
*
* A Longitudinal Study of Housing and Social Circumstances *
* in Childhood and Early Adulthood *
*

by

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SUMMARY OF FINDINGS

This report describes a two-part project to investigate the relationship between childhood circumstances and early adult outcomes, with particular emphasis on housing.

It is based on data which were collected in the course of the National Child Development Study - a longitudinal multidisciplinary study of all the people in England, Scotland and Wales (but this project is based only on those living in England) who were born in the week 3-9 March, 1958. The data used in this project were taken from stages of the study carried out at the ages of 7, 11 and 16 and the most recent follow-up at the age of 23.

It is important to note that at the age of 23 many of these young people will still be at a transient stage of their lives with regard to the kinds of outcomes examined in this project. Some will not long have completed their education and entered the labour market. Many will not yet have established independent households, formed long-term partnerships or had children. In addition, at the age of 16 in 1974 and 23 in 1981 they will not yet have encountered the worst of the deepening economic difficulties of the early eighties which particularly affected school-leavers and young people, nor the effects of the 'right to buy' policy and other strategies to promote home ownership.

Childhood social circumstances and early adult housing

The first part of the project examined the relationship between measures of social circumstances in childhood (i.e. social class, experience of being without a male head of household, family size, sex, parents' education, father's unemployment, and type of neighbourhood) and housing experiences in early adulthood (tenure, household status, crowding, household amenities, and whether experienced homelessness). Multivariate analysis was used in order to take account of the inter-relationships of the childhood social variables.

It was found that those who grew up in less advantaged backgrounds were more likely to have established independent households, to be Local Authority or Housing Association tenants and to be overcrowded.

On the other hand, those from more advantaged backgrounds, who are known to start later and progress more slowly through the major transitions of early adulthood, were also less likely to have established a stable position in the housing market. At 23, they were particularly likely to be in the private rented sector and to be experiencing some of the difficulties of that sector such as poor amenities.

There were similar differences between the sexes, in that women are more likely to leave home and marry etc earlier, and this was

reflected in their greater likelihood of being in one of the longer term tenures.

The childhood measures made it possible to examine relationships with changes of circumstances between 7 and 16. However neither the 'upward' nor the 'downward' mobile groups showed any consistent or coherent pattern of outcomes, except for being more often in LA/HA tenancies and more likely to be overcrowded than those from Non-manual backgrounds.

There was strong evidence of the particular problems of those who experienced being brought up by a lone parent at some point in their childhood being reflected in housing disadvantage at 23.

There was no strong relationship between childhood circumstances and experience of homelessness by 23. It is suggested that this is because of the offsetting effects of two distinct kinds of homelessness, that experienced by students and that of young families.

The nature of the neighbourhood in which the cohort member grew up showed some significant relationships with early adult housing. This is despite the fact that a fairly crude neighbourhood categorisation was used, and after taking account of personal characteristics.

Childhood housing circumstances and early adult outcomes

The second part of the project examined the relationship between four aspects of housing in childhood (tenure, whether the family occupied a whole house, crowding and amenities) and a range of early adult outcomes, covering aspects of work, qualifications, family formation, health and housing. Again multivariate analysis was used in order to allow for the relationships with social background variables (sex, social class, parents' education and type of neighbourhood).

Both tenure and crowding in childhood proved to be related to all seventeen of the outcome measures examined. In virtually every case the strongest relationship was with tenure. Household amenities in childhood and, particularly, whether or not the cohort member grew up in a whole house showed much weaker relationships, reaching statistical significance in only a minority of the analyses.

For tenure and crowding, the major contrast was between, in the first case, those whose families were owner occupiers at all three NCDS follow-ups at 7, 11 and 16 and those who were Local Authority tenants throughout; and between those who were consistently overcrowded (> 1 person per room) and those who were not on all three occasions. The owner occupiers and the not crowded were, compared with those who were LA tenants or crowded, more likely to be in higher status occupations at 23, to have higher family incomes, to have experienced less unemployment (both currently and since completing education), to have higher qualifications, and to

rate their health more highly. They were less likely to have married and/or to have children, to have left home and formed an independent household, to be on a Council waiting list, and to have moved home frequently.

Statistical interactions were present in many of the analyses, that is the differences in outcomes associated with tenure or crowding themselves varied according to other social characteristics. Where this did occur the pattern was generally one of cumulative advantage or disadvantage. The positive outcomes of, for example, having grown up in an owner occupied home were even stronger when in combination with a Non-manual background or more educated parents or coming from a better off neighbourhood. Conversely, those from Manual backgrounds, with less educated parents or from the worst off neighbourhoods showed even greater disadvantages in the outcomes associated with growing up in an LA tenant family or overcrowded home.

The effects of change during childhood - 'upward' or 'downward' mobility in tenure or crowding - were also examined. Most commonly the upwardly mobile groups were intermediate in their 23-year position, whereas the 'downwardly' mobile groups fared as badly as, sometimes worse than, those who were LA tenants throughout.

1. INTRODUCTION

Background

This report describes work carried out for the Department of the Environment to explore the long-term relationships of an individual's housing circumstances with other aspects of their lives. Based entirely on data which had already been collected in the course of the National Child Development Study, the project falls into two distinct parts.

The first part was designed to examine the association between social circumstances during childhood and housing circumstances in early adulthood (in fact at age 23). The second part was concerned with the relationship between housing experiences in childhood and a wide range of "outcomes", including some aspects of housing in early adulthood.

Of course, in both cases each childhood characteristic considered will reflect and be related to many aspects of early experience, and cannot necessarily be considered as a direct cause of a particular adult outcome. For example, if we were to find that people who had grown up in homes lacking in basic amenities had lower average incomes at age 23, it would be extremely unsafe to conclude that the former had directly caused the latter. Lack of amenities might be just one of a range of material hardships which might hamper

educational progress and thereby lead to lower income. In order to arrive more closely at an assessment of the relationships of interest, multivariate analysis has been used in both parts of the project. Of course it is never possible, using non-experimental data, to attain a totally pure estimate of a causal relationship, but it is possible to establish the extent to which taking other factors into account affects the initial simple relationship; sometimes it can be shown that the initial relationship is reduced to the point where it is trivial or non-existent, thus rendering a causal link extremely unlikely.

A detailed description of the statistical methods and of the variables included in the analyses are to be found in the later chapters with the account of the findings. However some more general points about the method of analysis will be found at the end of this chapter, after the description of the study from which the data are drawn.

The National Child Development Study

NCDS is a national longitudinal study of all the people in Great Britain who were born in the week 3-9 March, 1958. (It is important to note, however, that the project described here was based only on those resident in England).

It has its origins in the 1958 Perinatal Mortality Survey, carried out by the National Birthday Trust Fund in order to study factors associated with stillbirth, early death and congenital handicapping conditions. With the first follow-up, carried out by the National Children's Bureau in 1965, the focus of the study broadened to encompass social, educational and physical development more generally.

Subsequent follow-ups of the entire cohort, also by the National Children's Bureau, took place at the ages of eleven, sixteen and twenty-three. In addition details of public examination results were obtained from schools in 1978, and there have been a number of studies of special groups from within the cohort, such as the adopted, the handicapped, the gifted and the socially disadvantaged.

Main stages of the study

Methods of data collection for the main stages are summarised below:

- At birth (1958) Questionnaires completed by midwives from interviews with the mother and medical records.
- At seven (1965) Parents interviewed by health visitors.
Questionnaires completed by schools.
Medical examinations by local authority medical officers.
Attainment tests administered by schools.
- At eleven (1969) As at seven, with the addition of a short personal questionnaire completed by the cohort members.
- At sixteen (1974) As at seven and eleven, but with a much more substantial personal questionnaire.
- At twenty-three (1981) Personal interview of cohort members, carried out by professional research interviewers.

Census-based data describing the area in which the cohort member was living in 1974 and in 1981 were also added to the database.

It would not be appropriate to attempt here either to describe the several thousand items of information which are now held on each cohort member or to summarise the several hundred publications which have so far arisen from the study. Further information can be found in, for example, Davie et al (1972), Fogelman (1983), Shepherd (1985) and NCDS4 Research Team (1987).

The data from all the above stages have been deposited with the ESRC Data Archive, and some 50 projects based on them are taking place in this country and overseas. There is an NCDS User Support Group at City University which, in addition to encouraging and facilitating use of the existing data, is planning the next stage of the study which it is hoped will take place in the next two years or so.

Response

A major feature of the study has been its success in maintaining the goodwill and co-operation of the cohort members and others on whose participation the study has depended. Of some 16,500 survivors since the Perinatal Study over 90% were traced and participated in the seven and eleven-year stages. The comparable figure at sixteen was 87%, and the 12,537 people interviewed at twenty-three represented 78% of the target figure (that is, all those who had taken part in at least one previous stage of the study and who were not known to have died or emigrated).

Detailed analyses of response specific to this project have not been

undertaken, but more general analyses have demonstrated only small biases, with a slight under-representation in later stages of some disadvantaged groups. Re-calculation of earlier analyses omitting later non-respondents show that underlying relationships do not appear to be affected by response patterns.

Although attempts were made during the school years to include those people who were born in the same week but who had entered the country since birth, the one severe bias within the study concerns ethnic minority groups. It is probable that many who came into the country since their birth were not successfully included in the study, and it is certain that those who were included by age 16 were more likely than other groups to be missed at the 23-year follow-up.

For further information on response, see Goldstein (1983), Ades (1983) and Iyer (1984).

Age and Cohort Effects

This brief account of the main features of NCDS should alert the reader to two important points which should not be overlooked in relation to the project findings reported later. Firstly, the study does not yet hold data beyond the age of twenty-three. Although scarcely any of the cohort were still in full-time education at this age, many had been in the labour market for only a relatively short

time. Similarly, many had not yet experienced other crucial transitions into adulthood such as leaving the parental home, marriage or child-rearing. More important in the context of this project, speed of passage through such transitions will vary according to sex, social background, education and so on. Although the study is of people who are all of the same age, they will not be at the same stage in their life cycles. We will need to be extremely cautious about generalising from findings in early adulthood to later and probably more stable periods in their lives.

Secondly, the subjects of this study began to leave school in 1974. Therefore, compared with cohorts only a few years their junior, they will have escaped the worst consequences of the economic difficulties which began to be felt towards the end of the seventies. Similarly, they would not yet have been influenced by developments in housing policy such as the promotion of home ownership and the right to buy LA housing.

Approach to the Analyses

As already indicated, the underlying aim for both parts of the project was to relate a variable concerning childhood experience (social in the first part of the project, housing in the second) to a "dependent" variable concerning aspects of early adult experience (housing in the first part, a wider range in the second), taking into account associations with other variables which might otherwise explain the initial relationship.

Selection of Variables

The variables to be examined were selected from those available within NCDS, in close consultation with the Department of Environment. In addition to whether or not particular variables were considered of importance or interest to the Department, the other main criterion was to select those which previous NCDS work had demonstrated to relate significantly either to housing or to outcomes which might be associated with housing (earlier NCDS work on housing had mainly been concerned with its effects on educational progress and health). For this previous work see, in particular, Davie et al (op cit), Essen and Parrinder (1975), Essen, Fogelman and Head (1978a and 1978b), Essen and Fogelman (1979) and Fogelman (op cit).

Multivariate Analysis

To meet the specified aim, multivariate analysis would clearly be required. Two kinds of analysis were in fact carried out, depending on the nature of the dependent or outcome variable. Where this was continuous (for example, income) the generally familiar technique of analysis of variance was used. Where it was categorical, loglinear analysis was used - this was in fact the case for all the analyses in the first part of the project and the majority of those in the second part.

Both kinds of analyses have essentially the same purpose, as is described below. That is, in this context, to arrive at an estimate of the relationship between two variables after allowing for their associations with other variables. Analysis of variance operates on mean values and variances and produces estimates of deviations from the overall mean, adjusted deviations and uses the F-test to assess the probability level of their difference from each other.

Loglinear analysis, on the other hand, operates on the multi-way table of all the variables in the analysis, and produces coefficients which enable the calculation of relative odds (see below), and their significance levels are assessed by inspection of the z-values associated with each coefficient.

As loglinear analysis may be less familiar to some readers, this method is described in more detail below.

Multivariate analysis with categorical outcomes

For all the analyses in Part 1 and almost all those in Part 2, the dependent variables are categorical rather than continuous. The actual method used therefore was log-linear or logistic analysis.

The purpose of such analysis is essentially the same as regression or analysis of variance, that is to estimate the

relationship of each independent variable with a dependent variable after allowing for the association with the other independent variables in the analysis. It is also possible to add interactions to the model, that is to check whether the relationship between an independent variable and the dependent variable is similar across the values of another independent variable (for example, is the sex difference in homelessness similar for each social class?).

However, the results produced differ from those of analyses of continuous variables in one crucial respect. In the latter the contrast between, say, two categories of an independent variable would usually be presented as a fitted constant or the difference between two adjusted means. For example, the adjusted mean difference between men and women in an analysis of height might be 3.45 cms. By contrast, from a log-linear analysis the result is expressed as relative odds (this concept is considered further below). For example, it might be found that the odds of being homeless for men were twice those for women, after allowing for other variables included in the analysis.

