed for this group is not causing the low wellbeing. It is more likely to be the combination of both looking for work and having children.
It seems possible, therefore, that the low wellbeing of this group is driven by their need to find employment and that this search is hindered by their need to spend time with their children. In other words, the level of stress felt by people with children is higher than it is for those without children when they need to search for a new job.

**10.2. Age of Youngest Child**

**10.2.1. Age of Youngest Child - Personal Wellbeing Index**

These results are shown in raw form in Table A10.19, and truncated in Tables A10.19.1 and A10.19.2. The latter results are shown below:

![Age of Youngest Child (Personal Wellbeing Index)](image)

Figure 10.6: Age of Youngest Child (Personal Wellbeing Index)

It is evident that parental wellbeing is significantly reduced during the period the child is 9-21 years. This result remains when the effect of parental age is removed.

**10.2.1.1. Domains**

Tables A10.19.3 to A10.19.20 show the results at the level of domains. These are as follows:

- **Standard:** 22+ > 0-8, 9-21 and remains when parental age is used as a covariate.
- **Health:** 0-8 > 9-21, 22+ and is eliminated by parental age.
- **Achieving:** 22+ > 9-21 and remains with parental age.
- **Relationships:** 22+ > 9-21 and remains with parental age.
- **Safety:** N.S.
- **Community:** 22+ > 0-8, 9-21 and remains with parental age.
- **Future Security:** 22+ > 9-21 and remains with age as covariate.
- **Spiritual/Religious:** N.S.

**Summary:**

1. Three domains show no influence of child age (Health, Safety and Spiritual/Religious).
2. The other five domains show higher wellbeing once the youngest child attains 22 years or more.
3. None of the domains reliably distinguish between 0-8 and 9-21 years.

**Conclusion:**

Parental wellbeing rises after their youngest child attains 22 years of age or other.

**10.3. Parental Rating of Youngest Child’s Happiness**

Table A10.20 shows that the parental proxy rating for the happiness of their youngest child (79.7 points) exceeds the top of the normal range for the Personal Wellbeing Index (76.6 points) by 3.1 points. Table A10.49 shows that the average parental rating of child happiness (79.7 points) is 3.3 points above their rating of their own SWB (76.3 points). Such proxy ratings do not differ between male and female children (Table A10.50).

This is consistent with literature showing that parents perceive greater happiness for their children than their children, themselves, actually feel.

The following Table A10.21 confirms a significant correlation (.27) between parental Personal Wellbeing Index and their proxy response. This relationship is confirmed in Table A10.22 and A10.22.1, and is shown below:

![Figure 10.7: Parental Proxy Response of Child Happiness vs. Personal Wellbeing Index](image)

The pattern above is a dramatic demonstration of the correlation. Moreover, while it is quite possible that happy parents have happy children, it is also possible that happy parents see their children as happier than the children see themselves.

**Domains**

Tables A10.23 to A10.31.1 show the relationship between the parental proxy response and their own Personal Wellbeing Index. Each of these shows the same pattern as Figure 10.7.
10.3.1. Life Events

Table A10.34 shows these results.

It is evident that the reported experience of a sad event is associated with a lower proxy rating for child happiness. The ‘Yes-sadder’ group has lower proxy wellbeing than both of the other two groups.

10.3.2. Terrorist Attack

Table A10.35 shows no differences.

10.3.3. Gender

Table A10.36 shows no differences.

10.3.4. Age

Tables A10.37 and A10.37.1 show the pattern below:

The significant differences are confined to the two youngest groups. It is likely that parents of these ages still have their children living at home and so have more personal investment in perceiving them as happy.
10.3.5. Household Composition

Table A10.38 shows that people living with their partner and children give a higher proxy rating for child happiness than all other groups.

![Household Composition x Proxy Child Happiness](image)

It is interesting that the actual presence of the child plus partner gives a more positive proxy view of child happiness. This is probably because the parents themselves are happier.

10.3.6. Marital Status

Table A10.39 shows lower proxy child happiness for parents who are divorced.

![Marital Status x Proxy Child Happiness](image)

It is interesting that the proxy rating of divorced is lower than separated, even though the Personal Wellbeing Index of both groups is similar.

10.3.7. Full-time Work Status

Table A10.40 shows higher proxy ratings for fulltime paid and fulltime home.
Section 10: Children continued

10.3.8. Looking for Work

Table A10.42 shows no differences.

10.3.9. Income

10.4. Child’s life is going to get better or worse

The data for this item have been coded from 0 (worse) to 10 (better). Thus, the values reported (0-100) reflect the level to which the parent considers the child’s life will get better.

Table A10.21 shows a significant correlation between parent perceptions of the child’s future life and their own level of wellbeing (.34). This is again consistent with levels of parental wellbeing driving their perceptions of their child.

Indeed for all subsequent tables up to A10.33.1, the results are very similar indeed to those reported in the previous section on proxy happiness.

10.4.1. Life Events

Table A10.34 shows these results. They show the same pattern as for parental ratings of child happiness (Figure 10.8) except that here the Personal Wellbeing Index of ‘Yes-happier’ is higher than ‘No event’.

Once again these values are consistent with the parental levels of SWB.
10.4.2. **Terrorist Attacks**

Table A10.35 shows lower proxy ratings for the child’s future life among those parents who believe a terrorist attack in the near future is likely.

![Image of bar chart showing child's life better by belief in terrorist attack](chart.png)

**Figure 10.13: Terrorist Attack x Child’s Life Better**

Again it seems highly likely that the level of parental SWB, which is higher in the ‘No’ groups, are acting to raise parental views of their child’s happiness.

10.4.3. **Gender**

Table A10.36 shows a more optimistic view of the child’s future life by females.

![Image of bar chart showing child's life better by gender](chart.png)

**Figure 10.14: Gender x Child’s Life Better**

10.4.4. **Age**

Tables A10.37 and A10.37.1 show no differences.

10.4.5. **Household Composition**

Table A10.38 shows no differences.

10.4.6. **Marital Status**

Table A10.39 shows no differences.

10.4.7. **Fulltime Work Status**

Table A10.40 shows no differences.
10.4.8. *Looking for Work*

Table A10.42 shows no differences.

