

Final Report

Housing and its association with other life outcomes

authored by

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This paper uses data from the first two waves of the Negotiating the Life Course Survey, a longitudinal national random survey of Australian men and women aged 18–54 in 1996–97. The principal investigators of this survey are: Professor Peter McDonald, Professor Frank Jones (retired) and Dr Deborah Mitchell of the Australian National University and Dr Janeen Baxter of the University of Queensland. Data were made available through the ACSPRI Centre for Social Research at the ANU.

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EXECUTIVE SUMMARY

This paper uses data from a nationally-representative, longitudinal panel survey to assess the relationships between changes in aspects of housing and various non-housing outcomes.

The types of housing change considered are: changes in tenure; changes in equity for those who were purchasers or outright owners at both waves of the survey; and changes in costs for those who were paying for their housing, that is, they had non-zero costs of housing in both waves of the survey. Associations between these changes and changes in relationship status, education, employment, social security receipt, income, self-assessed health status, participation in community work, and self-concept are examined. The latter three concepts are considered potential consequences of housing changes, while others are treated as determinants of housing change.

The paper finds that changes in tenure are strongly associated with age, suggesting that life cycle changes are a major determinant of tenure changes. Entry to home ownership is strongly related to the formation of a cohabiting relationship, and exit from home ownership is strongly associated with exit from a relationship. Likewise, gaining of employment or increase in income coincides with entry to home ownership, while loss of employment or fall in income leads to exit from home ownership. Transitions to outright home ownership are not associated with changes in relationship status, income or employment. Changes in education level and movements on and off social security incomes are not associated with any changes in tenure.

No statistically significant relationships between changes in tenure and changes in health status, self-worth or participation in voluntary work are found. However, this research is based upon a nationally-representative sample, and thus cannot be used to draw conclusions in regard to the low end of the housing market.

Increases and decreases in housing equity among owners, respectively, appear related to partnering and partnership breakdown. Again, changes in changes in health status, self-worth and participation in voluntary work appear independent of changes in equity.

Housing cost changes are positively related to partnering and income and employment changes. Thus, for the general population at least, a rise in housing cost is an indicator of an increase in wellbeing, not a decrease. As measured in this paper, changes in health status, self-worth and participation in voluntary work are not significantly related to changes in housing costs.

The study draws two main conclusions: firstly that changes in housing circumstances have little impact on the wellbeing of Australians in general, as our analysis shows that most such changes represent movement from a relatively good situation to a better one; and secondly, that further analyses of the relationship between shelter and non-shelter outcomes consider not only changes in circumstances, but also the timing of such changes relative to each other.

1 INTRODUCTION

There is increasing recognition by social policy makers that assistance provided under specific government programs may have unintended, often positive, outcomes for recipients. This is especially true in the area of housing assistance as it has been claimed that access to secure and adequate housing has an impact on, for example, health and criminal behaviour.

Although parallel changes in economic and social wellbeing on the one hand, and housing on the other may not necessarily be causally related, the use of panel data to assess such changes provides a more reliable indicator of the link between each outcome than would be possible using cross-sectional data.

This project aims to examine the extent to which changes in housing over a three-year period are associated with changes in non-shelter outcomes by analysing the Negotiating the Life Course panel survey. It considers changes in education, employment, social security receipt and income, self-assessed health status, participation in community work, self concept, family formation and dissolution, and work-family values for people whose housing situation also changed.

Recent research has identified that there is a need to examine the relationship between the diversity of housing provision and consumption forms and a range of social and economic wellbeing outcomes. For example, the literature review provided by Phibbs (2000) has indicated evidence of impacts of housing form upon health and crime. Focus then falls upon the question: what are the key non-shelter impacts of different forms of housing provision and consumption and how do they contribute to the higher outcomes of improved social wellbeing for individuals, families and communities?

Effective study of this issue requires longitudinal panel survey data so that changes or stability in housing can be related to changes or stability in other areas of people's lives. Compared to longitudinal panel databases, cross sectional databases are very much more limited in their capacity to measure the levels of association between different life outcomes. As a measure of association, a relationship between two outcomes at one point in time is much less reliable than a relationship between temporal changes in each of the outcomes (Phibbs 2000). For example, the evaluation of the capital indexed loan scheme of the Victorian Government in the 1980s conducted by the Australian Institute of Family Studies indicated that home ownership led to positive changes in people's lives such as a closer association with their family and a greater sense of self-respect (Wulff 1991). These conclusions could be drawn more strongly because the study was a longitudinal panel survey in which changes over time were evident. In addition, all of the respondents in the study had undergone the same change in housing circumstance (home ownership) at the same time. Thus, the time sequence of the housing event with other events or outcomes was clear. While it is possible to measure some life changes retrospectively, for example, by using family formation histories or work histories, all life changes are more accurately reported in longitudinal surveys and some changes, such as changes in health status or self concept, can only be measured longitudinally.

1.1 Aims

The overall aim of the project is to examine the extent to which changes in housing are associated with changes in non-shelter outcomes by analysing the Negotiating the Life Course panel survey.

In particular, this project aims to:

1. examine the associations between changes in housing over a three-year period with changes over the same period in other aspects of people's lives including education, employment, social security receipt and income, self-assessed health status, participation in community work, self concept, family formation and dissolution, and work-family values; and
2. make recommendations about future directions in this area of research.

The paper begins by outlining the current state of knowledge on the relationship between life outcomes and housing changes (section 2) and describing the method and variables used in the present study (section 3). Section 4 looks at the relationship between changes in housing tenure, equity and housing costs, and changes in other areas of life for a sample of Australian adults aged 18–54 in 1996–97. The final section concludes the study and makes suggestions for future research.

2 PREVIOUS STUDIES OF THE IMPACT OF HOUSING ON OTHER LIFE OUTCOMES

It is not the purpose of this report to provide a comprehensive review of literature relating to the non-shelter outcomes of housing. Other recent AHURI or AHURI-related projects have addressed this aim (Phibbs 2000, Mullins and Western 2001, Waters 2001, King 2002). The review by Phibbs (2000) found that where housing needs were not met, there were negative outcomes in respect of education, employment, family relationships, integration in the community, health and crime. Waters's review of literature concluded that numerous studies had found associations between housing and health outcomes but that 'the direction of causality between housing and health is often unclear' (Waters 2001: iv). She herself draws several conclusions regarding differences in various health outcomes between renters, purchasers and outright owners. The strongest finding was that negative health outcomes were associated with renting compared to the other two tenure types (Waters 2001: iv-v). However, as her study is based upon a cross-sectional analysis of the 1995 National Health Survey rather than upon longitudinal data, the direction of causality remains a problem. The cross-sectional analysis by Mullins and Western found that the poorest non-housing outcomes applied to public housing tenants and private housing tenants who were in receipt of government assistance. They conclude, however, that 'differences are a product of the characteristics of the people residing in these various forms of tenure, not the buildings themselves' (Mullins and Wester 2001:4). In summary, this research identifies two problems for research. First, the direction of causality is problematic in any association found between housing and non-shelter outcomes. Second, often both outcomes may be the result of third factors indicating the central importance of controlling for these third factors in the statistical analysis.