Where the outcome has more than two categories, as for tenure, then relative odds are produced for each independent variable for every category. This will give, for example, the contrast between men and women in their odds of being independent owner occupiers, and a separate value for the relative odds of being in an independent LA/HA household and so on.

Odds

The concepts of "odds" and "relative odds" used in these analyses may need some clarification. They are, in fact, close to the more familiar concept of probability, frequently expressed in the same terms, and broadly interpretable in the same way. Nevertheless, they are not equivalent arithmetically.

The difference between probabilities (also sometimes known as "risks" in the statistical literature) and odds is simply that they are different ways of describing the likelihood of a particular event or characteristic. Probability expresses that likelihood as a proportion of the relevant population, whereas odds express it relative to those who do not experience the event or characteristic. More concretely, the probability of being female rather than male is (near enough) one in two, i.e. the ratio of the number of females to the number of all people; whereas the equivalent odds would be one to one, the ratio of the number of females to the number not female.

Relative odds, as which the results of the analyses for the first part of this project are presented, are simply the result of calculating the ratio between the odds of two groups which we wish to compare. For example, we might calculate the relative odds of being female of social researchers versus civil servants.

For the second part of this project, it was not appropriate to

present the relative odds in the same way, because of the frequent presence of interactions. In other words, the relative odds between two groups of interest would not be the same in different categories of a third variable. Therefore coefficients are presented, from which the relevant relative odds can be calculated. This is explained more fully in the section describing those results.

Constraints on the analyses

Loglinear and logistic analysis are essentially methods of summarising a multi-way table of all the variables in the analysis. Therefore it is not surprising that the results tend to become less certain the greater the number of cells in that table. This is particularly the case when there are significant interactions. It is therefore conventional to adopt a strategy of keeping the number of variables and interaction terms, and the number of categories within those variables, to the minimum compatible with the underlying substantive questions.

This principle not only affected the selection and categorisation of variables for the analyses, but also guided how decisions were taken in proceeding from the initial stage of each analysis to the final models from which the reported results are derived. Because of their different subject matter this was applied slightly differently in the two parts of the project.

Stages of analysis: part 1

The purpose of Part 1 was to identify the relationship of each of several childhood social characteristics to a number of housing outcomes. Thus each of the "independent" variables was of equal importance and interest.

The first stage of analysis was to run tables of each independent variable by each dependent variable. The independent variables for which the simple two-way relationship with the dependent variable was significant were then included in the first multivariate (loglinear) analysis in order to examine their joint effects. Significant variables in that analysis were then used in a further stage where the interactions between the variables were examined in turn, using a stepwise procedure. In the event none of these proved significant. Finally, therefore, the model with significant main effects only was used to obtain the relevant parameters for each term in the final model.

Stages of analysis: part 2

By contrast, for Part 2 the primary focus among the independent variables was on the childhood housing variables and their relationship with the dependent variables. Other independent variables were to be included as control variables, to be taken into account in estimating the relationships of first interest.

In this case, even if the association of a "control" variable with the dependent variable was small and did not reach statistical significance, it is not clear that it should be omitted from subsequent stages. Its influence on the relationship between the housing variable and the outcome variable might still be important.

Therefore, although two-way tables of the housing and other variables by the 23-year outcomes have been produced, they were not intended in the first place to identify which variables to include or exclude from the next stage.

Ideally there would have been only one further stage, to produce parameters for the housing variables from analyses which included all other variables, and this is what was done for the small number of outcome variables which were continuous measures.

However, many of the categorical analyses proved to contain significant interactions between the housing variables and other independent variables, which could not be ignored. For the reasons already referred to, analyses which attempted to include such interactions and all main effects proved to be problematic or unstable. It was therefore necessary to adopt a strategy to exclude some variables, and this was done in a similar way to that described for Part 1, so that the final parameters are based only on significant variables and interactions. Furthermore, the only interactions considered for inclusion in the final model were those between either the housing variable or sex and any other independent variable.

Significance levels

In the various procedures described above, a significance level of 5% was usually adopted. For analyses based on such large numbers, 5% is a generous limit and ensures that even relatively low levels of association are taken into consideration.

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2. CHILDHOOD SOCIAL CIRCUMSTANCES AND EARLY ADULT HOUSING

Introduction

As already described, the aim of this part of the project was to assess the relationship between social circumstances in childhood and a number of aspects of housing experience at the age of twenty-three.

The general method of analysis has already been outlined, but before proceeding to the results, the variables in the analysis are described in detail.

Variables measuring social circumstances in childhood

A standard set of six variables was developed and included as independent variables in the first stage of each analysis.

Social Class: This was based on the male head of household's job at the time of the 7 and 16 year stages of the study, and classified according to the Registrar General's Classification of 1960 and 1970 respectively. Five categories were created and used in the analyses: Non-Manual at 7 and 16; Manual at 7 and

Manual at 16; Manual at 7 and Non-Manual at 16 (upwardly mobile); Non-Manual at 7 and Manual at 16 (downwardly mobile); No Male Head of Household at 7, 11 or 16.

Family Size: The number of children under 21 living in the child's household, at the time of the 11-year follow-up. Two categories were used: 1-3 children; 4 or more children.

Parents' Education: Two categories were used: one or both parents stayed on at school beyond the minimum school leaving age; neither did so.

Father's Unemployment: Based on whether the male head of household had been unemployed for any length of time in the year before the interviews at age 11 or 16. Two categories: No unemployment; some unemployment at 11 and/ or 16.

Neighbourhood: Census based information (the ACORN classification) was available, describing the areas (enumeration districts) in which the subjects and their families lived at 16. The ACORN classification uses information on the area's demographic structure, household composition, housing, socio-economic structure and employment characteristics to create groups of areas of broadly similar characteristics. For the analyses, these groups were further combined as specified by the Department, to give three broad categories: 'Deprived';

'Best off'; 'Other'.

Sex

A seventh variable (Family Income) was included in one set of analyses only- that which examined relationships with tenure in early adulthood. This variable, based on information on net income from all sources provided by the mother (usually) in the parental interview at 16, was not used in all analyses because it was known to be problematic. Some 16% of respondents could not or refused to give this information. A few additional cases were excluded because they were known to be affected by the operation of the three-day working week during 1974.

Nevertheless the likelihood of family income in childhood being associated with tenure in early adulthood was considered so important that it was decided to include this variable despite its shortcomings. In the first stage of analysis, where the simple two way relationships were examined, income was grouped into quintiles. For the multivariate stages it was necessary to reduce the number of categories, so this variable was grouped into thirds.

Variables measuring housing circumstances in early adulthood

With the groups of childhood variables as described above five sets of analyses were carried out, one for each of five 'outcome' variables concerned with housing circumstances at the time of the 23-year follow-up.

Tenure at 23: This was defined as a combination of tenure position and independence of the household. If the respondent or their partner was jointly or solely regarded as head of the household, i.e. the accommodation was rented or bought in their name(s), they were regarded as independent. Four categories were created: Independent owner occupiers; Independent Local Authority or Housing Association tenants; Independent other (mainly private renters); Not independent (irrespective of tenure, i.e. mainly still living with parents).

Household Status at 23: Independence defined as in tenure above, and three categories then created: Not independent; Independent household - sharing; Independent household - not sharing. For the multivariate analysis the small group of those in independent sharing households was combined with the other independent householders.

Overcrowding at 23: The number of persons divided by the number of rooms in the household (with the kitchen counted only if greater than two metres in width). Two categories: less than one person/room; one or more persons/room.

Amenities at 23: Two categories: sole use of bath or shower and WC; shared use or absence of either.

Homelessness by 23: During the 23-year interview, a question was asked, "Have you ever had to move out of a place and had nowhere permanent to go?". Two categories, according to the reply to this question: Yes; No.

RESULTS

Presentation

As adumbrated in the introductory chapter, each analysis passed through a number of stages, and the presentation of the results reflects the main stages.

Firstly, two-way tables were produced of each childhood social variable by each early adult housing variable. These are provided as Appendix 1, and their significance levels indicated

in the first column of each summary table within the main text below.

Secondly, those childhood variables whose two-way relationship with the dependent variable was statistically significant at the 5% level were included in a loglinear analysis in order to assess their joint effects. Significance levels in this analysis are shown in the second column of each summary table.

In the same stage interactions were tested, that is to assess whether the relationship of each independent variable with the dependent variable could reasonably be assumed to be the same across categories of the other independent variables. Fortunately for the sake of simplicity in presenting and interpreting the results, in no analysis was there evidence of interactions significant at the 5% level.

The final stage was to run the final model, that is including only those variables which reached a significance level of at least 5% in the first joint analysis. This generated the parameters from which relative odds could be calculated, and these are presented in the second half of each summary table.

It will be noticed that the numbers included in each final analysis vary considerably, from just fewer than 6000 to just

over 10000. Each analysis included all those with complete information on the variables used in that analysis. Thus the total number of subjects is a function of the number of variables in that analysis.

Two variables have a disproportionate effect in reducing the analysis sample: income, for the reasons already described above (though in the event this variable is not used in a final model); and social class, because it in turn depends on having the relevant parental interview data at both ages seven and sixteen.

Results are now presented and discussed for each outcome variable in turn.

TENURE

This proved to be the most complex of the analyses, both because it was the only outcome variable with more than two categories, and also because of the relatively large number of variables which remained in the final model.

As can be seen in tables 1-8 in Appendix 1 and in the first column of the table below, all seven social variables were related to tenure at 23 at the simple level.

The second column of the table shows that in the first multivariate analysis the family income variable failed to reach the conventional significance level (as did interactions in this and all other analyses). In other words, the other social variables appeared to explain the initial relationship between family income at 16 and tenure at 23. In fact further exploration demonstrated that it was in particular social class which explained the relationship between income and tenure. For those particularly interested in this relationship, Appendix table 9 gives full numbers and percentages for this three-way relationship.

Thus, the variables included in the final model were social class, family size, sex, parents' education, father's unemployment and neighbourhood; each having proved to be associated with tenure at 23 even after allowing for their relationships with each other.

ANALYSIS 1.1

Dependent Variable = Tenure at age 23 (Independent owner occupiers, Independent LA/Housing Association, Independent others, Not independent)

Independent variables	Probability level of simple 2 way relationship with the dependent variable	Probability level in multivariate analysis
Social class	.001	.001
Family size	.001	.001
Sex	.001	.001
Parents' education	.001	.001
Fathers' unemployment	.001	.001
Neighbourhood	.001	.001
Family income	.001	N.S.
Interactions	-	N.S.

Variables in the final model = Social class, family size, sex, parents' education, father's unemployment, neighbourhood (N=5840).

ANALYSIS 1.1 (Cont.)

Relative odds of each tenure group membership for each variable adjusted for the effect of others

	<u>Tenure groups</u>			
	<u>Indep owners</u>	<u>Indep LA/HA</u>	<u>Indep other</u>	<u>Not independent</u>
<u>Social class</u>				
Manual at age 7 and 16 Vs Non-manual at age 7 and 16	1.0	1.9	.6	.8
Upwardly mobile Vs Non-manual at age 7 and 16	1.0	1.6	.8	.8
Downwardly mobile Vs Non-manual at age 7 and 16	1.0	1.8	.9	.8
No male - head Vs Non-manual at age 7 and 16	.8	2.0	.9	.7
Downwardly mobile Vs Upwardly mobile	.8	1.1	1.2	1.0
<u>Family size</u>				
Large Vs small	.7	1.5	1.2	.8
<u>Sex</u>				
Female Vs male	1.5	1.4	.9	.5
<u>Parents' education</u>				
Neither stayed on at school Vs at least one stayed	1.1	1.3	.7	.9
<u>Fathers' unemployment</u>				
Unemployed at 11 and/or 16 Vs Unemployed at neither	.8	1.4	1.1	.8
<u>Neighbourhood</u>				
Deprived Vs Best off areas	.9	1.6	.9	.8
Other Vs Best off areas	.9	1.4	.9	.9

The second half of the above table shows the relative odds (see the introductory chapter for discussion of this concept) for each contrast within the independent variables. As tenure has four categories, relative odds have been calculated for each of those categories. Thus each number in the second half of the table gives the relative likelihood of having a certain tenure of one category of an independent variable versus another.

For example, under social class, comparing those whose fathers were in manual occupations at age 7 and age 16 with those whose fathers were in non-manual occupations at both times, the former were equally likely as the latter to be independent owners at 23; were 1.9 times more likely to be independent tenants of a local authority or housing association; 0.6 times as likely to be in some other kind of independent household; and 0.8 times as likely to be in a non-independent household (in all cases, adjusted for the effects of other variables in the analysis).

It may be helpful to point out that where the independent variable has more than two categories, as in the case of social class, it is possible to calculate the comparisons between all possible pairs of categories from those which are presented. For example, the only comparison presented for the No Male Head

group is with Non-Manual. Since the former were 0.8 times as likely as the latter to be independent owners, and also the Non-Manual had equal odds as the Manual of this tenure, then it follows that the No Male Head group were also 0.8 times as likely as the Manual to be independent owners.