10.4.9. *Income*

Tables A10.43 and A10.43.1 show no differences.

10.5. *Most Desired Age*

10.5.1. *Most Popular Desired Age*

Table A10.44 shows the distribution of the most desired age for self, while Table A10.44.1 shows this cross-tabulated with parental age. The following observations can be made:

1. Very few people desire to be older than they actually are. The highest proportion of such respondents is among those aged 18-25 years, where 8.1% would prefer to be older. This drops to 3.3% at 26-35 years, and is even less at older ages.

2. The most desired age is current age. This peaks at 82.0% in those aged 18-25y, falls to 49.5% at 26-35y, and thereafter sits at about 23-29%. The correlation between actual and desired age is .50 (Table A10.45).

3. Very few people would wish to be aged 0-12 once again. This is highest in the 18-25y group (5.4%) and generally becomes lower as people age.

4. The overall most popular age also increases as people get older. The most popular choices are as follows:

<table>
<thead>
<tr>
<th>Actual Age</th>
<th>Most popular desired age</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>18-25 (82.0%)</td>
</tr>
<tr>
<td>26-35</td>
<td>18-35 (89.6%)</td>
</tr>
<tr>
<td>36-54</td>
<td>18-35 (66.8%)</td>
</tr>
<tr>
<td>46-55</td>
<td>26-45 (43.4%)</td>
</tr>
<tr>
<td>56-65</td>
<td>26-45 (54.4%)</td>
</tr>
<tr>
<td>66-75</td>
<td>36-55 (34.8%)</td>
</tr>
<tr>
<td>76+</td>
<td>36-55 (33.8%)</td>
</tr>
</tbody>
</table>

The reducing % within these desired ages indicates that the range of desired ages also increases as people age (Table A10.44.1).

The overall most desired age (Table A10.46) is 21-30 years (36.1% of all respondents). The overall least desired age is 0-10 years (1.7%).
10.5.2. **Ideal Age x Personal Wellbeing Index**

The results from Table A10.47 are shown below:

![Graph showing the relationship between Ideal Age and Personal Wellbeing Index](Figure 10.15)

At the lower end of the age-range, very few people would choose to be so young, and those who do have very low wellbeing. Presumably this reflects the fact that their lives are not going well and they would welcome the chance to have a fresh start.

The other, higher age groups, that sit above the normal range are probably being driven by the high wellbeing of elderly respondents. The 41-50 group contains a high proportion of elderly respondents and virtually the only people who wish to be 81-90 years old are the people in this age-range.

In the following figure, with results from Table A10.47.1, the match between ideal and actual age is shown in terms of Personal Wellbeing Index.

![Graph showing the match between Ideal Age and Actual Age](Figure 10.16)

It makes intuitive sense that people with high wellbeing will wish to be their current age, and that people with low wellbeing will wish to be some other age.
10.5.3. Actual vs Ideal

In the figure below, from Table A10.47.2, the Personal Wellbeing Index values are for only those people who’s actual age matched their ideal age.

As might be expected, people who would wish to be their current age have high wellbeing.

Table A10.47.3 shows the Personal Wellbeing Index of people who regard their ideal age as older than their actual age. The number of respondents is too small to be meaningful.

Table A10.47.4 shows the Personal Wellbeing Index of people who regard their ideal age as younger than their actual age. Both this table and the next (A10.48; A10.48.1) show much the same patterns as Table A10.47.
Dot Point Summary for Children

1. **Children and wellbeing**
   On average, having children is associated with a 1.4 point higher level of wellbeing.

2. **Parental gender and children**
   Female wellbeing is unaffected by whether or not they have children. However males who do not have children have very low wellbeing. This largely reflects the gender difference associated with being unmarried and living alone.

3. **Parental age and children**
   (a) Not having children in the parental age-group of 36-56y is associated with low wellbeing. This may be caused by being unmarried and living alone.
   (b) At 66+ years, parental wellbeing is uninfluenced by whether or not they have children. Thus, the idea that having children is good for wellbeing in old age is not supported by these results.
4. **Retirement and children**

People who are retired and without children have low wellbeing. It may be that people who have retired from paid work are at risk of losing their sense of life purpose, but that purpose can be found in their children, or their children’s children.

5. **Looking for work and children**

If people are not looking for work, then having children is associated with enhanced wellbeing. However, the reverse is true for people who are looking for work. It seems possible that having children magnifies the stress of looking for a new job, probably due to time-constraints or a sense of bread-winner responsibility.

6. **Age of youngest child**

Parental wellbeing is lowest when their children are aged 9-21 years. This effect is not a consequence of parental age.
7. **Parental proxy responses**
   
   (a) When parents try to predict the happiness of their child, they tend to over-estimate by about 3 points. So they see their child as happier than their child sees themselves.
   
   (b) Parental proxy responses for their child tend to reflect the level of parental wellbeing. Section 10.3 shows numerous results to support this view including the figure shown which indicates such responding is influenced by the parental experience of a sad event.

8. **Child’s life getting better or worse**
   
   Females perceive their child’s life getting better more so than males.

9. **Most desired age**
   
   (a) Very few people desire to be older than they currently are.
   
   (b) The most desired age is people’s current age.
   
   (c) Very few adults would wish to be aged 0-12y again.
   
   (d) The overall most desired age is 21-30 years.
   
   (e) The happiest people are those who desire to be their current age. People who would rather be a different age have lower wellbeing.
11. Life Better or Worse?

We asked:

‘Is your life getting worse or getting better? On a scale from 0 to 10, how do you feel your own life is changing?’

‘Now think about Australia in general. On a scale from 0 to 10, how do you think life in Australia is changing?’

Background

These items had been asked on three previous occasions as Survey 1 (April 2001), Survey 2 (September 2001), and Survey 5 (November, 2002). This current Survey 23, conducted in April 2010, is 7.5 years after the previous measure was made.

11.1. Own Life Getting Worse or Better

These results come from Table A11.1.

![Figure 11.1: Life Getting Better x Survey](image)

It can be seen that the latest survey shows a significant increase over the three previous surveys of about 2.5 points. People appear to be more optimistic about their own futures in 2010. This is probably the result of the improved economic outlook for Australia and the sense of relief at this country having avoided recession.