Phibbs (2000) proposes that these difficulties may be overcome if a longitudinal panel design is employed. Specifically, he argues that we should examine the changed non-shelter outcomes for people from before they receive housing assistance to after they have received housing assistance. Here, causality is argued from the time sequence. The AHURI Sydney Research Centre is undertaking a study with this design entitled Housing assistance and non-shelter outcomes. An issue for this type of research is the time frame. How long after the receipt of assistance should we expect to observe change for each non-shelter outcome. Also, it remains necessary to examine or control for the effects of third factors. A person who receives housing assistance may obtain employment (not related to the housing assistance) and it may be the employment that leads to improvements in other non-shelter outcomes. To control for all of the factors that can potentially influence non-shelter outcomes implies access to a large sample population.

Consistent with Phibbs recommendation, this study makes use of a longitudinal panel survey, the Negotiating the Life Course survey. However, a limitation of this study is that we observe the circumstances of the respondent only at two points in time, at the original survey in 1996–97 and at re-survey in 2000. The sequence of changes in their lives in the three-year period is not known. That is, we may observe a change in some aspect of housing and a change in self-worth between the two surveys, but we do not know which took place first. While the aim of the research is to infer causality, specifically, that a change in housing circumstances leads to changes, positive or negative, in other areas of people's lives, it is generally not possible to be confident about the direction of causality or the sequence of change. For example, it may be hypothesised that entry to home ownership may improve a person's sense of self-worth in turn leading to the person gaining a better job. The difficulty in this research, despite its longitudinal design, is that the causality may still be reversed. Within the three-year time frame, gaining a better job may lead to an increase in income enabling home purchase and, in general, this is the more plausible direction of the causality because home purchase, almost invariably, is contingent upon income but income is not contingent on home purchase. In fact, it is common that changes in housing circumstances are associated with other major changes in people's lives such as changes in employment or relationship status. When all of these major changes are occurring within the same period of time between two surveys, it is extremely difficult to attribute changes in non-shelter

outcomes such as health or wellbeing to any one of the other changes. This is especially the case with housing because research evidence suggests that income, employment and relationship changes are all more closely related to wellbeing than is housing. Heady (1993) concluded from an Australian study that happiness is explained mainly by our personality (psychological adjustment) and how we feel about the central areas of our lives (family, friends, health, job), not housing circumstances.

Among the non-housing factors considered in the study, some are logically or theoretically more likely to be determinants of housing than consequences. Changes in education, employment, social security receipt, income and family circumstances are more likely to be determinants of housing changes than consequences. On the other hand, self-assessed health status, participation in community work, self concept, and work-family values are less likely to be determinants of housing change and are better considered as consequences. The analysis undertaken in this report presumes that the causal directions hypothesised as most likely in the previous two sentences are the directions to be considered. Accordingly, bivariate tables are constructed with these causal directions implied, that is, the percentages in the tables run in opposite directions according to whether the particular factor is hypothesised to be a cause or a consequence of a particular housing change.

Hence, even when a longitudinal design is employed, an observed correlation between an improvement in wellbeing and a change in housing may be misleading. In theory, multivariate analysis can be used to assess the effects of housing controlling for the other changes that have occurred in people's lives, but, in practice, where these events tend to be closely linked with each other, very large samples may be required to establish the impacts of any one factor. This difficulty creates a problem in this research because the number of respondents who have experienced specific changes in housing or in selected non-housing outcomes is often relatively small. For example, in relation to tenure changes in the three-year period, 134 respondents entered home ownership, 93 exited, 100 purchasers became outright owners, 26 respondents moved out of public housing and 19 moved into public housing. These numbers become problematic when we need to control for a large number of factors potentially influencing a given non-housing outcome.

Another limitation of the present study is that the sample is a general sample of the Australian population. Hypotheses about the effects of changing housing circumstances upon non-shelter outcomes are normally hypotheses about those who are in very poor housing circumstances moving into a better situation not about changes for the whole population.

3 METHOD

To assess the impact of housing changes on other life outcomes, this paper uses data from Negotiating the Life Course (NLC), a longitudinal panel survey conducted jointly by the Research School of Social Sciences of the Australian National University and the University of Queensland. The NLC covers a range of characteristics, values and aspirations at both rounds of the study, emphasising education, employment and family formation and dissolution. Respondents' full life histories in these areas are available.

The first wave of the survey was a national telephone survey of 2,231 respondents aged 18–54 years, selected at random from the residential White Pages. It was conducted in November–December 1996 and March–April 1997. The wave 1 response rate was 57 per cent. The second wave, conducted in April–June 2000, included 1,768 of the original sample—a retention rate of 79 per cent. Although only one eligible person was interviewed in each household, extensive information was collected about the respondent's spouse or partner, where applicable.

The paper uses (primarily) contingency table analysis of the first two waves of NLC to examine the association between housing changes and changes in other areas of life. The total number of cases available for analysis—that is, respondents who participated in both survey waves—was 1,768. Weights have been used in all analyses in this paper to adjust for the unequal probability of selection arising from the study design. The total weighted sample number is 1,785. The second wave interviews were conducted before the introduction of the First Home owners grant in 2001.

3.1 Variable measurement

Housing tenure changes

At both waves, respondents' housing tenure is classified as one of the following categories: owner; purchaser; public renter; private renter; or other housing tenure. Tenure changes considered in this paper include the following transitions:

- from non-owner/purchaser to owner/purchaser (entry into home ownership);
- from owner/purchaser to non-owner/purchaser (exit from home ownership);
- from purchaser to outright owner;
- from non-public housing tenant to public housing tenant (entry into public rental); and
- from public housing tenant to non-public housing tenant (exit from public rental).

Educational outcomes

The NLC survey did not measure years of completed education of the respondents, and the highest completed level of education was measured differently at both survey waves. Therefore, it is difficult to accurately assess whether respondents had experienced positive educational outcomes. As a result, changes in education are measured by a single indicator of whether the respondent gained a Bachelor or higher degree during the period between survey waves, or was studying for a Bachelor or higher degree at the second survey wave. Where a respondent held a post-graduate qualification at wave 1, no educational outcomes could be detected unless he or she was studying for a further qualification at wave 2. Similarly, it was not possible to identify respondents holding a Bachelor degree at wave 1 who were awarded another Bachelor degree during the period between survey waves. Positive educational outcomes may, therefore, be understated in this analysis.

Analysis of educational outcomes does not take into account changes in the educational qualifications of respondents' partners, as respondents may have experienced relationship changes during the two survey waves.