As a further example, women were 1.5 times as likely as men to be owner occupiers; 1.4 times as likely to be LA or HA tenants; .9 times as likely to be in some other independent tenure; and only half as likely to be a dependent member of a household.

To turn to the substance of the results, it is immediately apparent that, at this age, they do not reflect the simple assumption that those who grew up in more advantaged circumstances are more likely to be owner occupiers. Those with middle class backgrounds were in fact no more likely to be owner occupiers than those from working class backgrounds; those who grew up in the best off areas were only marginally more likely to have become owner occupiers than those from the most deprived areas; and those whose parents stayed at school beyond the minimum leaving age are in fact very slightly less likely to be owners.

By contrast, disadvantage in childhood is associated with becoming a LA or HA tenant by 23. Coming from a working class background and a large family, growing up in a deprived

neighbourhood, and with a father who experienced unemployment and parents who left school at the minimum age, are all associated with substantially increased odds of being such a tenant at 23. The largest contrasts in the table are for those who experienced a period in their childhood without a male head of household, who were the most likely to be LA or HA tenants at 23, and the least likely to be owners.

The other tenure group where differences between the disadvantaged and the better off appear consistent comprises those who have not formed independent households, most of whom will still be living with their parents. This "tenure" is consistently more likely for those who in childhood were in middle class, small families, with parents with more education and less unemployment and living in the best of areas.

As would be expected, it is also the women who are much more likely to be independent, as they do tend to marry and leave home at an earlier age than men.

Differences between social groups in their rate of progress through the major transitions of early adulthood clearly play a major part in these findings. Those individuals from advantaged backgrounds who can be supposed to be the most likely eventually to become owner occupiers are also less likely to have established independent households by the age of 23. Many will

still be living at home. Others will have not long completed their education and entered the labour market. Certainly their average age of marriage will be relatively late.

There is a strong suggestion in the analysis of such groups of young people tending to use the private rented sector (the main constituent of the "independent other" group) as a common and probably temporary tenure at this age. It is again generally the more advantaged who are more likely to be in this tenure at 23, although the contrasts are not large, and do also show the downwardly mobile, those from larger families and those whose fathers had experienced unemployment as more likely to be in this group.

Despite the apparent strong influence of life cycle factors on the patterns found, it should not be overlooked that there is also clear evidence of the strong tendency for those from less advantaged backgrounds to become local authority tenants. Since such young people will be further advanced through leaving home, finding work, getting married and establishing households of their own, this will not be a temporary phenomenon, and can if anything be expected to become more marked as the cohort ages.

HOUSEHOLD STATUS

This variable bears a close relationship with the previous one, but distinguishes simply between those in independent households and those in dependent households.

In fact the variable was originally constructed also to distinguish between those sharing and not sharing within independent households. In the event, as can be seen in Appendix 1 tables 10-15, the number of sharers was small. They were therefore combined with those in independent households.

ANALYSIS 1.2

Dependent/outcome variable = Household status (Independent, Dependent)

Independent Variable	Probability level of simple two way relationship with the dependent variable	Probability level in multivariate analysis
Social class	.001	N.S.
Family size	.001	N.S.
Sex	.001	.001
Parents' education	.001	N.S.
Father's unemployment	.01	N.S.
Neighbourhood	.001	.01
Interactions	-	N.S.

Variables in final model = sex, neighbourhood (N=10421)

Relative odds of being in an independent household for each variable adjusted for the effect of others:

Sex

Female Vs Male = 1.6

Neighbourhood

Deprived Vs Best off areas = 1.2

Other Vs Best off areas = 1.1

Since the most substantial contrasts in the tenure analysis were in relation to the Local Authority and Housing Association tenants, we should expect that the simple dichotomy between independent and dependent households would produce less marked

patterns. This is indeed the case.

All six variables (income not being included in any but the analysis of tenure) were significant in their two-way relationships with household status, but once their joint effects were assessed in the multivariate analysis all but two failed to reach significance at the 5% level.

Given its strength in the previous analysis, and its independence from the other social variables, it would be surprising if the sex effect disappeared, and indeed we do find women more than one and a half times more likely to be in independent households at 23.

The only other variable which remained significant was "neighbourhood". Those who grew up in the best off areas were least likely to be in independent households, and those from deprived areas were most likely. However, although statistically significant, these contrasts are very small, and probably reflect the life cycle differences mentioned above when discussing tenure.

OVERCROWDING

The next analyses examined the odds of being at 23 in overcrowded accomodation (i.e. more than one person per room).

ANALYSIS 1.3

Dependent/outcome variable = Overcrowding
(Not crowded, over-crowded)

Independent Variables	Probability level of simple two way relationship with the dependent variable	Probability level in multivariate analysis
Social class	.001	.001
Family size	.001	.001
Sex	N.S.	-
Parents' education	.001	N.S.
Fathers' unemployment	.001	N.S.
Neighbourhood	.001	.001
Interactions	-	N.S.

Variables in final model = social class, family size, neighbourhood (N=5847)

Relative odds of being over-crowded for each variable adjusted for the effect of others:

Social class

Manual at age 7 and 16 Vs Non-manual at age 7 and 16	= 1.6
Upwardly mobile Vs Non-manual at age 7 and 16	= 1.4
Downwardly mobile Vs Non-manual at age 7 and 16	= 1.7
No male head Vs Non-manual at age 7 and 16	= 1.6
Downwardly mobile Vs Upwardly mobile	= 1.2

Family size

Large Vs small families	= 1.8
-------------------------	-------

Neighbourhood

Deprived Vs Best off areas	= 1.4
Other Vs Best off areas	= 1.2

As can be seen in detail in Appendix 1 Tables 16 - 21 five of the social variables were significant in their simple relationship with crowding, the exception being "sex". In the joint analysis, the relationships of parents' education and father's unemployment were reduced to where they were no longer significant, leaving social class, family size and neighbourhood in the final model.

By contrast with some of the previous analyses, here there does emerge a fairly clear relationship between disadvantage in childhood and in early adulthood. In terms of social class, for example, those whose fathers were in non-manual occupations were about one and a half times less likely than all other groups to be overcrowded at 23. The other social class groups examined were broadly similar to each other, although the downwardly mobile (those with fathers in non-manual jobs when they were seven but manual jobs at sixteen) were slightly (1.2) more likely to be overcrowded.

Similarly, the relationships with both family size and neighbourhood confirm the general relationship between disadvantage in childhood and overcrowding in early adulthood.

AMENITIES

Given that Local Authority accomodation tends to be at least as well provided with the basic amenities as does owner occupied accomodation, and that the most marked patterns which we have seen so far have been for groups of young adults going into LA accomodation at a relatively early age, we would not generally expect the social variables to have a very marked relationship with access to the basic amenities of a bath or shower and a WC. In the event, the two-way relationship proved significant for two variables only: parents' education and social class (Appendix 1 Tables 22-27), and the latter was a relatively weak association which disappeared in the joint analysis of just these two variables.

ANALYSIS 1.4

Dependent/outcome variable = Amenities
(Sole use, not sole use)

Independent Variables	Probability level of simple two way relationship with the dependent variable	Probability level in multivariate analysis
Social class	.02	N.S.
Family size	N.S.	-
Sex	N.S.	-
Parents' education	.001	.001
Fathers' unemployment	N.S.	-
Neighbourhood	N.S.	-
Interactions	-	-

Only parents' education is significant (N=8860). Relative odds of being without amenities for those with neither parent staying on at school beyond minimum school leaving school age compared to those with at least one parent who stayed is = 0.6.

Thus it is only parents' education which remains significant in the final analysis. However it is those people whose parents had not left school at the earliest opportunity who had almost twice the odds of lacking or sharing amenities at 23.

It seems very likely that what we are seeing here is closely related to the findings on the 'independent other' sector in the tenure analyses. Those with the more educated parents can be

assumed to be more likely to continue their own education to a later age. They would then be more likely to have entered the housing market, other than in the special role of a student, relatively recently, and to have done so in the first place via the private rented sector where the general level of amenities is worst. Obviously this relationship is likely to be temporary and can be expected to diminish and quite possibly to reverse as the cohort grows older.

HOMELESSNESS

The question on homelessness on which this analysis was based was provided verbatim earlier in this chapter. It is clearly extremely general and will encompass experiences of varying severity: from sleeping rough for a long period to a single night on a fellow student's floor.

If, as this suggests there are two kinds of homelessness, one associated with more general and possibly long-term difficulties, the other associated with the particular problems of accomodation for students, and both experienced by relatively small proportions of the cohort, then we would not expect very distinct results or marked contrasts from our analysis of the influence of childhood social circumstances.

ANALYSIS 1.5

Dependent/outcome variable = Homelessness
(Never homeless, Ever homeless)

Independent Variables	Probability level of simple two way relationship with the dependent variable	Probability level in multivariate analysis
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Social class	.001	.06
Family size	.01	N.S.
Sex	N.S.	-
Parents' education	.001	.02
Fathers' unemployment	.01	.001
Neighbourhood	.001	N.S.
Interactions	-	N.S.

Variables in final model = Social class, parents' education,
father's unemployment (N=6021)

Relative odds of being ever homeless for each variable
adjusted for the effect of others:

Social class

Manual at age 7 and 16	Vs	Non-manual at age 7 and 16	= 0.8
Upwardly mobile	Vs	Non-manual at age 7 and 16	= 0.9
Downwardly mobile	Vs	Non-manual at age 7 and 16	= 1.0
No male head	Vs	Non-manual at age 7 and 16	= 1.0
Downwardly mobile	Vs	Upwardly mobile	= 0.9

Parents' education

Neither stayed on at school Vs at least one stayed = 0.8

Father's unemployment

Unemployed at one or both ages of 11 and 16 Vs unemployed
at neither age = 1.4

Although sex was the only variable not to be significant in its simple relationship with homelessness, all but parents' education and father's unemployment failed to reach the significance level adopted for inclusion in the final model. However, social class only just failed to reach the 5% level and, on the grounds of caution was included in the final model.

The resulting contrasts in relation to childhood social class tend mainly to confirm that the criterion significance level was satisfactorily conservative. The relative odds of being homeless among the different social class categories are all close to unity.

Slightly larger contrasts appear for the other two variables, and they highlight well the contradictory influences on the two types of homelessness. On the one hand, those whose parents had left school at the minimum age were less likely to experience homelessness by the age of 23. On the other hand, homelessness was more common among those whose fathers had experienced unemployment.

GENERAL CONCLUSIONS

There is certainly considerable coherence to the patterns which have been found, if they are viewed in the light of the dual and to some extent mutually offsetting explanations outlined in the discussion of the tenure results.

Firstly, those people who grew up in less advantaged backgrounds are already by the age of 23 considerably more likely than others to be Local Authority or Housing Association tenants. This contrast is in fact further emphasised by the fact that those from working class backgrounds also tend to set up independent households at an earlier age and so were more likely to appear by 23 in what would be their longer-term tenure, irrespective of what that tenure might be.

These tendencies are compounded for those whose childhood experiences contained other dimensions which tend to be associated with material disadvantage, such as coming from a large family, having had a period with no male head of household, or having experienced unemployment.

Secondly, it is the other side of the same coin that those from relatively advantaged backgrounds- middle class more educated parents, small families, no unemployment - are slower in

starting off and progressing through the major transitions of early adulthood. Compared with their peers, they tend to prolong their education and postpone entry into the labour market, marriage, child-bearing and entry into a stable position in the housing market. Thus at 23 we do not yet see what will surely happen in subsequent years when they can be expected to have embarked on buying their own homes in considerably greater proportions than other social groups.

At 23, on the contrary, they appear to be more likely to be in the private rented sector, no doubt temporarily, and to be experiencing some of the difficulties of that sector such as poor basic amenities.

Additional specific points worthy of note include:

One of the most important variables in influencing the likelihood of having established an independent household by the age of 23 is sex. Thus women are also more likely to be in either one of the two more long-term tenures, LA tenancy or owner occupation. This is of course quite independent of the other childhood characteristics and there were no gender differences in the other early adult housing circumstances.

In none of the analyses were there found to be substantial differences between those who had been upwardly or downwardly

mobile in their childhood. It is not possible to determine whether this is because they share certain characteristics, and therefore the two groups will be similar in their housing careers; or whether 23 is too early to detect differences which will become apparent later.

There is a suggestion of a distinct pattern beginning to develop for those who experienced being without a male head of household at some point during their childhood. They are the group with the highest odds of being LA tenants and also of having formed an independent household, and among the groups most likely to be overcrowded at 23. The lone parent family is an increasing phenomenon and the housing and other material difficulties of such families are well documented. As far as we are aware this is the first study to identify the possibility of those difficulties continuing into the next generation. Of course this project was not designed to be an adequate study of the intergenerational effects of lone parenthood, and this issue should be pursued further with the NCDS data, and with a wider focus than housing.