11.1.1. Own Life Getting Better x Survey x Gender

These results come from Table A11.5.2.

![Figure 11.2: Own Life Getting Better x Survey x Gender](image)
It can be seen that females are generally more optimistic about their lives than males. This difference has become exaggerated in Survey 23, with a 1.6 point advantage to females.

While males at Survey 23 are significantly more optimistic than males were in Survey 5, females at Survey 23 are significantly more optimistic than were females at all three previous surveys.

11.1.2. Own Life Getting Better x Survey x Age

These results are shown in Table A11.7.2. They show the same pattern of higher optimism in Survey 23 for all age groups. While only some comparisons are significant this is due to the reduced cell sizes, and all age groups show the same pattern of response. The survey x age interaction is not significant.

11.1.3. Own Life Getting Better x Survey x Income

These results are shown in Table A11.9.2. They show no differences between surveys but a strong income effect, such that optimism rises with income. It may well be the case that the survey effect has been negated by the progressive movement of lower income people into higher income categories. This can be seen in relation to the <$15K category, which contained 410 respondents in Survey 1 and only 101 in Survey 23.

11.2. Life in Australia Getting Better or Worse

Life in Australia is also seen as getting better. The value for Survey 23.0 is higher than any of the previous three surveys.

11.2.1. Life in Australia Getting Better x Survey x Gender

These results come from Table A11.6.2. They show the same pattern as Figure 11.2 and again, there is no gender x survey interaction.

11.2.2. Life in Australia Getting Better x Survey x Age

This shows the same pattern of results as described in Section 11.1.2.

11.2.3. Life in Australia Getting Better x Survey x Income

This shows a strong effect of income, such that higher income yields higher optimism, and a weak effect for surveys, in that Survey 23 is higher than selected earlier surveys.
Dot Point Summary for Life Better or Worse?

1. In Survey 23, Australians are feeling more optimistic that their own lives are getting better than they did 8 or 9 years ago. They also feel more optimistic that life in Australia is getting better.

2. Females are generally more optimistic than males that their own lives and life in Australia is getting better.
12. Neighbourhood

We asked:

‘How much crime is there in your neighbourhood?’

[0 = no crime to 10 = crime going on all the time]

‘How much noise from neighbours is there where you live?’

[0 = no noise to 10 = noise all the time]

‘From 0 to 10, how stressful do you find this noise?’

12.1. Crime in the Neighbourhood

The overall average score of 34.8 points (on a 0-100 scale: Table A12.1) indicates a generally low perception of neighbourhood crime in Australia. This is reinforced by the raw frequencies in Table A12.2. These show that 13.4% of the sample consider their neighbourhood to be free of crime and 40.4% give the incidence of crime a rating of 2 or less. At the other end of the scale, only 3.4% give the incidence a rating of 9 or 10.

The following Figure 13.1 shows the crime ratings truncated to give reliable estimates at the high end of the rating scale.

![Figure 12.1: Perceived Incidence of Crime x Personal Wellbeing Index](image)

It can be seen that the perception of crime incidence needs to reach 8-10 before it is associated with below normal levels of Personal Wellbeing Index.

12.2. Personal Wellbeing Index Domains

Tables A12.3.1 to A12.3.9.1 show the same comparisons as in Figure 12.1, but now for each domain. One domain (Community) is not affected by perceived crime, with all values lying within the normal range. Two domains (Achieving and Future Security) are minimally affected, with just one value lying outside the normal range.

The two domains that show the greatest advantage to living in an area of low perceived crime are Standard and Relationships. These are shown below:
Section 12: Neighbourhood continued

Neither Standard nor Relationships are significantly compromised by high levels of perceived crime. The reason may lie in the high capacity of both money and relationships to act as a buffer to prevent homeostatic defeat.

The domain that shows the greatest disadvantage in areas of high perceived crime is Health.

Even a perceived incidence of 3/10 is associated with health satisfaction dropping to the bottom of its normal range. This is an important result since about 60% of the sample have a perceived incidence of 3/10 or greater. It is not clear why the health domain is so sensitive.

The domain that shows the greatest degree of volatility to levels of perceived crime is Safety.
It is intuitive that safety satisfaction would be the most sensitive and volatile domain. The reduction in safety within the (8+9+10) group is 6.8 points below the bottom of the generic range for safety and 15.2 points below the level experienced by zero perceived crime.

### 12.3. Life Events

Table A12.14 shows that people who have experienced a recent sad event perceive a higher incidence of crime in their neighbourhood. The direction of causation is unknown. It is possible that high perceived crime causes people to be sadder. However, it is probably more likely that people who are sad perceive more crime.

### 12.4. Terrorist Attack

Table A12.14 shows that people who regard a terrorist attack in the near future as likely, also perceive a higher incidence of neighbourhood crime.
Section 12: Neighbourhood continued

Figure 12.7: Regards a Terrorist Attack as Likely x Perceived Incidence of Neighbourhood Crime

People who consider a terrorist attack as likely may also experience anxiety which, in turn, links to a higher perception of perceived crime.

12.5. Gender

Table A12.5 shows that females perceive a higher incidence of neighbourhood crime than males.

![Gender x Perceived Incidence of Crime](diagram)

Figure 12.8: Gender x Perceived Incidence of Crime

12.6. Age

Table A12.6 shows no effects for age.

Table A12.6.1 shows no interaction effects between age and gender.

12.7. Household Composition

Table A12.7 shows no reliable effects for household composition.

Table A12.7.1 shows no significant interaction between household composition and gender.

12.8. Marital Status

Table A12.8 shows no significant effects for Marital Status.
12.9. **Work Status**

Tables A12.9 (Fulltime Work Status) and A12.9.1 (Part-time Work Status) show no significant effects.

12.10. **Looking for Work**

Table A12.10 shows no significant effects among people Looking/Not Looking for Work.

12.11. **Income**

Table A2.11 shows a significant effect for income which is enhanced when some cells are merged to create higher N, (Table A12.11.1).

![Figure 12.9: Perceived Incidence of Crime x Income](image)

It is clear that high income is associated with a lower perceived incidence of crime. This points to the protective influence of money through better living conditions and social interaction.