Employment changes

Employment status at each survey wave was defined as a categorical measure of both respondent's and partner's employment status, involving the following categories: neither

partner employed (or respondent not employed for those not cohabiting); one partner (or respondent for those not cohabiting) employed; and both partners employed. Change in employment status was measured as: positive change (an increase in the number of adults employed); negative change (a decrease in the number of adults employed); or no change.

Changes in self-reported health status

At each survey wave, respondents were asked to rate their general health status as either excellent, good, fair, or poor. These ratings were given a weight of 4, 3, 2 and 1, respectively, and the numeric difference between wave 2 and wave 1 ratings was calculated. The resulting measurement (ranging from -3 to +3) can be considered a crude, continuous measure of health improvement or deterioration. Some analyses in this paper use a simplified categorical measure of health status change (improvement, status quo, or deterioration) to aid interpretation.

Changes in income

Income in this report refers to the annual before-tax income from all sources of the respondent and, if applicable, the respondent's partner in 1995–96 (wave 1) and 1998–99 (wave 2).¹ Wave 1 income data were adjusted to June 1999 constant dollars using the Consumer Price (All Groups) Index—Weighted Average of Eight Capital Cities: Financial Years (ABS 2002, Cat No. 6401.0, Table 3a) before calculating change in income.

In assessing differences between wave 1 and wave 2 family income, distributions are divided into quintiles, and each respondent's quintile location is identified for each wave. Change in family income is measured as movement between quintiles of the income distribution—that is, movement from the second income quintile in wave 1 to the third quintile in wave 2 is categorised as an increase of one. This measurement was chosen over a simple percentage change to overcome the problem of calculating change where income at wave 1 was zero.²

Changes in housing costs

Changes in housing costs are limited to changes in mortgage and rent payments as no other information of housing costs was asked in the NLC survey. Housing cost data for Wave 1 were adjusted to March 2001 constant dollars using the Consumer Price (All Groups) Index—Weighted Average of Eight Capital Cities (ABS 2002, Cat No. 6401.0, Table 3b), to ensure comparability with Wave 2 housing costs. As with income, changes in housing costs from wave 1 to wave 2 are measured by changes in each respondent's position in the distribution of all respondents' housing costs. Only those respondents with non-zero housing costs at both waves are included in this analysis.

Changes in equity

In this report, analyses of changes in home equity are limited to those respondents who were home purchasers at both waves. Equity at both waves was measured by subtracting the total amount owed on the respondent's current home from the respondent's assessment of the market value of the home. Change is, once again, measured as quintile shifts across the equity distribution.

Changes in social security receipt

Two indicators of receipt of social security payments or benefits were created—one for each wave. These measured whether the respondent was receiving any government payment, benefit or allowance, excluding Family Allowance. Change in receipt of these payments measured whether respondent moved from no receipt to receipt, or from receipt to no receipt.

Changes in self-worth

Self-worth is considered to be a latent construct, the dimensions of which are tapped by asking respondents to indicate their level of agreement with each of the following statements:

¹ NLC income measures were created by Dr Rob Ackland of the ACSPRI Centre for Social Research.

² Although possible to convert zero incomes to a small notional amount (1 cent, for example) to overcome the division-by-zero problem, this method yielded extremely high percentage changes, often in excess of 10,000 per cent.

- I am able to do most things as well as other people;
- I feel that I am a person of worth, at least on an equal plane with others;
- Once I make up my mind I seldom change it;
- I take a positive attitude towards myself; and
- People like me don't have much chance to be a success in life.

These statements were asked at both survey waves³, and respondents' level of agreement was measured on a five-point Likert scale. Principal Factor Analysis was used to assess the degree of common variance of these items, and their loading on the latent factor.⁴ The solution yielded a single factor, indicating that all items were measuring aspects of the same latent construct. However, one item (once I make up my mind I seldom change it) performed quite poorly, with a very low factor loading (0.21 in wave 1 and 0.22 in wave 2) and final communality estimate (below 0.05 in both waves). It was decided to drop this variable from the analysis and the solution obtained from the remaining four items was satisfactory (see Appendix Table 1). The Chronbach's Alpha values of 0.65 and 0.67 (for wave 1 and wave 2, respectively) indicate that the level of reliability of the four-item scales is reasonable, though not ideal. Factor-based scales were then computed for each wave by summing an individual's scores on each of the component variables. Change in self-worth was calculated by subtracting the factor-based scale for wave 1 from that for wave 2.

Changes in work-family values

One of the original aims of this paper was to assess the relationship between housing changes and changes in work-family values. Values were considered to be a latent construct, measured at both waves by a series of individual attitudinal statements⁵ against which respondents' level of agreement was measured on a five-point Likert scale. The individual items were analysed using Principal Factor Analysis⁶ and assessed for reliability using Chronbach's Alpha. A single factor was extracted for both waves; however, the solutions were not considered to be adequate. Using wave 1 variables to illustrate: final communality estimates for two of the four variables are below 0.2, indicating substantial heterogeneity among the variables; these two variables have factor loadings below 0.45, which are considered to be poor; only 26% of the variance of the variables is accounted for by the extracted factor; and Chronbach's Alpha is quite low (.56), indicating the scale does not have sufficient reliability. As a result, work-family values are not assessed in this paper.

3.2 Effect of attrition

As with all panel surveys, attrition of respondents can invalidate results obtained. For example, if all people who dropped out of the survey before wave 2 all bought a house in the intervening period, these results may be quite different.

The impact of respondent attrition in the NLC was assessed for another paper in this series. Results showed no significant differences between respondents who completed both waves of the survey, and those that completed just the first wave in terms of age, household income, relationship status or duration, presence of children in the household, and university qualifications.

However there were significant differences—people aged 25–34, people from non-English-speaking backgrounds and households in which neither the respondent nor his/her partner were working were over-represented in the dropout group (Merlo and McDonald 2002).

³ Five additional items were asked in wave 2; however, as the intention was to calculate change in self-worth, these items were not used.

⁴ The item, *People like me don't have much chance to be a success in life*, was reverse-scored.

⁵ Individual statements were: If both the husband and wife work, they should share equally in the housework and care of the children; There should be satisfactory childcare facilities so that women can take jobs outside the home; It is better for the family if the husband is the principal breadwinner and the wife has primary responsibility for the home and the children (reversed); and Ideally, there should be as many women as men in important positions in government and business.