Despite the large number of personal childhood characteristics which were taken into account in these analyses, the characteristics of the neighbourhood in which the cohort member grew up were found to have an additional influence on tenure, household status and overcrowding at the age of 23. Again this

is an issue meriting investigation in more depth, exploiting the detail of the Census data held by NCDS and its availability in relation to 23-year address in addition to that at 16 used in the present project.

Although it has been possible to draw a number of specific conclusions from these analyses, perhaps the most salient point to emerge has been the transitory stage of many of these young people's lives at the age of 23. To understand more fully the relationships which have begun to be extricated would require a further study of an older age group who are more settled in their employment and housing, and at or nearing completion of their families.

3. CHILDHOOD HOUSING AND EARLY ADULT OUTCOMES

Introduction

Like the first part of the project, the second part was concerned with the relationship between experiences in childhood and characteristics at or by the age of 23. However, the focus in this case is on housing in childhood, and its association with a range of outcomes in early adulthood.

The majority of the outcome variables were categorical. Therefore the majority of the analysis was loglinear, similar in approach to those reported in the previous chapter (although, because of significant interactions the presentation of the results is somewhat different). For the small number of continuous outcome variables, analysis of variance was used (see the introductory chapter for an outline of the method).

Conceptually, the independent variables in these analyses are of two kinds. Firstly, each analysis included one of the variables describing an aspect of housing experience in childhood (tenure, type of accommodation, overcrowding and amenities). Each of these was constructed in a way that was intended to describe housing circumstances longitudinally; distinguishing those whose housing circumstances in childhood changed from those which were more

stable, and those whose circumstances had improved from those for whom they had deteriorated.

Secondly, each analysis included a standard set of variables designed to be 'control' variables, i.e. known to be associated with housing circumstances and whose relationship with the outcome variable was to be allowed for in estimating the relationship of prime interest.

Each of these variables, and the seventeen dependent variables are now described in detail.

Childhood Housing Variables

Tenure: five categories - Owner occupiers at 7, 11 and 16;

LA tenants at 7, 11 and 16;

Not owners at 7, owners at 16;

Owners at 7, not owners at 16;

Others

Type of Accommodation: five categories -

Whole house at 7, 11 and 16;

Not whole house at 7, 11 and 16;

Not whole house at 7, whole house
at 16;

Whole house at 7, not whole house
at 16;

Others

(N.B. This distinguishes not only those sharing, but also those in flats, who equally would be included in one of the 'not whole house' groups)

Overcrowding: using a criterion of greater than one person per room to be overcrowded, five categories -

Not crowded at 7, 11, and 16;

Crowded at 7, 11 and 16;

Crowded at 7, not crowded at 16;

Not crowded at 7, crowded at 16;

Others

Amenities: at each of the childhood NCDS stages, information was obtained on access to bathroom, indoor lavatory, and hot water supply. Again, five categories were created -

Sole use of all three at 7, 11,
and 16;

Not sole use at 7, 11, and 16;

Not sole use at 7, sole use at
16;

Sole use at 7, not at 16;

Others

'Control' Variables in Childhood

Sex

Social Class: two categories- NonManual and Manual. In order to maximise numbers the following strategy was adopted. 11- year Social Class was used whenever available, but if missing or no male head 7-year social class was used, and if that also was missing then 16-year social class was used.

Parents' Education: two categories- one or both parents stayed on at school beyond the minimum leaving age; neither did so.

Neighbourhood: as described for the variables in the first part of this project, the Census based ACORN classification was collapsed to give three categories: 'Deprived'; 'Best Off'; and 'Other'.

Dependent Variables at age 23

Net Family Income: a continuous variable derived from the responses to a range of questions in the 23- year questionnaire designed to identify income into the family from all sources.

Equivalent Family Net Income: based on the above, but adjusted according to Supplementary Benefit weightings to take account of the number of family members and their age- a continuous variable.

Age at (first) marriage: treated as a continuous variable. These analyses include only those who had married.

Self-rated health: precoded answers to the question, "How would you describe your health generally?" combined into two categories - excellent or good; fair or poor.

Malaise score: two categories - scores of 6 or less; scores of 7 or more- these being the conventional cut-offs on an inventory designed for use as a screening instrument to indicate a higher likelihood of depression. The inventory comprises 24 items of the kind: "Do you feel tired most of the time?" or "Are you constantly keyed up and jittery?". The score is simply the sum of positive responses to

these items.

Highest Educational Qualification: three categories - A level (or equivalent) and above; O-level (or equivalent); and below O-level. The initial categorisation of qualifications had adopted the same criteria as the General Household Survey.

Social Class of current or most recent job: Four categories- Professional or Intermediate; Skilled Non-Manual; Skilled Manual; Semi and Unskilled Manual.

Whether Unemployed: two categories- currently employed; currently unemployed. Housewives, students, sick or disabled and others out of the labour force were excluded from these analyses.

Amount of time unemployed: expressed as a proportion of economically active time since leaving school (i.e. time as a housewife, student or otherwise out of the labour force is discounted from the calculation). Categorized into three groups - never unemployed; unemployed up to 10% of the time; unemployed more than 10% of the time.

Partnership Status: three categories - single and alone (includes separated, divorced and widowed now alone); married; cohabiting (includes separated, divorced and widowed now cohabiting).

Number of (biological) Children: three categories - none; one; two or more.

Age at birth of first child: two categories- nineteen or less; twenty or more. This analysis included only those who had had a child.

Tenure: four categories- independent household owner occupier; independent Local Authority or Housing Association tenant; other independent (mainly private renters); not independent irrespective of tenure.

Household Status: two categories- independent; not independent.

Tenure aspirations: all those who at 23 were not already owner occupiers were asked whether they would ever want to buy. Two categories- those responding 'yes' or 'don't know'; those responding 'no'.

Whether on Council Waiting List: three categories- never having approached a Council, New Town Corporation or Housing Association; having made such an approach and now on a waiting list; having made such an approach and not now on waiting list.

Number of Moves since the age of sixteen: three categories- no moves; one to three moves; four or more moves.

Distributions of all the above, and the simple two-way relationships of each independent variable with each dependent variable can be seen in the tables in Appendix 2.

RESULTS

Continuous Outcome Variables

The underlying purpose of these analyses was to identify whether, and the extent to which, each of the childhood housing variables was related to the early adult outcome variables, after allowing for the "control" variables measuring other aspects of childhood circumstances. As the technical constraints on analysis of variance, used for the analysis of continuous dependent variables, did not impose any difficulties, it was possible to follow a relatively straightforward strategy for the first three sets of analyses considered, i.e. for net family income, equivalent net family income, and age at marriage.

In order to arrive at the most conservative estimate of the effect of the housing variable, all "control" variables and all first order interactions were included in the model, irrespective of whether they proved to be statistically significant in their association with the dependent variable.

In the summary tables below, the main results are presented in two columns. The first shows unadjusted deviations from the overall mean, for each category of the childhood housing variable. The

second shows the adjusted values after allowing for the other independent variables in the analysis.

Of course, when, as for that between type of accommodation and net family income, the initial relationship did not reach statistical significance at the 5% level, then the multivariate stage was not carried out.

It will also be noticed that no figures are presented for the "other" category of the housing variables. These were omitted from the multivariate analyses, on the grounds that they were usually small and with results close to the general mean (see Appendix tables), and in any case without any coherent meaning.

Although two-way interactions were included in all analyses of the continuous variables, in very few cases were they statistically significant, and none of these involved a childhood housing variable. Therefore the contrasts associated with the housing variables can be taken to be reasonably stable across categories of the other independent variables in the analyses.

Net Family Income

Summary table 2.1 presents the deviation coefficients for each category of the childhood housing variables, from the set of

analyses with net family income as the dependent variable. As this variable is expressed in pounds per week, interpretation of the table is straightforward. For example, if we consider the figures for the first childhood housing variable, tenure, the raw mean difference between those whose families were owner occupiers throughout their childhood and those who were LA tenants throughout amounts to £1.91 (the difference between -0.49 and -2.40). The largest contrast is with the "upwardly mobile" group, who were not in owner occupied homes when they were seven but were so by the time of the 16-year follow-up, whose net family income was an average of £9.21 higher than those who grew up in LA tenancies.

These differences associated with childhood tenure were significant at the 1% level, and remained so after allowing for the control variables. This did produce changes in some contrasts, in particular between the owner occupiers and tenants, where the difference in average net income was reduced to a trivial 14 pence.

ANALYSES SUMMARY 2.1

Dependent Variable = Net Family Income (pounds per week)

Childhood housing variables and categories	Unadjusted deviation from grand mean	Adjusted deviation
TENURE:		
O.O. at 7,11 & 16	-0.49	-1.39
Tenant at 7,11 & 16	-2.40	-1.25
Not O.O. 7, O.O. 16	6.81	7.07
O.O. 7, not 16	0.82	1.21
Probability level of F statistic	<.01	<.01
TYPE OF ACCOMMODATION:		
Whole house 7,11 & 16	0.0	
Not whole 7,11 & 16	-0.5	
Not whole 7, whole 16	1.7	
Whole 7, not 16	-2.8	
Probability level of F statistic	N.S.	

CROWDING:

Not Crowded 7,11 & 16	1.96	1.77
Crowded 7,11 & 16	-4.66	-4.33
Crowded 7, not 16	0.01	0.11
Not at 7, Crowded at 16	-2.03	-1.77
Probability level of F statistic	<.001	<.05

AMENITIES:

Amenities at 7,11 & 16	0.49	0.38
Shared etc at 7,11 & 16	-1.39	-0.97
Amenities at 7, not at 16	-2.22	-1.69
Not at 7, amenities at 16	-1.98	-1.82
Probability level of F statistic	<.01	N.S.

Type of accommodation did not show a significant relationship with net family income, even at the simple level. Differences were very small, particularly between the two largest, stable groups.

Overcrowding in childhood, on the other hand, showed the largest contrast between these two groups. Even after allowing for other aspects of social background in childhood, those who grew up in uncrowded homes had average net incomes at 23 over £6.50 higher than those who grew up in crowded homes. Those whose circumstances in this respect changed between seven and sixteen occupy intermediate positions, with those who moved out of overcrowding having higher incomes than those whose crowding situation had deteriorated.

Amenities in childhood had a much less strong relationship with net income, as evidenced by both the smaller mean differences and the fact that these were no longer significant after allowing for other background circumstances.

Although some fairly substantial differences have been found, particularly in relation to childhood tenure and crowding, these patterns are not easily interpreted. The simple measure of net family income takes no account of how many are contributing to, or having to be sustained by, that income. It therefore cannot be easily related to how well off that individual or family is, particularly when we suspect, and will have confirmed later in this report, that groups with different childhood housing experiences will differ in their likelihood of being married and having children. A better insight into general material circumstances is given by the next dependent variable discussed.

Equivalent Family Net Income

This variable weights the net income considered above to take into account the number and ages of the family members. It is based on Supplementary Benefit calculations of the relative needs of adults and children of various ages.

Summary table 2.2 presents the deviation coefficients for this outcome.

ANALYSES SUMMARY 2.2

Dependent Variable = Equivalent Net Family Income (pounds per week)

Childhood housing variables and categories	Unadjusted deviation from grand mean	Adjusted deviation
TENURE:		
O.O. at 7,11 & 16	6.77	3.87
Tenant at 7,11 & 16	-9.76	-5.84
Not O.O. 7, O.O. 16	3.12	3.00
O.O. 7, not 16	-11.53	-8.81
Probability level of F statistic	<.001	<.001
TYPE OF ACCOMMODATION:		
Whole house 7,11 & 16	-0.2	
Not whole 7,11 & 16	4.2	
Not whole 7, whole 16	0.6	
Whole 7, not 16	0.0	
Probability level of F statistic	NS	

CROWDING:

Not Crowded 7,11 & 16	7.04	5.04
Crowded 7,11 & 16	-13.49	-10.33
Crowded 7, not 16	-2.79	-1.25
Not at 7, Crowded at 16	-8.07	-6.08
Probability level of F statistic	<.001	<.001

AMENITIES:

Amenities at 7,11 & 16	1.81	0.97
Shared etc at 7,11 & 16	-11.09	-6.79
Amenities at 7, not at 16	-7.33	-3.65
Not at 7, amenities at 16	-4.66	-3.12
Probability level of F statistic	<.001	NS(=.09)

In fact the pattern of these results is similar to that found for net family income, except that where significant differences are found they are more marked.

For example, after allowing for other social factors, those who grew up in owner occupation are on average the equivalent of almost £10 per week better off than those who grew up in Local Authority homes. Even worse off - about £3 per week behind the tenants - are those who moved out of owner occupation during their childhood.

As with net family income, even stronger contrasts, at least between the two most extreme groups, are found in relation to crowding in childhood.

Also as found for the previous variable, whether or not the cohort member grew up in a whole house is not associated with 23-year income. Similarly the relationship of amenities in childhood is no longer significant after allowing for the control variables, although in this case it is close to borderline and the actual contrasts are not small.