The interaction between income and gender (Tables A12.11.2; A12.11.3) is non-significant.

12.11.1. **Participation in Future Security**

Table A12.12 shows no significant effect.

12.12. **Location**

Table A12.37 shows that people in urban areas perceive more crime in their neighbourhood.

![Figure 12.10: Neighbourhood Crime and Locality](image)

It is interesting that urban surrounds and regional do not differ in the perceived incidence of neighbourhood crime.
12.13. **Noise and Stress from the Neighbours**

12.13.1. **Personal Wellbeing Index Domains**

12.13.2. **Correlation Between Noise and Stress**

Table A13.1 shows a strong correlation between noise from neighbours and reported stress (.66).


![Figure 12.11: Perceived Noise and Stress x Personal Wellbeing Index](image)

It is interesting to observe in the next few figures the strong association between perceived noise and stress attributed to that noise.

The Personal Wellbeing Index is significantly compromised by levels of both stress and noise that are 6/10 or higher.

12.14. **Noise, Stress, and the Personal Wellbeing Index Domains**

These results are shown in Tables A12.15 to A12.23.1. Overall these show non-significant relationships, with most values lying within their domain-specific normal ranges even when reporting very high levels of noise or stress. Exceptions to this are for safety and community connection.

![Figure 12.12: Level of Noise or Stress vs. Satisfaction with Safety](image)

Satisfaction with Safety is more compromised than the Personal Wellbeing Index by levels of both stress and noise at levels of 5/10 or higher.
The relationship between stress and community satisfaction is erratic, for reasons that are unknown.

### 12.14.1. Correlation Between Noise, Stress and Personal Wellbeing Index

Table A12.25 indicates that the overall correlation between the Personal Wellbeing Index and noise (-.136) and stress (-.119) is very low. This suggests that homeostasis is managing most levels of both variables, and that maybe the small amount of systematic variability being identified is linked to high and low set-points.

### 12.15. Recent Life Events x Stress/Noise

Table A12.26 shows that people who have reported a recent sad event also report higher levels of neighbourhood noise. The pattern is the same as Figure 12.6. The result for stress is non-significant.

### 12.16. Terrorist Attack x Stress/Noise

Table A12.27 shows that people who expect a terrorist attack feel more stress from neighbourhood noise. This pattern is similar to Figure 12.7.

### 12.17. Gender

Table A12.28 shows no significant effects for either noise or stress.

### 12.18. Age

Table A12.29 shows a significant effect for perceived noise but not stress. These results are shown below:
Section 12: Neighbourhood continued

It can be seen from Figure 12.14 that noise and stress show opposite age-trends. As people age they perceive less noise from neighbours, while their stress levels from this noise rise after 18-25y and then remain stable.

The explanation may be that young people are less stressed by neighbour noise, and that older people tend to live in quieter environments.

12.19. **Household Composition**

Table A12.30 shows no significant effects.

12.20. **Marital Status**

Table A12.31 shows significant effects for noise but not stress.

![Figure 12.15: Perceived Neighbourhood Noise vs. Marital Status](image)

The only significant difference is the very high perception of noise by Never Married. This may be due to the younger-age of the sample living in noisy environments.

12.21. **Work Status**

Tables A12.32 and A12.33 show that only one significant result – that people in full-time study perceive higher levels of neighbourhood noise. This could either be because they are living in noisy environments or that they are more sensitive to noise due to their need to study in a quiet environment.

12.22. **Looking for Work**

Table A12.34 shows no significant effects.

12.23. **Income**

Table A12.35 shows no significant effects.

12.24. **Location**

Table A12.37 shows no differences for the levels of stress from neighbourhood noise, but a significantly higher level of noise from neighbours in urban areas.
Figure 12.16: Neighbourhood Noise vs. Locality

It seems likely that this difference is related to population density.
Dot Point Summary for Neighbourhood?

1. Levels of the perceived incidence of crime that reach 8/10 are associated with low wellbeing.

2. The domains of standard and relationships are minimally affected by the level of perceived crime.

3. The domain of health is very sensitive to levels of perceived crime, falling below its normal range at an incidence of 3/10.

4. The domain of safety is closely linked to perceived crime, as expected.
5. People who perceive a terrorist attack as likely or who have experienced a recent sad event evidence a higher level of perceived crime.

6. Females show a higher level of perceived crime than males.

7. People with a household income of $101,000 or more perceive a lower incidence of crime in their neighbourhood.

8. People living in urban settings perceive a higher incidence of crime than those in living in Urban Surrounds or Regional areas.
9. Wellbeing is significantly compromised by levels of both noise and noise-related stress that are rated 6/10 or higher.
13. Insights into Homeostasis

[An insight into progress]

13.1. Health Satisfaction

13.1.1. The Distribution of Health Satisfaction

Figure 13.1: Satisfaction with Health (Frequency: combined sample)

Figure 13.1 is based on Table A12.1 and is a very good indication of the ability of respondents to use the full range of the 0-10 scale. It is based on 44,395 respondents and, with the exception of the 5-6-7 progression, it is a smooth and skewed distribution with a mode of 8. This is also the shape that would be predicted by homeostasis. That is, a basically normal distribution which becomes negatively skewed by homeostatic failure experienced by a small proportion of the sample. In this sample 7.5% score <5.

13.1.2. Separating Health Satisfaction from SWB

Taking the sample as a whole, the top and the bottom of the normal range, defined by two standard deviations around the mean, is 99.9 points and 50.3 points (Table A12.1). This, however, is not useful in defining the normal range for people who are uncompromised by their health or other concerns. In other words, this range is enlarged through the inclusion of two kinds of people as:

(a) People who are distressed by their medical condition to the point that their perception of their health is below normal.

(b) People who are distressed by other aspects of their life such that they have lost their capacity for normal homeostatic maintenance, are depressed, and so rate all of the Personal Wellbeing Index domains as lower than normal.

These are importantly different groups of people. Through the process of domain compensation it is quite possible for someone to register low in health satisfaction, yet maintain normal levels of SWB because of the counteractive bolstering from other domains, such as relationships, that rise higher than normal. Thus, in order to distinguish between (a) and (b) a differential diagnostic process must be undertaken.