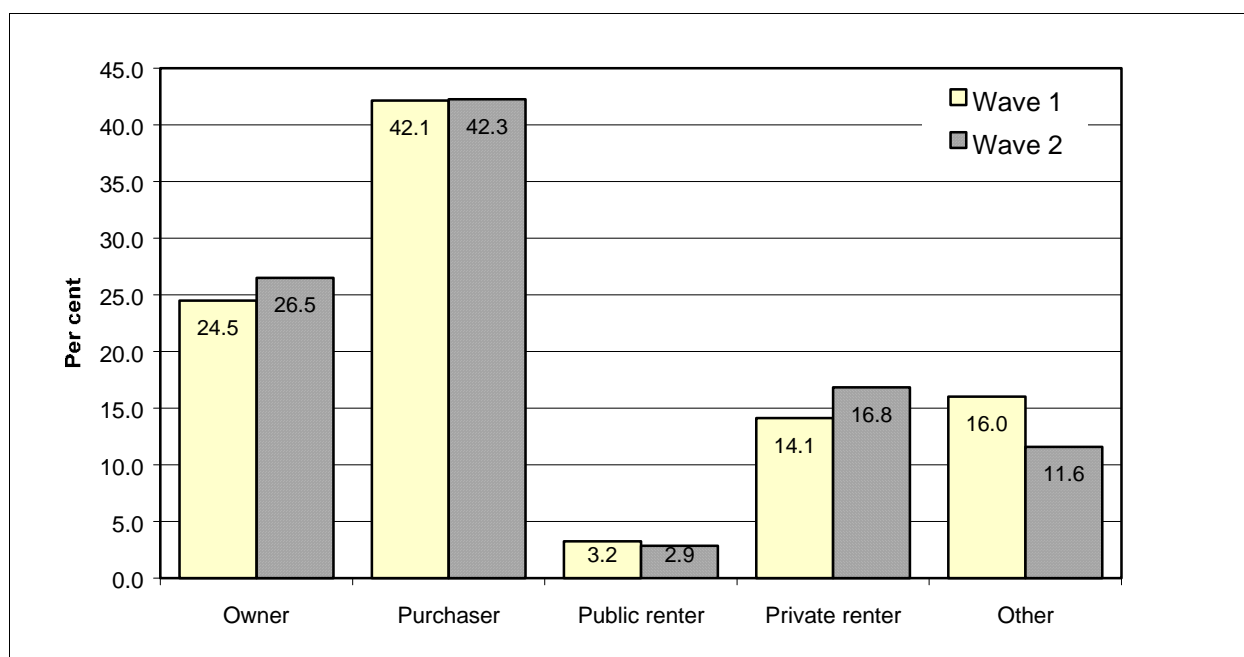
⁶ Variables were also analysed using Principal Components Analysis and Alpha Factoring. The choice of extraction method made little difference to the final solution.

4 RESULTS

4.1 Changes in tenure

Before examining the impact of tenure changes on non-shelter housing outcomes, a brief overview of housing tenure among NLC survey respondents is presented. It is clear from Figure 1, which shows the percentage distribution of housing tenure of respondents at both waves of the NLC survey, that purchasers and owners considerably outweigh those in other tenures at both data collection time points. Together, owner-purchasers make up almost 67% of respondents at wave 1 and 69% at wave 2. There were slightly more private renters at wave 2 than at wave 1 (17% versus 14%, respectively), and slightly fewer respondents in other forms of tenure, such as boarding or living rent-free. Public renters comprise just three per cent of respondents at both waves.

Figure 1: Housing tenure of respondents at wave 1 and wave 2, NLC survey 1996–97 and 2000



The relative similarity of these figures masks a substantial amount of individual-level movement between tenure types. Not surprisingly, owners and purchasers exhibit more stable tenure arrangements across the two survey waves than do respondents in all other tenures. Over 80 per cent of owners at wave 1, and 77% of purchasers at wave 1, did not change tenure types between 1996–97 and 2000 (Table 1). In contrast, public housing tenants showed considerable movement during the three years between survey waves: 19% became owners or purchasers, 18% moved into the private rental market and almost one in ten moved into other tenure forms. Almost half (47%) of those formerly in other tenures also changed status by 2000, most of whom had moved into the private rental market (28%).

Although interesting in their own right, many of the transitions depicted in Table 1 involve only small numbers of cases, and it is not possible in this paper to examine each of the twenty possible tenure transitions in great detail. For example, one of the original aims of this paper was to examine movement into and out of public housing. However, as only 26 cases (1.5%) moved out of public housing and 19 cases (1.1%) moved into public housing between the two survey waves, no further analysis of these transitions is presented.

Table 1: Housing tenure at wave 1 by housing tenure at wave2, NLC survey 1996–97 and 2000

Tenure at wave 2	Tenure at wave 1				
	Owner	Purchaser	Public renter	Private renter	Other
Owner	81.2	13.5	2.8	3.0	2.9
Purchaser	13.3	77.2	16.0	26.9	14.1
Public renter	0.3	0.8	53.8	2.6	2.1
Private renter	2.8	6.4	17.9	58.9	28.0
Other	2.5	2.1	9.4	8.6	53.0
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Total number	431	741	57	251	284

Note: chi-square statistically significant at $p < .0001$.

Instead, the remainder of this section will examine the effect of the following transitions: entry into home ownership (defined as movement from non-owner/purchaser to owner/purchaser) ; exit from home ownership (defined as movement from owner/purchaser to non-owner/purchaser); and attainment of outright home-ownership for previous purchasers. These transitions are shown in Figure 1.

Figure 2: Selected housing tenure transitions of respondents, NLC survey 1996–97 and 2000