Age of Marriage

The third and final continuous variable analysed was the individual's age at the time of their marriage. This analysis was restricted to those who had been married by the age of twenty-three, just under half the number in fuller analyses.

In summary table 2.3 the coefficients represent months, so that the differences between any pair can be translated as the average difference in months between the groups concerned in their age at the time they were married.

ANALYSES SUMMARY 2.3

Dependent Variable = Age at Marriage (months)

Childhood housing variables and categories	Unadjusted deviation from grand mean	Adjusted deviation
TENURE:		
O.O. at 7,11 & 16	3.68	2.14
Tenant at 7,11 & 16	-4.11	-2.34
Not O.O. 7, O.O. 16	1.70	1.03
O.O. 7, not 16	-3.26	-2.38
Probability level of F statistic	<.001	<.001
TYPE OF ACCOMMODATION:		
Whole house 7,11 & 16	0.22	0.10
Not whole 7,11 & 16	3.30	3.83
Not whole 7, whole 16	-2.85	-1.75
Whole 7, not 16	-2.57	-2.20
Probability level of F statistic	<.01	NS(=.13)

CROWDING:

Not Crowded 7,11 & 16	2.96	1.93
Crowded 7,11 & 16	-3.48	-2.02
Crowded 7, not 16	-2.27	-1.67
Not at 7, Crowded at 16	-3.04	-2.16
Probability level of F statistic	<.001	<.001

AMENITIES:

Amenities at 7,11 & 16	0.64	0.22
Shared etc at 7,11 & 16	-2.23	-0.70
Amenities at 7, not at 16	-1.89	-0.14
Not at 7, amenities at 16	-4.75	-4.70
Probability level of F statistic	<.001	N.S.

The differences in age of marriage according to previous family housing experiences are not in fact found to be very large. For both amenities and type of accommodation they cease to reach statistical significance once other factors are taken into account. For both the other housing variables the most extreme contrast amounts to about four months.

In itself this does not seem a difference of any great practical import, and is therefore difficult to interpret without also knowing about differences in the likelihood of being married at all. We shall therefore return to this when that analysis is dicussed.

Categorical Outcome Variables

As has been described, the method of analysis used to examine the remainder of the dependent variables was loglinear analysis of the same kind as for the first part of the project. If there had been no technical constraints, it would have been desirable to follow essentially the same model as for the continuous dependent variables, that is to estimate the contrasts associated with the childhood housing variable after allowing for all the control variables and first-order interactions. However this was not possible because of the number of cells in the underlying table and the presence of significant interactions.

It was therefore necessary to adopt a strategy to reduce the number of variables, and this was done in the same way as for the comparable analyses in the first part of the project. Firstly, 'control' variables which did not reach the 5% significance level in their simple association with the dependent variable were omitted from the multivariate analysis. Then those which did not do so in the multivariate analysis were dropped, so that parameter estimates were finally produced from analyses which included only significant main effects and significant interactions with the childhood housing variable or sex or both.

In addition, the 'other' category of each of the childhood housing variables was omitted from the multivariate analyses, for the same reasons as described in the previous section.

The presentation of the results of these analyses requires some explanation, as this differs from those presented previously. Although the result of interest is again the contrast between two categories (of the childhood housing variable) expressed as relative odds, the results have not been presented in exactly this way. This is because of the presence of significant interactions in many of the analyses. Since this means that the relative odds of interest differ across the categories of another variable, each possible contrast would have to be calculated and presented separately, resulting in long strings of indigestible figures.

Instead it is more economical to present the coefficients from which any contrast of interest can be calculated relatively easily. For consistency, this has been done even where significant interactions were not found.

To make this more concrete, we shall work through the arithmetic of the first summary table below in some detail.

Self-rated health at 23

The figures in the table below, Analyses Summary 2.4, give the results for the outcome variable of self-rated health at 23. This is a dichotomous variable: excellent or good; fair or poor.

The first section of the table, (a), gives the results for tenure in childhood. The final model in this analysis comprised only sex and tenure in childhood. In other words, none of the other variables were significant in the multivariate analysis, no significant interactions were found in this example, and so the tenure contrasts are adjusted for the relationship with sex alone.

The relative odds of rating ones health as excellent or good between the tenure categories can be calculated from the numbers in the first row. For example, those from owner-occupied homes throughout their childhood compared with those from tenanted homes throughout are 1.78 (i.e. 1.6 : 0.9) times more likely to rate their health relatively highly. The most extreme contrast is between the consistently owner occupiers and those who moved from owner occupation to being tenants during their childhood, the former being more than twice as likely (1.6 : 0.7) to rate their health relatively positively.

The same procedure can be followed for the next row, in order to calculate relative odds of rating ones health as fair or poor. As would be expected, the patterns here are broadly though not exactly the converse of those in the first row.

It is important to note that this procedure cannot be followed down columns as well as along rows. It would not be legitimate to use these coefficients to calculate, for example, the relative odds of having grown up in a certain tenure, contrasting one health group with the other.

The next section of this table indicates that type of accommodation in childhood did not prove to be significantly related to this outcome, so no further results are presented beyond the two-way tables in the appendix.

ANALYSES SUMMARY 2.4 Coefficients for calculating relative odds

Dependent variable: Self-rated health at 23

a) Tenure in Childhood

	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
<u>Self-rated health</u>				
excellent/good	1.6	.9	1.0	.7
fair/poor	.6	.9	1.0	1.4
Model=Tenure in childhood, sex				N=5507

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
excellent/ good	1.3	.8	.8	1.2
fair/poor	.8	1.3	1.2	.8
Model= Crowding in childhood, sex, parents' education.				N= 5579

d)

	<u>Amenities in Childhood</u>			
	Present 7,11,16	Lacking/shared 7,11,16	Not 7 Present 16	Present 7 Not 16
<u>excellent/ good</u>				
Neighbourhood:				
Deprived	1.3	1.0	1.2	.7
Best off	.02	900000	.01	.004
Other	1.2	.8	1.0	1.1
<u>fair/poor</u>				
Deprived	.8	1.0	.8	1.5
Best off	56.9	.0000001	70.7	230.0
Other	.9	1.2	1.0	.9

Model= Amenities in Childhood, sex, parents' education, neighbourhood, neighbourhood X amenities N=5700

crowding in childhood, in the same way as those in section (a) for tenure. The model this time includes parents' education as well as sex and the crowding variable. Thus the crowding contrasts are adjusted for both sex and parents' education.

Again it is the relatively advantaged, not crowded at any of the three follow-ups, who are best off, being 1.6 (1.3:0.8) times more likely to rate their health highly than both those who were crowded each time and those whose crowding circumstances improved. On the

other hand the contrast with those who moved into crowded circumstances is only marginal (1.3:1.2).

In the final section of the table, (d), we encounter the first interaction. In this analysis, of amenities in childhood, the other significant factors in the final model are sex, parents' education, neighbourhood, and the interaction between neighbourhood and amenities in childhood. That is to say that the contrasts in self-rated health at 23 associated with amenities in childhood differ according to the type of neighbourhood in which the cohort member grew up.

The rather extreme looking figures in the table make it immediately apparent where this interaction arises. There is some contrast between the 'deprived' neighbourhoods and the 'other' group, but the dramatic contrast is between them and those who grew up in the best off neighbourhoods. In general those who grew up with good amenities are most likely to rate their health highly, but the differences are not very great for those from deprived or 'other' neighbourhoods. For those from best off neighbourhoods, however, the differences are much greater.

Those who grew up in homes with adequate amenities are twice as likely to rate their health highly as those whose circumstances improved (0.02:0.01), and 5 times more likely than those whose circumstances deteriorated (0.02:0.004). The coefficients associated with lack of amenities in best off areas are dramatically strange,

but this results from a totally empty cell. There were in fact no children with poor amenities and living in best off areas who rated their health as poor or fair. Nevertheless it is reasonable to conclude that the disadvantages for subsequent feelings about ones health associated with having grown up with inadequate amenities appear to be greater if experienced in the contrasting setting of a well off neighbourhood.

Thus, of the childhood housing variables, the strongest relationship with self-rated health at 23 appears to be for tenure, the main contrast being between those who were in owner-occupied homes at 7, 11 and 16 and the rest.

For tenure and the other two housing variables which are related to self-rated health it is consistently those who were best off in childhood (owner occupiers, not crowded, adequate amenities) who rate their health most highly, and the consistently more disadvantaged who rate their health as poorer. However the relationships are less consistent for those whose childhood circumstances were less stable. For example, those who were tenants at 7 but owner occupiers at 16 rate their health as better than those who showed the opposite change. On the other hand, those who moved out of crowded circumstances between 7 and 16 gave poorer health ratings than those whose situation deteriorated in this respect. Amenities show an even less consistent pattern in that the contrasts between those who experienced change differ according to

the neighbourhood characteristics, although for two of the three kinds of areas there is the expected pattern of good health being associated with improved circumstances.

Malaise Inventory Score

The malaise inventory is a 24 item screening instrument, devised to detect increased likelihood of being depressed.

Table 2.5 gives the coefficients from the analysis of this variable.

ANALYSES SUMMARY 2.5 Coefficients for calculating relative odds

Dependent variable: Malaise Score at 23

a) Tenure in Childhood

	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
<u>Malaise Score</u>				
low/not 'depressed'	1.5	.8	1.1	.8
high/ 'depressed'	.7	1.3	.9	1.3
Model=Tenure in childhood, sex				N=5496

b) Type of Accommodation in Childhood

	Whole house 7,11,16	Not whole 7,11,16	Not 7 Whole 16	Whole 7 Not 16
low	1.4	1.2	.8	.8
high	.7	.9	1.3	1.3
Model= Accommodation in childhood, sex				N=5715

c)

Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
<u>low</u>				
Men	1.4	.5	1.1	1.2
Women	1.3	.8	1.0	.9
<u>high</u>				
Men	.7	1.9	.9	.8
Women	.8	1.2	1.0	1.1

Model= Crowding in childhood, sex, social class,
sex X social class, crowding X sex

N= 5710

d)

Amenities in Childhood

NOT SIGNIFICANT

Amenities in childhood are not found to be related to the malaise inventory score.

High malaise scores (i.e. a greater likelihood of depression) are found least frequently among those who were consistently in owner occupied homes and in whole houses. For both these variables there is a suggestion of higher scores for those whose circumstances changed, or were disadvantaged throughout.

For crowding in childhood, there is an interaction with sex. This is largely due to the higher relative likelihood of high malaise scores of men who were in tenanted homes through their childhood. Otherwise the broad pattern is of lower scores for those not crowded, but only a little lower than those who experienced change.

Highest Educational Qualification

Among the results presented in table 2.6, those for the tenure analysis take into account three relevant and significant interactions, with social class, sex and parents' education. It is therefore necessary to present three sets of coefficients in order to demonstrate how the contrasts associated with tenure vary in relation to each of these variables.

ANALYSES SUMMARY 2. 6 Coefficients for calculating relative odds

Dependent variable: Highest Educational Qualification

a)

	<u>Tenure in Childhood</u>			
<u>Highest Qual</u>	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
<u>A-level +</u>				
NonManual	2.4	.5	1.1	.8
Manual	1.9	.5	1.5	.7
<u>O-level</u>				
NonManual	.9	1.3	1.0	.8
Manual	1.3	1.0	1.0	.8
<u><O-level</u>				
NonManual	.5	1.5	.9	1.7
Manual	.4	1.9	.8	1.6
<u>A-level+</u>				
Male	2.0	.7	1.1	.7
Female	2.2	.4	1.5	.8
<u>O-level</u>				
Male	1.1	1.1	.9	1.0
Female	1.1	1.3	1.0	.8
<u><O-level</u>				
Male	.5	1.4	1.0	1.6
Female	1.5	2.1	.7	1.7

A-level+

Neither parent stayed on	1.9	.7	1.1	.7
Did stay on	2.3	.4	1.6	.7

O-level

Neither parent stayed on	.9	1.0	1.1	1.0
Did stay on	1.3	1.3	.8	.7

<O-level

Neither parent stayed on	.6	1.5	.9	1.4
Did stay on	.3	1.9	.8	1.9

Model=Tenure in childhood, social class, sex,
 parents' education, neighbourhood,
 tenure X social class, tenure X sex,
 tenure X parents' education

N=5200

b) Type of Accommodation in Childhood

	Whole house 7,11,16	Not whole 7,11,16	Not 7 Whole 16	Whole 7 Not 16
<u>A-levels +</u>				
Male	1.7	1.0	.8	.8
Female	.9	.9	1.0	1.2
<u>O-levels</u>				
Male	.8	1.0	1.1	1.1
Female	1.2	1.1	1.2	.6
<u><O-levels</u>				
Male	.7	1.1	1.1	1.5
Female	.9	1.0	.8	1.0

Model= Type of accommodation, social class, sex
neighbourhood, social class X sex,
accommodation X sex

N= 5667

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
<u>A-levels +</u>				
Neither parent stayed on	1.5	.7	1.0	1.1
Did stay on	2.1	.6	1.0	.8
<u>O-levels</u>				
Neither parent stayed on	1.2	.7	.9	1.3
Did stay on	1.2	.8	1.1	1.0

<O-levels

Neither parent stayed on	.6	2.0	1.1	.7
Did stay on	.4	2.1	.9	1.3

Model = Crowding in childhood, social class, sex, parents' education, Neighbourhood, social class X sex, crowding X parents' education N=5459

d)

Amenities in Childhood

	Present 7,11,16	Lacking/shared 7,11,16	Not 7 Present 16	Present 7 Not 16
<u>A-level +</u>				
NonManual	1.2	1.1	.5	1.3
Manual	1.4	1.2	.9	.6
<u>O-level</u>				
NonManual	1.1	.8	1.4	.8
Manual	1.0	.8	1.1	1.3
<u><O-level</u>				
NonManual	.6	1.1	1.4	1.0
Manual	.7	1.1	1.0	1.3

Model= Amenities in childhood, social class, sex, parents' education, neighbourhood, social class X sex, sex X neighbourhood, amenities X social class N= 5643

Clearly, interpretation of the relationship between childhood tenure and examination attainment is not easy when the final model proves to be so complex. Nevertheless, if we concentrate on the relative odds of gaining the highest qualifications level - A-levels, their

equivalent, or above - a pattern does become discernible. In the first place there is the familiar contrast between those who grew up in owned homes and those who grew up in tenanted homes, with those who changed occupying an intermediate position. However, the superiority of the first group in their attainment is greater if they experienced other advantages. For example, the owner occupiers from nonmanual backgrounds are almost five times as likely (2.4 : .5) to obtain high qualifications as the tenants from the same social class; whereas the comparable ratio for those from manual backgrounds is less than four (1.9 : .5). Similarly, if at least one parent stayed at school beyond the minimum leaving age, owners are nearly six times more likely to have high qualifications (2.3 : .4), compared to less than three (1.9 : .7) when both parents left at the minimum age. Interestingly there is a similar advantage for women compared to men.