This can be done on an individual basis by plotting the individual’s scores on the domain of health against the normal range generated by using the other six domains. Two groups can be produced as a consequence as:
Section 13: Insights into Homeostasis continued

(a) People with below-normal health satisfaction but normal levels of SWB. These people are only being troubled by their health.

(b) People with below-normal health satisfaction and SWB. These people are registering low health satisfaction because they are depressed.

13.1.3. The Distribution of the Personal Wellbeing Index at Levels of Health Satisfaction

In order to determine the relationship between Satisfaction with Health and the Personal Wellbeing Index corresponding to each interval of health satisfaction, Figure 13.2 has been calculated. The Personal Wellbeing Index range (vertical lines) at each level of health satisfaction has been empirically determined as two standard deviations around the Personal Wellbeing Index mean score corresponding to that level of health satisfaction (Table A12.1).

<table>
<thead>
<tr>
<th>N</th>
<th>283</th>
<th>190</th>
<th>554</th>
<th>825</th>
<th>1,480</th>
<th>3,932</th>
<th>3,530</th>
<th>7,338</th>
<th>11,736</th>
<th>8,120</th>
<th>6,407</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWI</td>
<td>86.6</td>
<td>90.2</td>
<td>87.5</td>
<td>85.5</td>
<td>87.0</td>
<td>91.5</td>
<td>99.9</td>
<td>97.5</td>
<td>95.1</td>
<td>90.6</td>
<td>84.6</td>
</tr>
<tr>
<td>Satisfaction with health</td>
<td>11.5</td>
<td>12.8</td>
<td>21.8</td>
<td>27.5</td>
<td>36.3</td>
<td>41.8</td>
<td>49.8</td>
<td>54.3</td>
<td>58.7</td>
<td>61.7</td>
<td>56.1</td>
</tr>
</tbody>
</table>

This normal range is the generic normal range for individuals calculated from the scores of individuals comprising the entire sample (N = 44,395 : Table A12.1)

Figure 13.2: Satisfaction with Health x Personal Wellbeing Index

In this figure, the shaded horizontal bar indicates the generic normative range for the Personal Wellbeing Index based on individual scores (Table A2.6). The vertical bars indicate ±2 standard deviations of the Personal Wellbeing Index at each level of health satisfaction. The midpoint of each range is indicated by an X.

There is an almost perfectly linear relationship \( r = .995 \) between satisfaction with health and personal wellbeing over the 11 scale points. This illustrates a massive level of dependence between these two variables which is not surprising since the variable of health forms part of the Personal Wellbeing Index and the values for both are dominantly determined by the set-point of HPMind. Despite this, however, the detail of Figure 13.2 reveals some important asymmetries as follows:

(a) Over the four lowest ratings of health satisfaction (0-3) the mean Personal Wellbeing Index approximates the bottom of the normal range and increases from 49.0 to 56.5, an increment of 6.5 points. In contrast, over the next four ratings (3-6) the Personal Wellbeing Index increments by 13.4 points, and over the four ratings 6-9 it increments by 10.8 points. Thus, the incremental rise in the Personal Wellbeing Index over the lowest four ratings was about half that shown by the rest of the scale. This indicates some fundamental change in the Health vs. Personal Wellbeing Index relationship when health satisfaction falls below 4.
Section 13: Insights into Homeostasis continued

(b) It is evident that the magnitude of the standard deviations is changing over the scale (Table A12.1). These are shown in Figure 13.3.

These changes in variance are consistent with the following:

Over the range of health satisfaction from 6 to 10, the level of health satisfaction over these five response levels is linearly related to the Personal Wellbeing Index mean score ($r = .999$; Figure 13.1) but is independent of the Personal Wellbeing Index variance at each level ($r = -.310$; Figure 13.2).

(c) The most obvious confounding factor is cell size: that the higher levels of health satisfaction have lower SDs due to their larger cell sizes. While this is certainly a confounding influence, it is not a dominating influence due to the following considerations.

(i) The values for the smallest cell (N=190) are sufficient to achieve considerable variance stability.

(ii) A comparison between the low levels of health satisfaction in the combined data (Table A12.1) and high levels of satisfaction in Survey 22 reveals comparable N values. Yet the SDs for the low levels of health satisfaction are far larger.

(d) This pattern of changing variance across the levels of health satisfaction is consistent with both health satisfaction and all other Personal Wellbeing Index domains being driven by some common factor, which we propose is HPMood.

(e) In these terms, HPMood represents an individual difference that is influencing equally all of the domains within this normal range. Thus, at a health satisfaction of 10, the rating for this domain, and all other domains, are being determined by those people in the sample with the highest set-points.

A corollary from this is that essentially the same group of people should be responsible for producing the highest scores for all of the domains. That is, the within-person variation between the domains should be very low. The could be calculated by:

$$\text{Personal domain variation} = \sum_{i=1}^{6} \left( \frac{\text{health satisfaction} - \text{other domain satisfaction}}{6} \right)$$

It is predicted that this value will be quite constant over the range of health satisfaction 6-10. The same situation occurs at a health satisfaction of 9, 8, 7, and 6. Thus, the Personal...
Wellbeing Index variance at each level of health satisfaction reflects the systematic influence of the HPMood set-point at each level.

(f) So, what creates the Personal Wellbeing Index variance at each level of health satisfaction and why is it so constant?

(g) The cause of the Personal Wellbeing Index variance at each level of health satisfaction is likely the result of two influences as:

(i) Random mood fluctuations caused by acute conditions.

(ii) Varying levels of concordance between the level of health satisfaction and the average level of the other six domains. This variance will be created by specific challenges to other domains (e.g. feeling unsafe) and the effects of homeostatic compensation to raise the levels of the rest of the domain set.

(h) The reason for the consistency in this variance is homeostasis. It is striving to keep SWB positive and it is relevant to note that the Personal Wellbeing Index range around the lowest normative health satisfaction rating of 6 is 49.5 to 89.6 points (Table A12.1). That is, at a health satisfaction rating of 6/10, around 95% of the Personal Wellbeing Index scores are positive lying above 50 points.