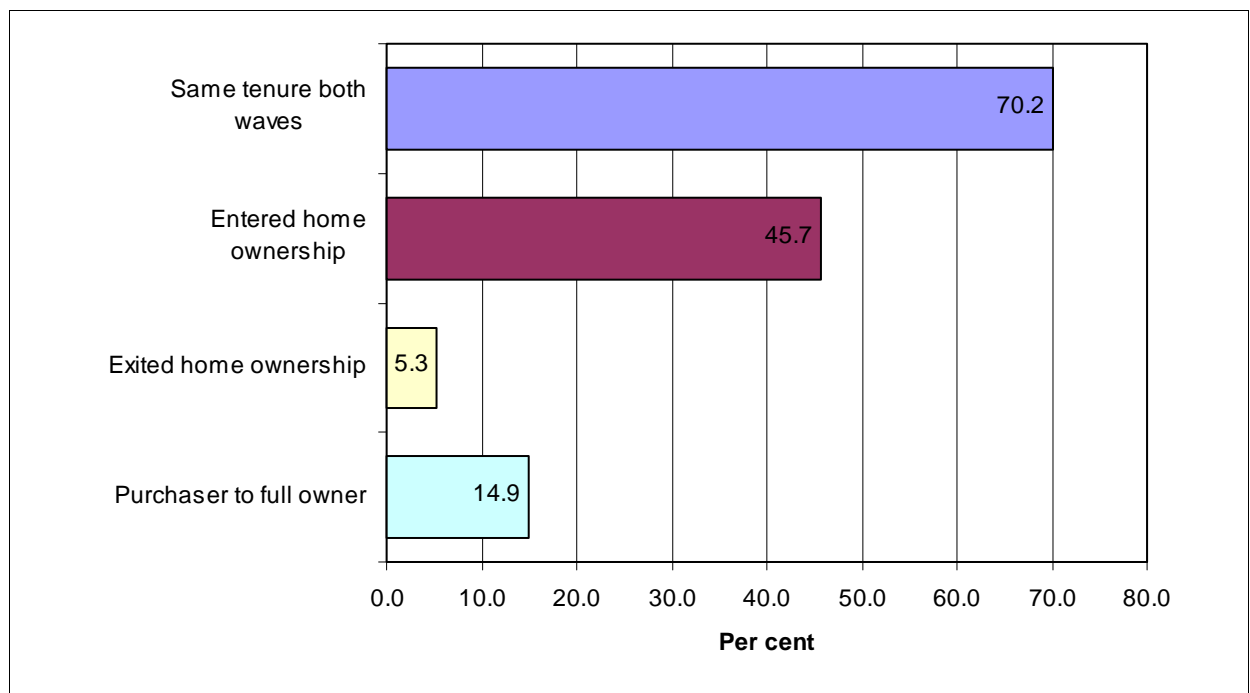


Table 2 suggests that membership of the three chosen transition groups are defined largely by life cycle factors. It is clear that entry into home ownership occurs primarily between the ages of 25 and 44. One half of new home purchasers were aged 25–34 years at wave 2. Interestingly, exit from home ownership is also common in this age range. Almost 30 per cent of respondents who left home ownership were in this age group, compared with just 12 per cent of home owners who remained in that tenure. Purchasers who made the transition to outright owners between the survey waves were primarily concentrated in the 35–44 age group.

Table 2: Age of respondent by tenure transitions, NLC survey 1996–97 and 2000 (%)

	Entered home ownership? [*]		Exited home ownership? [*]		Transition from purchaser to outright home-ownership? [*]	
	No	Yes	No	Yes	No	Yes
Age of respondent (wave 2)[*]						
Under 25 years	30.2	4.4	--	--	--	--
25–34 years	37.7	49.6	11.6	28.5	48.0	33.0
35–44 years	18.7	33.1	38.2	44.2	34.3	61.6
45 years and over	13.4	12.6	50.1	26.2	17.6	5.4
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Number of cases	458	134	1,085	93	572	100

Notes:

-- too few cases to provide reliable percentages.

* chi-square statistically significant at $p < .0001$.

4.2 Life transitions and tenure changes

This section examines the relationship between changes in tenure and changes in other life areas, such as cohabiting relationships, education, employment and income. Tenure transitions are not assumed to cause changes in these areas—these associations are presented to provide a picture of the possible motivating forces of tenure transitions. The section does not provide a detailed analysis of the causes of tenure transitions, merely an introduction to the associations of tenure transitions with other life outcomes.

Entry into home ownership is clearly associated with having a partner. Almost 40% of those who had entered home ownership had acquired a partner between survey waves, compared with just 17 per cent of those who remained as non-home owners (Table 3). Conversely, 56 per cent of those who did not enter home ownership were people who had remained single between the two waves. This group constituted only 11 per cent of those who entered home ownership. Those who remained in the same relationship between the two waves were also over-represented among those who entered home ownership.

Consistent with this is the fact that respondents who made the transition to home ownership were more likely to have experienced an increase in the number of adults in the household who were in paid employment, and almost four times as likely to have experienced an increase in family income which moved them at least two quintiles higher in the income distribution.

Changes in education and receipt of social security income do not appear to be significantly related to entry to home ownership.

Table 3: Non-owner/purchasers in wave 1: changes in other areas of life by entry into home ownership, NLC survey 1996–97 and 2000 (%)

	Entered home ownership?	
	No	Yes
Change in relationship status*		
Same relationship both waves	22.9	47.2
Single both waves	56.2	11.3
Relationship change – now single	4.1	1.6
Relationship change – now partnered	16.8	39.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in employment of respondent/couple[^]		
Decrease in number of adults employed	13.8	12.6
No change	63.6	49.4
Increase in number of adults employed	22.6	38.1
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in education		
No change	85.2	77.8
Attained/currently studying for university degree	14.8	22.8
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in family income*		
Decrease by 2 or more quintiles	5.3	7.4
Decrease by 1 quintile	13.6	7.4
No change	53.0	33.0
Increase by 1 quintile	18.2	13.6
Increase by 2 or more quintiles	9.7	38.6
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in receipt of social security		
Ceased receiving benefits/payments	14.7	15.3
No change	76.8	78.6
Commenced receiving benefits/payments	4.5	6.1
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Number of cases	458	134

Notes:

* chi-square statistically significant at $p < .0001$.

[^] chi-square statistically significant at $p < .01$.

Not surprisingly, while entry into home ownership is related to the acquisition of a partner, exit from home ownership appears to be related, at least in part, to the loss of a partner. Among previous home owners, almost 20 per cent had experienced a relationship breakdown and had not re-partnered by wave 2 (Table 4). The comparable figure for respondents who remained home owners was less than three per cent. Respondents who experienced a relationship breakdown but had re-partnered by wave 2 also made up a greater proportion of those who left home ownership (15%) than those who didn't (5%).

Although the relationship between changes in family income and exit from home ownership is significant, this relationship disappears once the effects of relationship breakdown are controlled. Similarly, the apparent relationship between changes in employment status and exit from home ownership is spurious and does not exist when the effect of relationship breakdown has been removed.

As with entry into home ownership, exit from home ownership is not related to changes in education and receipt of social security income.

Table 4: Owner/purchasers in wave 1: changes in other areas of life by exit from home ownership, NLC survey 1996–97 and 2000 (%)

	Exited home ownership?	
	No	Yes
Change in relationship status*		
Same relationship both waves	83.4	55.8
Single both waves	8.9	10.5
Relationship change – now single	2.5	19.2
Relationship change – now partnered	5.2	14.5
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in employment of respondent/couple[^]		
Decrease in number of adults employed	13.3	24.4
No change	72.9	56.4
Increase in number of adults employed	13.8	19.2
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in education		
No change	88.4	90.1
Attained/currently studying for university degree	11.7	9.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in family income[^]		
Decrease by 2 or more quintiles	8.0	20.6
Decrease by 1 quintile	22.3	18.3
No change	48.5	37.4
Increase by 1 quintile	15.4	19.9
Increase by 2 or more quintiles	5.9	3.8
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in receipt of social security		
Ceased receiving benefits/payments	8.7	9.3
No change	83.5	79.1
Commenced receiving benefits/payments	7.8	11.6
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Number of cases	1,085	93

Notes:

-- too few cases on which to base percentages.

* chi-square statistically significant at $p < .0001$.

[^] chi-square statistically significant at $p < .01$.