Although the exact contrast again varies according to other characteristics, those whose families moved into owner occupation are about twice as likely to have high qualifications as those who were downwardly mobile in their tenure.

The pattern found for type of accommodation is somewhat surprising, in that this is hardly associated at all with the qualifications achieved by women, but more so for men. However, this association is much weaker than that for childhood tenure.

This is also true for crowding, although it is more consistently in the expected order. The one interaction, with parents' education follows the same pattern of cumulative advantage as for tenure.

This is not the case though for the amenities result. The interaction with social class is largely due to the reversal of the contrast between the two groups whose access to amenities changed. In addition, the contrast between those with and without amenities in their odds of having high qualifications, though in the expected direction, is relatively small (but note that the converse contrast in the likelihood of having only low or no qualifications is slightly greater).

Social Class of Current or Most Recent Occupation

Social Class at 23 has been used with four categories so that the coefficients in table 2.7 enable the calculation of the relative odds for each of these.

ANALYSES SUMMARY 2.7 Coefficients for calculating relative oddsDependent variable: Social class at 23

a) Tenure in Childhood

<u>Social class</u>	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
Prof/Inter	1.8	.5	1.2	1.0
Skill NM	1.6	1.0	1.2	.5
Skill M	.8	1.3	1.0	.9
Semi/Unskill	.4	1.7	.7	2.0

Model=Tenure in childhood, sex, social class,
parents' education, neighbourhood, sex X neighbourhood

N=5006

b) Type of Accommodation in Childhood

	Whole house 7,11,16	Not whole 7,11,16	Not 7 Whole 16	Whole 7 Not 16
Prof/Inter	1.2	.8	1.0	1.0
Skill NM	.8	1.5	1.1	.7
Skill M	1.1	1.2	1.1	.7
Semi/Unskill	.9	.7	.8	1.9

Model= accommodation in childhood, social class, sex,
parents' education, neighbourhood,
sex X parents' education

N=5460

c)

Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
Prof/Inter	1.5	.6	1.8	1.1
Skill NM	1.5	.7	.9	1.0
Skill M	.8	1.2	1.0	1.0
Semi/Unskill	.5	1.8	1.1	.9

Model= crowding, social class, sex,
parents' education, neighbourhood,
sex X parents' education

N= 5262

d)

Amenities in Childhood

	Present 7,11,16	Lacking/shared 7,11,16	Not 7 Present 16	Present 7 Not 16
<u>Prof/Inter</u>				
Men	1.4	1.3	1.1	.9
Women	1.4	.8	.9	1.1
<u>Skill NM</u>				
Men	1.0	1.1	1.0	.9
Women	1.7	.6	1.6	.6
<u>Skill M</u>				
Men	.8	1.3	1.3	.9
Women	.6	1.6	.4	2.9
<u>Semi/Unskill</u>				
Men	.8	1.0	.9	1.3
Women	.9	1.5	1.6	.5

Model= Amenities, social class, sex,
parents' education, neighbourhood,
amenities X sex

N= 5438

Although all four childhood housing variables are related in the expected direction to occupational class in early adulthood, the association is stronger for tenure and crowding than for type of accommodation or amenities.

The groups whose housing changed during childhood show very heterogeneous patterns. However, the particularly high likelihood of semi or unskilled jobs among those who were downwardly mobile with respect to tenure and type of accommodation is noteworthy. In fact, the pattern is not so dissimilar for the amenities variable, if one takes into account the different distribution of social class for women's occupations. It may be that the effect of classification differences between the sexes accounts for at least some of the sex and amenities interaction.

Whether Unemployed at 23

The first unemployment variable considered is based on the simple dichotomy of whether or not the individual was in work at the time of the 23-year follow-up. These analyses are however restricted to those in the labour force; and thence the reduced sample sizes in table 2.8.

ANALYSES SUMMARY 2.8 Coefficients for calculating relative odds

Dependent variable: Whether unemployed at 23

a) Tenure in Childhood

<u>Whether unemployed</u>	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
employed	1.6	.9	1.3	.6
unemployed	.6	1.2	.8	1.7

Model=Tenure in childhood, sex N= 4648

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
employed	1.5	.7	1.1	.9
unemployed	.7	1.5	.9	1.1

Model= crowding, neighbourhood N= 4813

d) Amenities in Childhood

NOT SIGNIFICANT

The links between childhood housing and current unemployment at 23 are generally weaker than we have seen for other outcomes, type of

accommodation and amenities failing to reach significance.

Nevertheless, among those in the labour market, those who grew up in tenant families are twice as likely to be unemployed at 23 as those from owner occupying backgrounds, and the group most likely to be unemployed are those who moved out of owner occupation during childhood.

Growing up in an overcrowded home also approximately doubles the odds of being unemployed at this age.

Proportion of time unemployed since leaving school

This variable can be expected to give a more long-term assessment of labour market difficulties than the previous one, although it is also more likely to be affected by the inter-relationship between secular trends and age of entry into the labour market.

ANALYSES SUMMARY 2.9 Coefficients for calculating relative odds
 Dependent variable: Proportion of time unemployed

a)	<u>Tenure in Childhood</u>			
	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
<u>Time unemployed</u>				
<u>None</u>				
<u>Neighbourhood</u>				
Deprived	1.2	.6	1.3	.9
Best off	1.3	.9	1.6	.5
Other	1.3	1.4	.8	.8
<u>-10%</u>				
Deprived	1.1	1.5	1.2	.5
Best off	.7	.9	.6	3.0
Other	1.1	1.0	1.2	.8
<u>>10%</u>				
Deprived	.7	1.0	.6	2.1
Best off	1.1	1.3	1.1	.6
Other	.7	.7	1.1	1.7

Model=Tenure in childhood, neighbourhood,
 neighbourhood X tenure

N=5371

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
<u>None</u>				
Men	1.3	.5	1.0	1.1
Women	1.2	1.0	.9	.9
<u>-10%</u>				
Men	.9	1.1	1.0	1.0
Women	.9	.8	1.0	1.3
<u>>10%</u>				
Men	.7	1.4	1.0	1.0
Women	.9	1.2	1.1	.8

Model= crowding, sex, neighbourhood,
sex X neighbourhood, sex X crowding

N=5655

d) Amenities in Childhood

NOT SIGNIFICANT

As for current unemployment, it is only tenure and crowding which prove to be related to the proportion of time unemployed up to the age of twenty-three. Of the tenure groups, it is the downwardly mobile who have the highest odds of high unemployment and the lowest odds of not having experienced unemployment at all. The upwardly

mobile appear to be generally as well protected from unemployment as the owner occupiers.

The interaction with the neighbourhood variable appears to suggest that contrasts in unemployment experience between the tenure groups are slightly more marked in more deprived areas, a pattern we have seen in relation to other outcomes.

For childhood crowding the interaction is with sex. It appears that men from crowded conditions have higher relative odds of more unemployment than women. In general these contrasts are smaller than those related to childhood tenure.

Partnership Status

We now move on to a group of variables related to marriage and family formation. The first of these is partnership status at 23. It is important to stress that it is current status: those previously married are categorised as single, married or cohabiting, according to their situation at the time of interview.

ANALYSES SUMMARY 2.10 Coefficients for calculating relative odds

Dependent variable: Partnership Status at 23

a) Tenure in Childhood

<u>Partnership status</u>	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
single	1.8	.9	.9	.7
married	.8	1.1	1.0	1.2
cohabiting	.7	1.1	1.1	1.1

Model=Tenure in childhood, sex ,parents' education, neighbourhood N=5252

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
single	1.3	.8	.9	1.0
married	.9	.9	.8	1.4
cohabiting	.8	1.3	1.3	.8

Model= crowding, social class, sex, parents' education, neighbourhood N=5458

d)

Amenities in Childhood

	Present 7,11,16	Lacking/shared 7,11,16	Not 7 Present 16	Present 7 Not 16
single	1.4	.7	1.1	.9
married	1.0	1.0	1.1	.9
cohabiting	.7	1.5	.8	1.2

Model= amenities, social class, sex, parents' education, neighbourhood, sex X parents' education N=5642

Given findings reported earlier it would have been surprising not to find a fairly strong association between childhood tenure and partnership status. In the event this appears mainly as a differentiation between those who were in owner occupied homes at all three NCDS stages and the rest. They are about twice as likely to be single and living without a partner, and about 50% less likely to be married or cohabiting, compared with the other tenure groups - among which there is little variation.

The pattern in relation to childhood crowding is somewhat similar, except that those who moved into crowded circumstances later in their childhood years have notably the highest odds of being married, and are no more likely to be cohabiting than are those who were never crowded.

If we consider these results in conjunction with those on age of marriage in table 2.3, we have a very clear indication of the later entry into marriage of those who grew up in owner occupation. Growing up in a whole house on the other hand is not related to either whether married or age of marriage by 23. Crowding and amenities are, but less strongly than tenure.

Number of children

As the formation of stable partnerships and child bearing are not totally unrelated we might expect the findings for this outcome to follow a similar pattern to those for partnership status. From table 2.11 we can see that this is broadly the case, although generally the contrasts appear somewhat stronger.

ANALYSES SUMMARY 2.11 Coefficients for calculating relative odds

Dependent variable: Number of children by 23

a) Tenure in Childhood

<u>Number of children</u>	O.D. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.D. 16	O.D. 7 Tenant 16
0	2.1	.7	1.3	.5
1	1.1	1.1	1.1	.7
2+	.4	1.3	.7	2.6

Model=Tenure in childhood, sex , parents' education,
Neighbourhood.

N=5253

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c)

Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
<u>None</u>				
<u>Parents ed</u>				
neither stayed	1.3	.7	.9	.9
did stay on	2.6	.7	1.6	.4
<u>One</u>				
neither stayed	.9	1.0	.9	1.2
did stay on	.9	.8	.9	1.5
<u>Two or more</u>				
neither stayed	.6	1.8	1.2	.9
did stay on	.4	1.5	.7	2.0

Model= crowding, social class, sex, parents' education, neighbourhood, social class X sex, crowding X parents' education N=5459

d)

Amenities in Childhood

	Present 7,11,16	Lacking/shared 7,11,16	Not 7 Present 16	Present 7 Not 16
0	1.4	1.0	.9	.8
1	1.0	1.0	1.2	.8
2+	.7	1.0	.9	1.6

Model= amenities, sex, parents' education, neighbourhood N= 5705

Those who grew up in owned homes are three times more likely not to have had any children by the age of 23 than those who grew up as tenants, and conversely three times less likely to have had two or more children. The downwardly mobile group are the most likely to

have relatively large families by this age, being twice as likely even as those who grew up as tenants to have had two or more children.

Crowding proved to have a significant interaction with parents' education, with a similar pattern to what we have seen for several other outcomes: those never crowded were likely to have fewer children, but this was particularly so for those who themselves were the children of more educated parents.

Amenities showed a similar, but less strong, relationship with number of children as did tenure. Type of accommodation showed no significant relationship.

Age at Birth of First Child

The coefficients in table 2.12 are of course based only on those who had had a child by the age of 23, giving an analysis sample about one quarter the size of most. This may contribute to the failure of either type of accommodation or amenities to reach statistical significance in these analyses; but the contrasts in relation to the other two housing variables are also not very large.