(i) The mean of these five levels of health satisfaction (6-10), calculated as the simple average of the five means, is 76.70 points. This calculation has not been weighted by the number of respondents in each cell because the proportion of respondents who score <6, who are in homeostatic failure, cannot be knowingly distributed between the cells. This may be the most accurate estimate yet of the natural mean set-point value for Personal Wellbeing Index because it is based to a 95% level of probability on respondents who are not in homeostatic failure.

(j) The standard deviation within these five cells varies from 8.5 to 10.0 and averages 9.34. If this is used as the basis of a calculation of normal range around the average of these top-five mean scores (76.70 points), the ±2SD range become based on normative health satisfaction. It is 58.02 to 95.38 for the Personal Wellbeing Index. This is the most accurate estimate yet of the normal range of set-points.

(k) It is most notable that the standard deviation for the Personal Wellbeing Index does not systematically change over the range of health satisfaction from 6-10. That is, the variance of the Personal Wellbeing Index does not change even though the level of health satisfaction is changing. So at levels of health satisfaction from 6-10 the Personal Wellbeing Index range is constant.

This is consistent with both the health satisfaction and the Personal Wellbeing Index being driven by a common source, core affect. At levels of health satisfaction that lie within the normal range of 6-10, the differences in level of satisfaction represent differences in set-point. Below the value of 6/10, additional variance is introduced by some respondents lying below the normal range.

(l) This logic allows a more precise definition of the normal range for the health of individuals as 6-10 points on the 0-10 scale. But any such determination is necessarily going to be a probability statement. These considerations are as follows:

(i) Keeping in mind that the proposed range for Personal Wellbeing Index set-points is 58.02 to 95.38 (see (j)), the ±2SD range for Personal Wellbeing Index values that lie within that range (95% probability) corresponds to the health satisfaction categories of 8, 9 and 10 Figure 13.2. In other words, at a health satisfaction rating of 8-10, there is a 95% probability that the corresponding Personal Wellbeing Index will fall within the normal set-point range.
Section 13: Insights into Homeostasis continued

(ii) At a health satisfaction rating of 7 and 6, the bottom of the ±2SD range lies below the set point range of 58 points, but remains in positive territory. Using the premise that depression is a loss of positive mood, people in this grey area between 50 to 58 points may be under homeostatic stress but just holding the line above overt negative feelings. Their homeostatic system is fighting hard to maintain control and mean SWB sits at about 70. This changes quite dramatically at a health satisfaction rating of 5.

(m) People who score five for health satisfaction may or may not have their Personal Wellbeing Index under normative control. The majority of them will still experience normal-range Personal Wellbeing Index even though their health satisfaction is less than it should be. A minority of the people who score five for health will also be experiencing overall homeostatic failure, and this proportion increases as health satisfaction falls to progressively lower values.

(n) If this analysis is correct, the above values should hold for all groups. That is, even though medically compromised groups will have a lower proportion of their members in the 6-10 range, the Personal Wellbeing Index variance corresponding with each level of health satisfaction between 6-10 should remain constant. This remains to be tested.

(o) Also consistent with the homeostatic model, the variance changes shown in Figure 13.3 are caused by larger incremental increases in the bottom than in the top of the ±2SD (Figure 13.2). Whereas the top of the range increases by 17.4 points between the health ratings from 0 to 10, the bottom increases three times as much, by 52.1 points. This is consistent with lower levels of health satisfaction being associated with a greater proportion of people experiencing homeostatic failure, and for their lower wellbeing causing the lower margin of the Personal Wellbeing Index range for decrease.

(p) These changes in the magnitude of the variance for the Personal Wellbeing Index are also not equally distributed throughout the response scale for satisfaction for health. In order to demonstrate this, it is necessary to average adjacent increments in Table 12.1, shown in Table 12.2) (e.g. variance increment in the ±SD values from 0-1 plus increment from 1-2). If the increments are used individually their error of measurement obscures the pattern. Figure 13.4 shows the result.

Figure 13.4: The top and bottom of the ±2SD range for the PWI at differing levels of Health Satisfaction

An explanation for all of these patterns of change is as follows:

(a) The capacity of low health satisfaction to influence overall SWB is limited by two factors as:
(i) The level of health satisfaction. Assuming that a normal Personal Wellbeing Index always lies in the positive sector of the satisfaction range (>50), and also assuming that the 2SD range encompasses the sample under investigation, Figure 13.2 shows that a health satisfaction from 6-10 allows normal SWB. Thus, health satisfaction of <6 is a risk factor, associated with homeostatic failure (PWI < 50) for some people.

(ii) Individual resilience: From Figure 13.2 it can be seen that, even with the lowest rating for health satisfaction (zero) about half of the sample maintained SWB above 50 and a few people into the high 80s. This attests to the power of homeostatic compensation. Through the use of either external buffering resources (e.g. wealth or relationships) or internal buffering resources (e.g. sense of control, self-esteem or optimism), combined with a naturally high SWB set-point, their overall personal wellbeing has been little affected.

(c) Figure 13.3 shows a progressive decrease in the magnitude of the scale-sample variance from 0 to 6. It then stabilizes. An investigation of this is as follows:

The side of this figure designated ‘A’ shows variation in health satisfaction caused by individual set-points. This ranges over the positive health satisfaction range of 6-10. The half of the figure designated ‘B’ indicates the onset of pathology at the point that people report feelings of health neutrality, neither satisfied nor dissatisfied. At this point, the least resilient people, who may be those who have the lowest set-points, report lower-than-normal Personal Wellbeing Index (Figure 13.2) and this causes the sample variance to increase (Figure 13.3). This reinforces the usefulness of regarding 5/10 as a level of health satisfaction that puts SWB homeostasis under a significant degree of threat.

A corollary of this is that the stable level of scale-sample variance over the 6-10 response range can be used to calculate the normal range of set points. This can only be approximate since even with a 10/10 health satisfaction other influences on the person’s life may be acting to reduce SWB. Nevertheless, at this highest level of health satisfaction, reported by 14.0% of the total sample, the x 2SD range extended down to 64.89 points (Table A.1). Thus, as a working hypothesis the normal set-point range may be regarded as 65 points or higher. The implication is that individual SWB scores of < 65 indicate pathology.

(d) Figure 13.4 shows the average changing nature of the top and bottom of the response variance. Consider first the bottom of the range.