There were no statistically significant associations between the movement to outright home-ownership and changes in relationship status, employment, income, education or receipt of social security (Table 5). This transition is related to the progression of time and, possibly, to other, unmeasured factors.

Table 5: Purchasers in wave 1: changes in other areas of life by transition to outright home ownership, NLC survey 1996–97 and 2000 (%)

	Transition to outright home ownership?	
	No	Yes
Change in relationship status		
Same relationship both waves	82.8	84.9
Single both waves	8.8	8.1
Relationship change – now single	2.3	2.7
Relationship change – now partnered	6.1	4.3
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in employment of respondent/couple		
Decrease in number of adults employed	13.9	15.1
No change	71.8	72.4
Increase in number of adults employed	14.3	12.4
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in education		
No change	87.7	89.7
Attained/currently studying for university degree	12.3	10.3
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in family income		
Decrease by 2 or more quintiles	6.0	8.6
Decrease by 1 quintile	19.5	26.6
No change	49.7	42.5
Increase by 1 quintile	19.9	14.4
Increase by 2 or more quintiles	4.9	7.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Change in receipt of social security		
Ceased receiving benefits/payments	9.9	8.7
No change	81.1	82.2
Commenced receiving benefits/payments	9.0	9.2
<i>Total</i>	<i>100.0</i>	<i>100.0</i>
Number of cases	572	100

Note: differences are not statistically significant

4.3 Outcomes of changes in housing tenure

The link between housing and well-being has a long history. Not only does housing satisfy our basic human need for shelter and protection from harsh environments, but it has been suggested that home ownership preserves and maintains our sense of ontological security, thereby fulfilling our emotional needs as well (Giddens 1990; Saunders 1989). In this section, the three tenure transitions examined above are used to assess whether changes in tenure affect changes in individuals' well-being. Although the concept of well-being is generally well-understood, little agreement has been reached about its measurement. Obviously, it is a multi-faceted concept, and the NLC survey does not claim to examine individual well-being in detail. However, three measures available in the survey are used here as proxy indicators of well-being. They are: self-reported assessment of general health; self-worth (the measurement of which is discussed in section 3.1), participation in voluntary community work, which is considered an indicator of individuals' emotional well-being and sense of community.

It appears from Table 6 that experiencing any of the tenure transitions examined here has no significant effect on changes in health, self-worth or participation in community work⁷. This finding is perhaps not surprising given that the measures used here are relatively crude, and that the timing of tenure transitions relative to assessment of well-being indicators at wave 2

⁷ Although the categorical variables used here may suppress the extent of change in health and self-worth (which may be thought of as continuous variables), analysis of variance tests showed no statistically significant difference in the means of the groups under investigation.

is unknown (that is, there may not be sufficient lag time between a tenure transition and the measurement of well-being indicators if the tenure change was very recent in the three-year period between surveys, or, alternatively, too much lag time where the tenure change was early in the period). It is also not surprising that the housing changes we have observed have little relationship to changes in health status because the vast majority of the housing changes that we address (most of the housing changes that Australians experience) are not changes from unhealthy housing (rising damp, over-crowding, wet areas, draughts, no heating, no sanitation etc) to healthy housing. Instead, they are changes from one healthy house to another. The most notable differences occur between purchasers who made the transition to outright home-ownership and those who remained purchasers, with the former appearing slightly more likely to report deterioration in general health and an increase in participation in voluntary community work. However, as this group is concentrated at the upper end of the age range, these effects may be due to differences in age structure, rather than to the tenure transition itself.

Separate analyses controlling for age and relationship breakdown were performed and no significant differences between groups were found. Further analysis (controlling for other factors) is possible, but not considered of value at this stage. Such analyses could be revisited when the third wave of the NLC survey is available. The third wave will be conducted in March-April 2003.

Table 6: Effect of tenure transition on self-reported health, self-worth and participation in voluntary work, NLC survey 1996–97 and 2000

	Entered home ownership?		Exited home ownership?		Transition to outright home ownership?	
	No	Yes	No	Yes	No	Yes
Change in overall health status						
Reported deterioration in health	23.6	21.4	24.6	22.7	26.2	31.4
No reported change	58.6	60.5	61.3	62.2	60.3	56.8
Reported improvement in health	17.9	18.2	14.1	15.1	13.5	11.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Change in self-worth						
Reported decrease in self-worth	29.0	31.1	24.2	27.9	24.6	19.5
No reported change	30.9	31.9	32.7	27.3	33.2	35.7
Reported increase in self-worth	40.1	37.1	43.2	44.8	42.2	44.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Change in participation in voluntary work						
Decreased participation	10.4	10.5	10.3	12.8	10.4	9.2
No change	75.8	75.0	74.7	73.8	73.7	69.7
Increased participation	13.8	14.5	15.0	13.4	16.0	21.1
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Number of cases	458	134	1,085	93	572	100

Note: differences are not statistically significant.

4.4 Changes in equity

As with income, the amount of equity that the respondent (and partner) held in their housing was measured in relative terms, that is, according to the quintiles of the equity distribution for all respondents who were owners or purchasers. The analysis here is restricted to those who were home owners or purchasers at both waves of the study so that change in equity was not confounded by change in tenure. Between the two wave of the survey, 57 per cent of those who were home purchasers in both waves remained in the same quintile of the level of equity in the house, 22 per cent dropped to a lower quintile and 21 per cent rose to a higher quintile.

As may have been expected, where a respondent moved from being partnered to unpartnered, there was a considerable drop in their housing equity ranking (Table 7). While the numbers involved are small, such people were almost three times more likely to shift to a lower quintile of equity than those who remained in the same relationship across the two

waves. There is some indication also that those who attained a university degree during the three year period were less likely to have experienced a fall in their equity than other people, however, this difference was not statistically significant.

Aside from these associations, there was remarkably little association between changes in housing equity and change in relationship status, changes in employment, changes in family income and changes in receipt of social security benefits.

There was also no association found between changes in equity and changes in health status, changes in self-worth and changes in participation in voluntary work (Table 8). Not only were no statistically significant differences observed, the bivariate distributions shown in Table 8 were very similar across the categories of change in the level of home equity.