ANALYSES SUMMARY 2.12 Coefficients for calculating relative odds

Dependent variable: Age at birth of first child

a) Tenure in Childhood

<u>Age</u>	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
-19	.8	1.3	.8	1.3
20+	1.3	.8	1.3	.8

Model=Tenure in childhood, sex

N= 1247

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
-19	.9	1.4	1.2	.7
20+	1.2	.7	.8	1.5

Model= crowding, sex

N= 1375

d) Amenities in Childhood

NOT SIGNIFICANT

The tenure contrast is between two pairs of groups; on the one hand, the owner occupiers and those who moved into owner occupation, and, on the other hand, the tenants and those who became tenants - the latter being about 60% more likely than the former to have had their first baby by the age of nineteen.

Surprisingly, although the ratio is about the same with respect to crowding, the dichotomy is between those never crowded plus the downwardly mobile versus those crowded throughout plus the upwardly mobile.

Tenure

The remaining outcome variables to be examined are all concerned with aspects of housing experience in early adulthood. We would expect, based on the results in the previous chapter and what we have just seen in relation to partnerships and childbirths, that life cycle issues will again loom large here - that the results will be very much affected by the propensity of young adults of different social origins to pass through the stages of leaving home, entry into the labour market, marriage etc at very different rates.

This is confirmed by the results for the first housing outcome, tenure at 23, summarised in table 2.13.

ANALYSES SUMMARY 2.13 Coefficients for calculating relative odds

Dependent variable: Tenure at 23

a)

	<u>Tenure in Childhood</u>			
<u>Tenure at 23</u>	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
Owner Occ	1.3	.7	1.4	.8
LA/HA	.4	1.9	.7	1.8
Other Indep	.9	.9	1.0	1.2
Not Indep	1.9	.9	.9	.6

Model=Tenure in childhood, sex , social class,
parents' education, neighbourhood

N=5192

b)

Type of Accommodation in Childhood

	Whole house 7,11,16	Not whole 7,11,16	Not 7 Whole 16	Whole 7 Not 16
<u>O.O.</u>				
Male	1.4	.8	.9	.9
Female	1.2	.7	1.2	1.0
<u>LA/HA</u>				
Male	.7	.9	1.5	1.0
Female	.7	1.9	.6	1.2
<u>Ind Other</u>				
Male	.8	1.3	.6	1.5
Female	1.0	.7	1.2	1.0
<u>Not Ind</u>				
Male	1.2	1.0	1.2	.7
Female	1.1	1.0	1.0	.8

Model= accommodation, sex, social class,
parents, education, neighbourhood,
accommodation X sex

N=5657

c)

Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
O.O.	1.5	.6	.9	1.3
LA/HA	.5	2.0	1.1	1.0
Ind Other	1.0	1.1	1.0	1.0
Not Ind	1.4	.8	1.0	.8

Model= crowding, sex, social class, parents' education, N=5450
neighbourhood, ses X parents' education

d)

Amenities in Childhood

	Present 7,11,16	Lacking/shared 7,11,16	Not 7 Present 16	Present 7 Not 16
<u>O.O.</u>				
NonMan	1.2	1.2	.9	.7
Man	1.2	.9	1.0	.9
<u>LA/HA</u>				
NM	.3	1.8	1.1	1.8
M	.8	1.2	1.1	1.0
<u>Ind Other</u>				
NM	1.3	.7	1.0	1.1
M	.7	1.1	.8	1.6
<u>Not Ind</u>				
NM	1.8	.7	1.1	.7
M	1.5	.8	1.2	.7

O.O.

Neighbourhood

Deprived	1.0	.8	.4	3.3
Best off	3.2	1.5	1.2	.2
Other	.7	.9	1.9	.8

LA/HA

Deprived	.6	1.4	1.5	.7
Best off	.4	1.0	1.0	2.3
Other	.4	2.2	1.4	.8

Ind Other

Deprived	1.3	1.1	2.4	.3
Best off	.5	.5	.6	6.1
Other	1.4	1.2	.5	1.3

Not Ind

Deprived	1.2	.8	.8	1.4
Best off	1.5	1.2	1.4	.4
Other	2.5	.5	.8	1.1

Model= amenities, social class, sex,
 parents' education, neighbourhood,
 amenities X social class,
 amenities X neighbourhood

N= 5633

Those who themselves grew up in owner occupied homes, together with those who moved into them during their childhood, are about twice as likely to be owner occupiers at the age of 23. Conversely, those who

grew up as tenants and the downwardly mobile (in their childhood tenure) are up to five times as likely to be LA or HA tenants at 23. It is perhaps surprising that these relationships are not even stronger - until we notice that the childhood owner occupiers are also more than twice as likely not yet to be in independent households. In other words, many of them are still at home with their parents and have not yet attained their own long-term adult tenure.

Similar, but generally fairly weak relationships are found with the type of accommodation in which these people grew up. The most notable contrasts relate to the likelihood of being an LA/HA tenant at 23, where not only are there marked differences according to whether an individual grew up in a whole house, but these differ according to sex. Specifically, women who grew up in flats or shared houses are particularly likely to be LA/HA tenants at 23, but this pattern does not appear for men.

Crowding in childhood produces very similar patterns to those for tenure, with those not crowded being most likely to be owner occupiers at 23 but also to be not yet in an independent household.

The relationship of the amenities variable with tenure at 23 is rather complex, with two significant interactions - with social class and with neighbourhood. The social class interaction appears reasonably straightforward, showing the familiar cumulative affect

of advantage or disadvantage. For example, those who grew up with adequate amenities are generally less likely to be public tenants at 23, but particularly so if they are also from nonmanual backgrounds.

The interaction with the neighbourhood in which they grew up shows something of the same pattern, but also some dramatic and somewhat strange results for specific groups. For example it is difficult to know what to make of the finding that those whose amenities deteriorated are at least three times as likely as other groups to be owner occupiers if they came from a "deprived" area, but up to fifteen times less likely if from a better off area. There are other equally dramatic contrasts, particularly with respect to this downwardly mobile group. It is possible to speculate that these results reflect the experiences of some specific groups which our variables do not identify: for example, those who experienced family breakdown, or some ethnic minority groups. However, without further evidence, we must consider it at least as likely that we are seeing the result of fitting such a full statistical model for a dependent variable with several categories, and thus the affect of small and zero cells.

Household Status

By contrast the results from the analyses of household status are

extremely simplified, confirming that most of the complications of the tenure analyses resulted from the contrasts between owner occupiers and tenants. As we see in table 2.14, in relation to the simpler measure of whether or not the cohort member had formed an independent household, associations with childhood housing are fairly weak for tenure and crowding and not significant for type and amenities.

ANALYSES SUMMARY 2.14 Coefficients for calculating relative odds

Dependent variable: Household Status at 23

a) Tenure in Childhood

<u>Household status</u>	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
Dependent	1.3	1.0	.9	.9
Independent	.8	1.0	1.1	1.1

Model=Tenure in childhood, sex , neighbourhood N=5455

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
Dependent	1.1	.9	1.0	.9
Independent	.9	1.1	1.0	1.1

Model= crowding, sex, neighbourhood N= 5741

d) Amenities in Childhood

NOT SIGNIFICANT

Tenure Aspirations

Questions about tenure aspirations were put to those cohort members who were not already owners of or buying their home at 23. Thus the analysis samples on which table 2.15 is based are about 70% of those in most analyses.

ANALYSES SUMMARY 2.15 Coefficients for calculating relative odds

Dependent variable: Tenure Aspirations at 23

a) Tenure in Childhood

	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
<u>Hope to buy</u>				
Yes + DK	2.1	.7	.8	.8
No	.5	1.4	1.2	1.3

Model= Tenure in childhood, social class N=3723

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
Yes + DK	1.2	.8	.9	1.0
No	.8	1.3	1.1	.9

Model= crowding, sex, social class N= 3906

d) Amenities in Childhood

	Present 7,11,16	Lacking/shared 7,11,16	Not 7 Present 16	Present 7 Not 16
Yes + DK	1.4	.8	.9	1.0
No	.7	1.3	1.1	1.0

Model= amenities, sex, social class, neighbourhood N= 3988

It is not surprising to find that tenure in childhood is strongly related to tenure aspirations in adulthood, with those from owner occupier backgrounds some three times more likely to say they want to buy (or to be unsure). It was less expected that those who moved into owner occupation during their childhood were no more likely to say they wanted to buy than other groups.

Apart from type of accommodation in childhood, where the relationship did not reach statistical significance, other childhood housing variables provide a weaker echo of the pattern for tenure.

Whether on Council Waiting List

The coefficients in table 2.16 relate to a three category variable which differentiates those who said that they had never approached a council to be put on a waiting list, those who had but were not now on a waiting list, and those currently on a waiting list.

ANALYSES SUMMARY 2.16 Coefficients for calculating relative odds

Dependent variable: Whether on Council Waiting List

a) Tenure in Childhood

	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
<u>Never approached</u>				
Parents' educ:				
Neither stayed	1.8	1.9	1.0	.7
Did stay on	2.6	.8	1.1	.7
<u>Approached not on</u>				
Neither stayed	.8	.9	1.4	1.0
Did stay on	1.4	1.1	.8	.7
<u>On List</u>				
Neither stayed	.7	1.4	.7	1.5
Did stay on	.3	1.6	1.1	2.1

Model=Tenure in childhood, sex , parents' education,
sex X parents' education, tenure X parents' education

N=4455

b) Type of Accommodation in Childhood

	Whole house 7,11,16	Not whole 7,11,16	Not 7 Whole 16	Whole 7 Not 16
Never approached	1.1	1.1	.9	.9
Approached not on	1.5	.6	1.3	.8
On list	.6	1.5	.8	1.3

Model= Type of accommodation, sex, social class,
sex X social class

N=4934

c)

Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
Never approached	1.6	.7	.9	.9
Approached not on	.9	.8	1.0	1.4
On list	.8	1.6	1.1	.8

Model= crowding, sex, parents' education,
neighbourhood, sex X parents' education

N= 4592

d)

Amenities in Childhood

NOT SIGNIFICANT

Although the general relationship between childhood tenure experience and whether or not an individual had approached the council and was on a waiting list is in the expected direction, some interesting detail is added to this by the interaction with parents' education. For example, among those both of whose parents' left school at the earliest age there is little difference between those who were tenants and those who were owner occupiers in their likelihood of having approached a council. However among the offspring of more educated parents, those who grew up as tenants are more than three times as likely to have applied (i.e. the converse of 0.8:2.6 as the relative odds of never having approached

the council). In turn, among those with more educated parents tenants are five times more likely than those with owner occupier backgrounds actually to be on a waiting list (1.6: .3), compared with only twice as likely among those with less educated parents(1.4: .7). It does appear that among those whose childhood experience would make them more likely to go on to public housing (i.e. who had themselves grown up as LA tenants), the help of more educated parents increases the likelihood of achieving this goal.

In relation to type of accommodation, there is little association with whether or not a council had been approached. However, those whose childhood home was not a whole house or who moved out of a whole house during their childhood are considerably more likely to be on a waiting list now at the age of 23.

Crowding during childhood is associated with an increased likelihood both of approaching the council and of being on the waiting list, but there is no relationship with amenities in childhood.

Number of Moves since Sixteen

The final outcome examined is a measure of housing mobility. The reader will by now be alert to the fact that age of leaving the parental home, and therefore the length of the period during which moves could have taken place will vary according to social background and housing experience in childhood. The figures in table 2.17 therefore need to be interpreted with some care.

ANALYSES SUMMARY 2.17 Coefficients for calculating relative oddsDependent variable: Number of moves

a)

<u>Number of moves</u>	<u>Tenure in Childhood</u>			
	O.O. at 7,11,16	Tenant at 7,11,16	Tenant 7 O.O. 16	O.O. 7 Tenant 16
<u>None</u>				
Nonmanual	1.5	1.4	1.6	.3
Manual	1.9	1.3	.7	.6
<u>1-3</u>				
Nonmanual	.7	1.2	.8	1.5
Manual	.9	1.1	.9	1.3
<u>4+</u>				
Nonmanual	1.0	.6	.8	2.2
Manual	.6	.7	1.6	1.3

Model=Tenure in childhood, sex, social class,
parents' education, tenure X social class

N=5249

b) Type of Accommodation in Childhood

NOT SIGNIFICANT

c) Crowding in Childhood

	Not Crowded 7,11,16	Crowded 7,11,16	Crowded 7 Not 16	Not 7 Crowded 16
<u>None</u>				
Parents' ed:				
Neither stayed	1.4	.8	.9	.9
Did stay on	1.0	.9	1.4	.8
<u>1-3</u>				
Neither stayed	1.2	1.1	1.0	.7
Did stay on	.7	.9	.8	1.9
<u>4+</u>				
Neither stayed	.6	1.1	1.1	1.4
Did stay on	1.4	1.2	.9	.7

None

Neighbourhood:

Deprived	1.5	1.3	1.1	.5
Best off	1.2	.8	1.0	1.1
Other	1.0	.7	1.3	1.2
<u>1-3</u>				
Deprived	.7	.9	.9	1.9
Best off	.9	1.3	1.3	.8
Other	1.2	.8	.8	1.2
<u>4+</u>				
Deprived	1.0	.9	1.1	1.1
Best off	.9	1.0	1.0	1.2
Other	.8	1.8	.9	.7

Model= crowding, sex, social class, parents' education, N= 5456
 neighbourhood, crowding X parents' education,
 crowding X neighbourhood

d)

Amenities in Childhood

NOT SIGNIFICANT

Interestingly, the tenure analysis suggests that it is the groups who were mobile in childhood, in terms of tenure changes, who are most mobile in early adulthood, in terms of home moves. Those who moved out of owner occupation in childhood, for example, are some five times less likely not to have moved at all, if from a Nonmanual

background. The contrast is less marked for those from manual backgrounds. The same group is most likely to have made a particularly large number of moves.