Over the scale range 0-6 the bottom of the range rises in a fairly consistent manner. Beyond 6/10 further rises are reduced. This is consistent with a lower normative set-point range of 65. When there are people in the sample with values < 6, their SWB will be sensitive to the varying levels of stressors, including health. However, this sensitivity is much reduced when people are experiencing a level of SWB (65+) that lies within their set-point range.

The top of the response-sample ranges shows a quite different pattern. shows almost no change over the response range 0-4. Beyond this, the rate of change accelerates.

In order to explain this a further hypothetical construct will be introduced, as the set-point-range (SPR). That is, under normal conditions SWB is free to vary within a range. The magnitude of this range is not known but may be about 10 points.

Under non-challenging conditions SWB will tend to lie at the top of its SPR. Then, as the level of challenge is increased, it will progressively have a higher probability of lying at the bottom of the SPR. As the level of challenge becomes even stronger it will remain at the bottom of the SPR as long as homeostasis is retained.

This hypothesized sequence explains the changes shown in Figure 13.4. At high levels of health satisfaction SWB is very sensitive to challenge, and quite minor reductions in health satisfaction are
effective in shifting the probability of SWB within the set-point range. Moreover, since in the high satisfaction ranges the whole sample is experiencing this phenomenon, these probability changes have a marked influence on SWB.

The influence of decreasing health satisfaction on the top of the SWB range decreases for two reasons as:

(a) Progressively more people have a SWB that sits at the base of the set-point range. This then cannot change further unless the person experiences homeostatic failure, which will cause a further drop.

(b) The people at the top of the range have not experienced homeostatic failure (Figure 13.2). Thus, over the health satisfaction range of 0-3 the SWB of these people remains unchanged despite the continued decreased in the mean SWB of the response groups as progressively more people experience homeostatic defeat.

This is also interesting in another respect, that it may be age-dependent. In old age, health satisfaction decreases, while the Personal Wellbeing Index rises. This Figure should be split by age.

13.2. Relationship Satisfaction

These results come from Table A12.4.

A major difference from Figure 13.1 is that while the median satisfaction interval for health was 80 points, the median for relationships is 100 points. Over one quarter of the sample (25.8%) rate their satisfaction as 10/10.
(a) Once again, in terms of mean scores, there is an almost perfect linear relationship between relationship satisfaction and personal wellbeing. However, again, there is evidence of homeostatic defence at the lowest levels of relationship satisfaction. Over the four lowest ratings of relationship satisfaction (0-3) the Personal Wellbeing Index approximates the bottom of the normal range and increments 4.9 percentage points. Over the four intervals 3-6 the Personal Wellbeing Index increments by 11.8 points, and over the four intervals 6-10 it increments 15.5 points. This is evidence for a homeostatic plateau at the bottom of the normal range for relationship satisfaction.

While the proportion who rate their relationship satisfaction as 10/10 is almost double that for health (25.8% vs. 14.8%), the proportion of people within each domain who rate their level of satisfaction between 5-10 is almost identical (Health: 83.7%, Relationships: 86.8%). Thus, either the actual objective circumstances of health are more harsh, such that people are rating it lower, or people are programmed to register higher, or more resilient, levels of relationship satisfaction. There seems no good reason to expect that either of these is valid.

A further possibility is that ‘relationships’ allows more scope for higher ratings than does ‘health’. In a sense, health is unitary. People have only one health and this can be affected by myriad forms of illness or disability. Relationships, on the other hand, are more flexible. If satisfaction with family relationships is low, satisfaction with friendship relationships can be high. Moreover, if the item about relationships is answered with the best source of satisfaction in mind, then this might explain why so many people rate this as 10/10.

(b) Again it is evident that the changes in the Personal Wellbeing Index across ratings of relationship satisfaction are driven mainly by changes at the bottom of the ±2SD range. Over the entire 0-10 range, the top of the range has varied by 23.1 points, while the bottom of the range has varied by 46.9 points. This two-fold difference, while substantial, is far less than the three-fold difference for health satisfaction.

The cause of this difference lies in the magnitude of the variance within each unit of satisfaction rating.
13.3. Standard of Living Satisfaction

These results come from Table A12.5.

Figure 13.7: Satisfaction with Standard of Living (Frequency: combined sample)

This pattern is similar to Health in having a median at 8/10.

Figure 13.8: Satisfaction with Standard of Living x Personal Wellbeing Index
13.4. Combined Data

It is apparent that the Personal Wellbeing Index scores corresponding with low domain satisfaction are more tightly bunched (i.e. smaller standard deviation) in the case of relationships. This applies to both high and low satisfaction. Relative to health, at low levels of satisfaction, the SDs are smaller showing a more tightly grouped distribution. Thus, low levels of relationship satisfaction diminish the Personal Wellbeing Index to about the same extent as for Health but with less variation around the mean. The influence of low relationship satisfaction is, thus, more predictable in its damaging influence on the Personal Wellbeing Index.

(c) It is evident from Figure 13.6 that the progressive decline in the top of the +2SD range shows two phases as:

- 10, 9, 8, 7, 6, 5, 4: A progressive decrease to about 80 points.
- 4 and below: Maintenance at about 80 points.

It is notable that this downward progression extends further than for health (over the range 10-4 compared with 10-7) and that it plateaus at a lower level than health (80 vs 90 points). Again, this reinforces the hypothesis that low relationship satisfaction is a more powerful determinant of low personal wellbeing than is low health.

Following the logic presented in relation to health, the initial decrease in Personal Wellbeing Index from the highest rating of 10/10 for relationship satisfaction, reflects the changing set-point. This occurs over the neutral-positive region of the rating scale (5-10). Scores below 5, therefore, indicate pathology. The changing variance is shown below.
13.5. **Personal Wellbeing Index Mean Scores vs. Domain Ratings**

These results are taken from Table A12.10.

The following can be observed:

1. The intersection of both domains with the hypothetical linear relationship line is at about 70. That is, a person who responds with a satisfaction rating of seven will likely have a Personal Wellbeing Index rating of about 72. This seems to represent the neutral position for the homeostatic system, where a satisfaction value corresponds for both the value of a domain and the value of the Personal Wellbeing Index.