Table 7: Home purchasers at both waves: change in equity by change in selected other areas of life, NLC survey 1996–97 and 2000 (%)

	Change in level of home equity			<i>Total</i>	N
	Moved to lower quintile	Same quintile both waves	Moved to higher quintile		
Change in relationship status*					
Same relationship both waves	21.2	57.7	21.2	100.0	827
Single both waves	18.9	61.0	20.1	100.0	89
Relationship change – now single	61.7	34.0	4.3	100.0	25
Relationship change – now partnered	18.9	48.9	32.2	100.0	49
Change in employment of respondent/couple					
Decrease in number of adults employed	27.2	56.0	17.0	100.0	140
No change	21.2	57.0	21.8	100.0	709
Increase in number of adults employed	19.0	58.9	22.1	100.0	137
Change in education					
No change	22.8	55.9	21.3	100.0	878
Attained/currently studying for university degree	14.7	65.9	19.4	100.0	114
Change in family income					
Decrease by 2 or more quintiles	26.6	56.9	16.5	100.0	58
Decrease by 1 quintile	23.4	57.2	19.4	100.0	173
No change	20.8	57.3	21.9	100.0	374
Increase by 1 quintile	21.8	51.1	27.1	100.0	124
Increase by 2 or more quintiles	18.1	56.6	25.3	100.0	45
Change in receipt of social security					
Ceased receiving benefits/payments	15.4	58.0	36.5	100.0	87
No change	22.0	57.3	20.7	100.0	831
Commenced receiving benefits/payments	27.9	52.9	19.1	100.0	73
All cases	21.8	57.1	21.1	100.0	992

Note: * chi-square statistically significant at $p < .0001$.

Table 8: Home purchasers at both waves: effect of changes in equity on self-reported health, self-worth and participation in voluntary work, NLC survey 1996–97 and 2000

	Change in level of home equity			All cases
	Moved to lower quintile	Same quintile both waves	Moved to higher quintile	
Change in overall health status				
Reported deterioration in health	20.8	24.7	29.1	24.8
No reported change	64.5	60.2	61.1	61.3
Reported improvement in health	14.8	15.0	9.8	13.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Change in self-worth				
Reported decrease in self-worth	22.1	23.0	28.2	23.9
No reported change	33.9	33.8	31.1	33.2
Reported increase in self-worth	44.0	43.2	40.7	42.9
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Change in participation in voluntary work				
Decreased participation	10.7	11.9	7.7	10.8
No change	74.3	73.5	74.5	73.9
Increased participation	15.0	14.7	17.8	15.4
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Number of cases	217	566	209	989

Notes:

number of cases may not add to total due to missing values on classification variables.

differences are not statistically significant.

4.5 Changes in housing costs

Not surprisingly, changes in housing costs are significantly related to changes in relationship status, employment status and family income. Table 9 shows that the breakdown of a cohabiting relationship has a substantial effect on housing costs. Over one-half of respondents who did not experience a change in relationship status had relatively constant housing costs. This compares with less than one-third of those who did experience the dissolution of a cohabiting relationship. Interestingly, 46 per cent of those who re-partnered between survey waves experienced an increase in housing costs, while over one-half of those who went from cohabiting in wave 1 to not-cohabiting in wave 2 experienced a drop in housing costs.

This is reflected in the relationship between changes in housing costs and changes in the number of adults within the family who were in paid employment. Housing costs were more likely to fall where a household experienced a drop in the number of adults employed, and were more likely to rise within households that experienced an increase in the number of employed adults.

Consistent with this is the positive relationship between income changes and housing cost changes. As incomes rise, so too do housing costs (Pearson's correlation of 0.25, significant at $p \leq .001$). Over one-third of those who rose by at least two quintiles on the income distribution income had experienced a comparable rise in housing costs, compared with just 13 per cent of those whose relative family income position increased by one quintile.

Table 9: Respondents with housing costs at both waves: change in housing cost by change in selected other areas of life, NLC survey 1996–97 and 2000 (%)

	Change in housing costs					Total	N
	Moved two or more quintiles lower	Moved to next lowest quintile	Same quintile both waves	Moved to next highest quintile	Moved two or more quintiles higher		
Change in relationship status*							
Same relationship both waves	11.9	17.3	48.9	15.8	6.1	100.0	476
Single both waves	4.4	13.5	57.8	13.5	10.9	100.0	148
Relationship change – now single	25.8	30.0	31.8	7.6	4.6	100.0	36
Relationship change – now partnered	12.3	13.5	28.2	14.7	31.3	100.0	88
Change in employment of respondent/couple *							
Decrease in number of adults employed	17.6	25.3	35.7	17.1	4.3	100.0	113
No change	11.4	17.2	51.1	12.7	7.7	100.0	503
Increase in number of adults employed	4.6	7.5	43.8	20.4	23.8	100.0	130
Change in education							
No change	11.6	18.3	46.5	14.2	9.5	100.0	651
Attained/currently studying for university degree	7.6	8.2	52.7	18.5	13.0	100.0	99
Change in family income *							
Decrease by 2 or more quintiles	22.6	29.8	28.6	15.5	3.6	100.0	45
Decrease by 1 quintile	13.9	25.4	48.8	8.0	4.0	100.0	109
No change	8.0	14.3	56.4	14.1	7.2	100.0	306
Increase by 1 quintile	9.2	16.1	41.5	19.8	13.4	100.0	117
Increase by 2 or more quintiles	2.2	8.9	32.2	21.1	35.6	100.0	49
Change in receipt of social security							
Ceased receiving benefits/payments	10.7	14.7	54.7	11.3	8.7	100.0	81
No change	10.1	16.1	48.9	15.1	9.8	100.0	602
Commenced receiving benefits/payments	20.2	26.6	24.2	16.1	12.9	100.0	67
All Cases	11.1	16.9	47.3	14.8	9.9	100.0	750

Notes:

number of cases may not add to total due to missing values on classification variables.

* chi-square statistically significant at $p < .0001$.

No statistically significant relationship was found between changes in housing costs and indicators of well-being (Table 10). However, it appears that those who experience a large drop in housing costs also reported worsening health. This suggests a reversal of the causality being tested. Rather than a change in housing costs leading to a change in health, ill health, presumably through loss of income or employment, may have led to a fall in housing costs or to lower quality housing. On the other hand, it may mean that those with reduced costs were concentrated at older ages and deteriorating health was related to age. Large increases, either up or down, seem to have been associated somewhat with improvements in self-worth perceptions. Again, large falls in housing costs may have been associated with older ages and older ages may have been associated with higher self-worth. For example, Table 2 shows that transition to outright ownership was associated with being older. Large increases in housing costs may reflect an improvement in economic circumstances and hence in the quality of housing. The group most likely to have increased their participation in voluntary work were those who had no change in their relative housing cost. This could mean that they were less mobile and therefore more connected to the local community, but this would require much more detailed investigation. Overall, it is not

possible to draw any conclusion that changes in housing costs were the cause of any negative change in personal wellbeing.