2. Satisfaction ratings above and below this level are dampened in relation to a linear relationship between the Personal Wellbeing Index and the domain ratings. This is consistent with the action of a homeostatic system. The degree of dampening is determined by the extent to which core affect dominates the valuation of the domain; high core affect high dampening.
This predicts that the lowest levels of core affect are found in Satisfaction with Standard of Living and the highest are in Satisfaction with Health. This is consistent with the regressions of the domains against Life as a Whole. Here, Standard of Living dominates the unique variance indicating its relatively low levels of core affect, which represents the shared variance.

3. It is remarkable to note the close correspondence between this value and the population mean Personal Wellbeing Index value of 75.0 (Table A2.1).

13.6. **Demographic Influences and Predictions from Homeostasis Theory**

This chapter tests predictions from homeostasis theory against various demographic data.

13.6.1. *Life as a Whole*

*We asked:* ‘Thinking about your own life and personal circumstances, how satisfied are you with your life as a whole’.

The results on ‘life as a whole’ are taken from Table A12.10.

![Figure 13.12: Frequency Distribution for Life as a Whole](image)

**Prediction 12.6.1:** The response to the complex and abstract question ‘How satisfied are you with your life as a whole’ is normally generated by a heuristic that reflects core affect (Davern et al., 2007). Thus, it will normally be positive, lying within the range of 6-9 (60-90 points) which is the hypothesised range for individual set-points.

**Result 12.6.1:** 74% of responses lie between 6-9.

**Prediction 12.6.2:** More responses will lie below the 6-9 range than lie above. This is due to the nature of the influences that are causing a response different from core affect. A response of ‘10’ will reflect an acute situation of enhanced positive affect due to some recent life event. Such responses are transitory due to rapid adaptation.

A response of 5 and below will reflect either an acute or a chronic situation that has caused homeostatic defeat. Thus, the response that is provided reflects a reduced level of satisfaction caused by the inducing agent. This may be either short or long-term, depending on the rate of adaptation. If adaptation is impossible due to the persistent strength of the challenging agent, then SWLW will remain chronically below its normal set-point range and the person will be at enhanced risk of depression.

Thus, because the below-normal response may be either acute or chronic, while the above-normal response can only be acute, more people should lie below than above the normal range.
Result 12.6.2: 15.9% lie below the 6-9 range while 14.9% lie above. This difference is magnified if the normal range is considered as between 7-9, which is the symmetrical portion of the distribution (Figure 13.12). Using this criterion, 21.3% of responses lie below while 14.9% lie above.

Prediction 12.6.3: Core affect is always positive, so any response in the dissatisfied 0-4 range of the scale should indicate pathology in the form of a high risk for depression. Thus, the frequency of responses in the 0-4 range should approximate the incidence of depression within the general population.

Result 12.6.3: 9.0% of responses lie within the 0-4 range.

13.6.2. Life as a Whole vs. Personal Wellbeing Index

Table A12.10 shows the mean value of the Personal Wellbeing Index for each 0-10 response on the Life as a Whole Scale. The mean and SD for each level on the response scale are shown below.

Figure 13.13: Life as a Whole vs. PWI Mean and Standard Deviation (cumulative data)

The changes in the value of the Personal Wellbeing Index means are quite linearly related to Life as a Whole. However, the increments of change are more variable over the range 0-2 and also show relatively little change. The total point change over these three response intervals is 4.7 points, compared with 8.8 points over the response range 8-10. This may be because people have difficulty distinguishing between response choices at the lower-end of the scale or that there is a ‘floor-effect’ in that people with a PWI < 40 are less likely to complete the questionnaire.

This linearity of change is not shared by the standard deviation. Here there appears to be a flattening-off of the change between 6-10 on Life as a Whole. In order to further examine this phenomenon, the x2SD range for the Personal Wellbeing Index at each response point on Life as a Whole is shown below.
13.7. **Effect of Recent Life Events**

*We asked:* ‘Has anything happened to you recently causing you to feel happier or sadder than normal? [If yes] How strong would you rate this influence?’

These results come from Table A12.11.

Homeostasis theory predicts that within any Australian general population sample, the vast majority of people will have a level of SWB that lies within their normal range. From this can be derived two predictors as follows:

1. The experience of a recent ‘happy’ event will have little impact on the Personal Wellbeing Index. There are two reasons. First is rapid adaptation to sources of hedonic pleasure. Second is that the residual influence of such an event, following the brief acute response, will be restricted by the margin between the set-point and the top of the set-point range. Consistent with these predictions, the difference is SWB between the happy event and the no event groups is +0.9 points.
Section 13: Insights into Homeostasis continued

2. No such restrictions are imposed on the outcome of experiencing a sad event. First, the rate of adaptation to sad events is much slower than it is to happy events. Second, recovery is not guaranteed. If the source of the negative event remains as a chronic and powerful source of stress or anxiety, then this may act to chronically defeat homeostasis and, therefore, to keep SWB depressed below its normal set-point range.

Consistent with these predictions, the difference in SWB between the sad event and the no event groups is -4.8 points.

A further prediction from homeostasis concerns the changes in variance. That is, the effect of a happy event should be to increase the probability that people are experiencing the upper-half of their set-point range, instead of being evenly distributed through the set-point range as for the no-event group. This is confirmed. The happy event group has a standard deviation that is 0.82 points less than that of the non-event group (Table A12.12). 

Note: If all of the people comprising happy event group had simply been made happier, in the absence of a homeostatic system, the standard deviation should show no change or even an increase due to individual differences in the strength of response to the happy event.
Dot Point Summary for Insights into Homeostasis

1. The intersection of the three domains with the hypothetical linear relationship line is at about 70 points. That is, a person who responds with a satisfaction rating of seven will likely have a Personal Wellbeing Index rating of about 72. This seems to represent the neutral position for the homeostatic system, where a satisfaction value corresponds for both the value of a domain and the value of the Personal Wellbeing Index.

Satisfaction ratings above and below this level are dampened in relation to the Personal Wellbeing Index. This is consistent with the action of a homeostatic system.
Appendix A1

A1.1 References to the Text


A1.2 Previous Reports on the Australian Unity Wellbeing Index


Appendix A1 continued


Appendix A1 continued