Table 10: Respondents with housing costs at both waves: effect of changes in housing cost on self-reported health, self-worth and participation in voluntary work, NLC survey 1996–97 and 2000 (%)

	Change in Housing Costs					All cases
	Moved two or more quintiles lower	Moved to next lowest quintile	Same quintile both waves	Moved to next highest quintile	Moved two or more quintiles higher	
Change in overall health status						
Reported deterioration in health	31.2	29.4	24.8	19.5	27.5	24.0
No reported change	52.0	56.2	60.1	66.8	57.3	60.6
Reported improvement in health	16.9	14.5	15.1	13.7	15.2	15.4
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Change in self-worth						
Reported decrease in self-worth	19.5	20.2	27.3	22.9	26.1	26.1
No reported change	36.4	37.3	31.0	36.1	26.1	31.8
Reported increase in self-worth	44.2	42.5	41.7	41.0	47.8	42.1
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Change in participation in voluntary work						
Decreased participation	9.7	14.3	11.3	8.3	11.6	10.4
No change	79.2	71.9	73.4	78.5	82.6	74.9
Increased participation	11.0	13.9	15.4	13.2	5.8	14.7
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Number of cases	83	127	355	111	75	750

Notes:

number of cases may not add to total due to missing values on classification variables.

differences are not statistically significant.

5 CONCLUSIONS

The principal aim of this study was to make use of the longitudinal panel survey data from the Negotiating the Life Course Survey to examine the associations between changes in aspects of housing and various non-housing outcomes. The Negotiating the Life Course Survey is a nationally-representative survey of persons who were aged 18–54 years in late 1996 and early 1997 when they were interviewed for the first time. Re-interviews with the same sample were conducted about three years later in 2000. Both waves of the survey collected a range of information about housing and about many other aspects of the respondents' lives. Three aspects of change in housing were examined: changes in tenure; changes in equity for those who were purchasers or outright owners at both waves of the survey; and changes in costs for those who had non-zero costs in both waves of the survey. The study examines associations of changes in these aspects of housing with changes in education, employment, social security receipt, income, self-assessed health status, participation in community work, self-concept, and family formation and dissolution.

Among the non-housing factors considered in the study, changes in education, employment, social security receipt, income and family circumstances are treated as determinants of housing changes and self-assessed health status, participation in community work, self concept, and work-family values are treated as consequences. This division of non-housing factors into determinants and consequences is based upon the outcomes of previous research and the logic of the case. It remains possible in each case, however, that the causal direction is reversed. This problem is exacerbated by the factor that our data do not allow us to identify the time sequence of the changes. Thus, while our use of changes in circumstances is an improvement upon purely cross-sectional data, the problem of identifying the direction of causality remains.

Changes in tenure between the waves were strongly associated with age suggesting that life cycle changes are a major determinant of tenure changes. This was confirmed by the associations between tenure changes and life cycle events. Entry to home ownership was very strongly associated with entry into a relationship and exit from home ownership was very strongly associated with exit from a relationship. Likewise, gaining of employment or increase in income led to entry to home ownership while loss of employment or fall in income led to exit from home ownership. However, transitions to outright home ownership were not associated with changes in relationship status, income or employment. Changes in education level and movements on and off social security incomes were not associated with any changes in tenure.

There were no statistically significant relationships between changes in tenure and changes in health status, self-worth or participation in voluntary work. Indeed, there is not even evidence of any tendency towards changes in these non-shelter outcomes related to any of the measured changes in housing tenure. The conclusion that there is no relation seems strong. It must be remembered that the measured changes in tenure are changes that relate to the general population and not to those moving from very bad housing circumstances into something better. Our research cannot be used to draw conclusions in regard to the low end of the market.

Increases and decreases in housing equity among owners were significantly related, respectively, to partnering and exit from a partnership. Although not statistically significant, there were tendencies for increases in housing equity to be related to increases in income, movements off social security benefits and completion of a university degree. Again, there were no significant differences between changes in equity and changes in health status, self-worth and participation in voluntary work.

Rises in housing costs were associated significantly with partnering and rises in income and employment. The direction of these relationships suggests that, for the general population as distinct from the poor, a rise in housing cost is an indicator of an increase in wellbeing, not a decrease. There were no significant relationships between changes in housing costs and changes in health status, self-worth and participation in voluntary work.

One conclusion to be drawn from the study is that hypotheses related to the impact of housing changes upon other life outcomes are probably best formulated in respect of those moving from poor housing circumstances to something better rather than to the population in general. For the population in general, the research in this report suggests that there is little reason to expect that changes in housing circumstances affect wellbeing probably because the changes in question are changes from a relatively good situation to a better situation, or are merely a reflection of life cycle changes such as partnering, employment or higher income.

The second conclusion to be drawn from the study is that it is important to identify the sequence of changes so as to improve the degree of confidence about the causal direction of observed relationships between housing changes and non-shelter outcomes. This implies that psychological measures are obtained both before the change in housing takes place and after. As many changes are relatively small or infrequent, large sample sizes are implied for studies of this type.

6 APPENDIX A

Appendix Table 1: Results of Principal Factor Analysis of self-worth scale

		Wave 1 factor loadings		Wave 2 factor loadings	
		Solution 1	Solution 2	Solution 1	Solution 2
<i>Self-worth scale</i>					
1	I fee that I am a person of worth, at least on a plane with others	0.76	0.78	0.76	0.78
2	I take a positive attitude towards myself	0.59	0.58	0.58	0.56
3	I am able to do most things as well as other people	0.58	0.57	0.55	0.54
4	People like me don't have much chance to be a success in life*	0.41	0.42	0.45	0.46
5	Once I make up my mind I seldom change it	0.22	(excluded)	0.21	(excluded)
	Eigenvalue	1.47	1.43	1.48	1.44
	Per cent of explained variance	29.5	35.6	29.5	36.0
	Scale reliability (Chronbach's Alpha)	0.55	0.65	0.59	0.67

Notes:

* Item reversed-scored before scaling.

Factors extracted using iterated principal factor analysis.

REFERENCES

- Giddens, A. (1990). *The Consequences of Modernity*. Stanford University Press: Stanford.
- King, A. (2002). *Housing assistance: the lifetime impacts*, Australian Housing and Urban Research Institute, Melbourne.
- Saunders P. (1989). "The meaning of 'home' in contemporary English culture". *Housing Studies*, 4(3): 177–192.
- Merlo R. and P. McDonald (2002). *The value of home-ownership aspirations in predicting future purchasing behaviour*. Australian Housing and Urban Research Institute: Melbourne.
- Mullins, P. and J. Western (2001). *Examining the links between housing and nine key socio cultural factors*, Australian Housing and Urban Research Institute, Melbourne.
- Phibbs, P. (2000). *The Social and Economic Impacts of Unmet Housing Needs*, Occasional paper 4, Housing Queensland, Brisbane.
- Waters, A-M. (2001). *Do housing conditions impact on health inequalities between Australia's rich and poor?* Australian Housing and Urban Research Institute, Melbourne.
- Wulff.M. (1991). *Restructuring home loan finance for low-income families: third and final evaluation report on the Department of Planning and Housing Victoria Capital Indexed Loan Scheme*. Australian Institute of Family Studies for the Department of Planning and Housing Victoria: Melbourne.

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