The only other childhood housing variable to which mobility is related is crowding, and that in a more complex way because of interactions with both parents' education and neighbourhood. These are in fact some of the most marked interactions we have seen, in that they result in a reversal of the relationship between crowding and moves. For example, among those with more educated parents it is those who did not grow up in crowded homes who are most likely to have moved frequently, whereas they are the least likely among those whose parents left school at the minimum age (it is possible that this reflects the more turbulent housing careers of a group likely to contain a relatively high proportion who had been students).

Perhaps to a lesser extent similar patterns can be found with respect to the neighbourhood in which the cohort member grew up. Among those from deprived areas not moving at all is barely related to childhood crowding, apart from being less likely among those whose crowding deteriorated. On the other hand, those who were crowded in their childhood are more likely to have moved compared with others from better off areas.

Large numbers of moves (four or more) are related to crowding only among those who grew up in the middle category of areas, designated

neither as "deprived" nor "best off".

Some General Conclusions

The first and most obvious point to emphasise is that there has proved to be a relationship between housing in childhood and circumstances in early adulthood. Each and every one of the seventeen 'outcome' measures examined is associated with both tenure and experience of crowding during childhood, after allowing for other relevant aspects of social background during childhood, namely social class, parents' education and the quality of the neighbourhood in which the individual grew up.

This conclusion encompasses a wide range of outcomes in areas such as employment, unemployment and income; health; qualifications; partnership, marriage and family formation; and housing.

The strongest relationship in almost every area is with the tenure of the home(s) in which the cohort member grew up. In most areas the

relationship of crowding with the outcome showed a similar but less strong pattern than did tenure.

Experience of lacking or sharing basic household amenities is less strongly associated with the adult outcomes. In fact in multivariate analysis allowing for the social factors, this association did not reach the conventional level of statistical significance in relation to about half the outcomes. There is no particular coherence about the measures for which the relationship did or did not appear; no evidence of amenities being more relevant to some areas than others. This is probably best interpreted as a generally weaker relationship, rather than in any very specific way.

The same is true, but to an even greater extent, for the variable which measured whether or not the individuals had grown up in a whole house. This had generally weak associations with the outcomes, reaching statistical significance for only five of the seventeen examined.

Where significant relationships have emerged, that is particularly with regard to tenure and crowding, the major consistent contrast is most often between those who were in the most advantageous circumstances at all three NCDS childhood follow-ups and those who were consistently less advantaged. Those whose families were owner occupiers at 7, 11 and 16, and similarly those who were not in crowded homes at those ages, were more likely, compared with those

who were LA tenants (or in crowded homes) at all three ages: to be in higher status occupations at twenty- three; to have higher family incomes, particularly when family situation is taken into account; to have experienced less unemployment, both currently and since completing education; to have higher qualifications ; and to rate their health highly. They were less likely to have married and/or to have children; to have left home and formed an independent household; to be on a Council waiting list; and to have moved home frequently.

Although a fairly substantial proportion of the analyses produced significant statistical interactions - that is the contrasts associated with childhood housing varied according to the value of another variable- these were not such as to suggest any amendment to this general conclusion. On the contrary, they usually suggested that the effect of childhood housing was cumulative with other advantages or disadvantages experienced by the cohort member. To take just one example, the odds of the owner occupiers attaining qualifications equivalent to A-level or higher were even greater relative to other groups if they were from Nonmanual backgrounds, and also if at least one of their parents had continued their education beyond the minimum age.

However, it would be wrong to place too much emphasis on these interactions. They appear in about one quarter of the analyses (about one third of those where the childhood housing variable was

significant), but, other than the pattern described above, there is no particular consistent pattern to them, in terms of the housing variables or the type of outcome to which they relate.

The childhood housing variables were constructed in such a way as to make possible not only the comparison between the groups with stable housing conditions during their childhood (and it is generally between these groups that the most extreme contrasts emerged), but also with those whose circumstances changed during their childhood. This would make it possible not only to assess the effects of such changes, but also to provide some insight as to whether housing circumstances in the earlier years of childhood are more important in their long-term effects than those encountered later.

When we examine the groups which were 'mobile' with respect to their tenure and whether or not they were overcrowded, there is some variation according to the specific outcome, but it is possible to detect a general pattern across a large number of the outcomes. Firstly, the 'upwardly mobile' groups, those who moved into owner occupation or out of overcrowding between seven and sixteen, are generally intermediate between the two stable groups. If anything they more often fall closer to the group which was more advantaged throughout, but generally their outcome is near to midway between the two.

On the other hand, the 'downwardly mobile', who moved out of owner

occupation or into overcrowding in the same period, often appear to be among the worst off, close in their outcome to the consistently disadvantaged and frequently with an even poorer outcome.

Thus change in circumstances certainly appears to be of importance: those whose housing circumstances improved during their childhood are generally in better situations by twenty-three than those who shared their relatively poor starts. Those whose housing circumstances deteriorated have generally poorer outcomes than those who shared their more fortunate beginnings. The apparent extreme difficulties of this group in some respects (particularly low equivalent income, for example) make it tempting to speculate that this group are likely to have experienced some other traumatic disadvantage in childhood, such as family breakdown or loss of employment by the breadwinner.

Whatever the explanation, the difficulties of this group and the contrasts between the more stable groups confirm once again the pattern of disadvantage (and privilege) continuing from one generation to the next.

Table 1: Tenure at 23 x Social Class in Childhood

<u>Tenure 23</u>	<u>Social Class</u>					Total
	NM 7 x 16	Man 7 x 16	Man 7, NM16	NM7, M16	NMH	
Ind. Owner	536 29.1%	1090 31.3%	195 33.9%	70 25.3%	203 26.9%	2094 30.2%
Ind. LA/HA	94 5.1%	630 18.1%	73 12.7%	45 16.2%	158 20.9%	1000 14.4%
Ind. Other	239 13.0%	275 7.9%	51 8.9%	28 10.1%	87 11.5%	680 9.8%
Dependent Other	973 52.8%	1493 42.8%	256 44.5%	134 48.4%	307 40.7%	3163 45.6%
N = 100%	1842	3488	575	277	755	6937

2
 $\chi^2 = 243.2$ P < .001

Table 2: Tenure at 23 x Family Size in childhood

<u>Tenure 23</u>	<u>Family Size</u>		Total
	Three or less	Four or more	
Independent Owner	1987 31.6%	627 24.1%	2614 29.4%
Independent LA/HA	699 11.1%	584 22.5%	1283 14.4%
Independent Other	609 9.7%	256 9.8%	865 9.7%
Dependent Other	2997 47.6%	1132 43.6%	4129 46.4%
N = 100%	6292	2599	8891

$\chi^2 = 205.9$ $p < .001$

Table 3: Tenure at 23 x Sex

<u>Tenure at 23</u>	SEX		Total
	Male	Female	
Ind Owner	1125 21.3%	1943 37.0%	3068 29.1%
Ind LA/HA	585 11.1%	966 18.4%	1551 14.7%
Ind Other	482 9.1%	546 10.4%	1028 9.8%
Dependent Other	3079 58.4%	1800 34.3%	4879 46.4%
N = 100%	5271	5255	10526

²
 $\chi^2 = 650.9$ $p < .001$

Table 4: Parents' Education (Whether stayed beyond minimum leaving age)

Parents' Education

<u>Tenure at 23</u>	Neither Stayed	At Least One Stayed	Total
Ind Owner	1663 30.9%	1037 28.4%	2700 29.9%
Ind LA/HA	980 18.2%	287 7.9%	1267 14.0%
Ind Other	425 7.9%	445 12.2%	870 9.6%
Dependent Other	2313 43.0%	1886 51.6%	4199 46.5%
N = 100%	5381	3655	9036

2
 $\chi^2 = 247.4$ $p < .001$

Table 5: Tenure at 23 x Father's Unemployment

Father's Unemployment

<u>Tenure at 23</u>	In employment at 11 & 16	Unemployed at one or both	Total
Ind Owner	1722 30.3%	201 25.7%	1923 29.7%
Ind LA/HA	714 12.6%	198 25.3%	912 14.1%
Ind Other	555 9.8%	59 7.5%	614 9.5%
Dependent Other	2692 47.4%	325 41.5%	3017 46.7%
N = 100%	5683	783	6466

²
X = 93.5 p < .001

Table 6: Tenure at 23 X Neighbourhood at 16

<u>Tenure 23</u>	<u>Neighbourhood at 16</u>			Total
	Deprived	Best Off	Other	
Independent Owner	654 27.7%	709 30.6%	1683 29.4%	3046 29.3%
Independent LA/HA	519 22.0%	143 6.2%	882 15.4%	1544 14.8%
Independent Other	197 8.3%	261 11.3%	561 9.8%	1019 9.8%
Dependent Other	994 42.0%	1205 52.0%	2603 45.4%	4802 46.1%
N = 100%	2364	2318	5729	10411

2

$\chi^2 = 239.5$ $p < .001$

Table 7: Tenure at 23 X Family Income at 16 (in fifths)

<u>Tenure 23</u>	<u>Income at 16</u>					Total
	Bottom Fifth	2	3	4	Top Fifth	
Independent Owner	307 28.1%	392 28.9%	445 31.4%	385 32.7%	281 26.5%	1810 29.7%
Independent LA/HA	203 18.6%	243 17.9%	206 14.5%	125 10.6%	108 10.2%	885 14.5%
Independent Other	121 11.1%	114 8.4%	143 10.1%	102 8.7%	129 12.2%	609 10.0%
Dependent Other	460 42.2%	606 44.7%	624 44.0%	565 48.0%	541 51.1%	2796 45.8%
N = 100%	1091	1355	1418	1177	1059	6100

2
 $\chi^2 = 83.2$ $p < .001$

Table 8: Tenure at 23 X Family Income at 16 (in thirds)

<u>Tenure 23</u>	<u>Income at 16</u>			Total
	Bottom Third	Middle third	Top third	
Independent Owner	586 28.3%	636 31.9%	588 28.9%	1810 29.7%
Independent LA/HA	369 17.8%	300 15.1%	216 10.6%	885 14.5%
Independent Other	207 10.0%	188 9.4%	214 10.5%	609 10.0%
Dependent Other	907 43.8%	859 43.6%	1020 50.0%	2796 45.8%
N = 100%	2069	1993	2038	6100

2
 $\chi^2 = 55.8$ p < .001

Table 9: Social Class in Childhood X Family Income at 16 X Tenure at 23

a) N's

Tenure at 23

<u>Social Class</u>	<u>Income</u>	Ind. Owner	Ind. LA/HA	Ind. Other	Dep	Total
NM 7,16	Bottom 1/3	82	14	36	117	249
	Middle	124	21	46	171	362
	Top 1/3	193	37	98	424	752
M 7,16	Bottom 1/3	282	202	82	409	975
	Middle	358	192	93	477	1120
	Top 1/3	244	115	61	331	751
M7, NM16	Bottom 1/3	48	18	12	63	141
	Middle	57	21	9	55	142
	Top 1/3	42	16	22	84	164
NM7, M16	Bottom 1/3	12	12	6	39	69
	Middle	18	19	9	30	76
	Top	21	6	6	34	67
NMH	Bottom 1/3	110	77	41	162	390
	Middle	12	12	8	24	56
	Top 1/3	13	10	5	14	42

Table 9: Social Class in Childhood X Family income at 16 X Tenure at 23

b) Percentages

Tenure at 23

<u>Social Class</u>	<u>Income</u>	Ind. Owner	Ind. LA/HA	Ind. Other	Dep.	Total
NM 7,16	Bottom 1/3	32.9	5.6	14.5	47.0	100
	Middle	34.3	5.8	12.7	47.2	100
	Top 1/3	25.7	4.9	13.0	56.4	100
M 7,16	Bottom 1/3	28.9	20.7	8.4	41.9	100
	Middle	32.0	17.1	8.3	42.6	100
	Top 1/3	32.5	15.3	8.1	44.1	100
M7, NM16	Bottom 1/3	34.0	12.8	8.5	44.7	100
	Middle	40.1	14.8	6.3	38.7	100
	Top 1/3	25.6	9.8	13.4	51.2	100
NM7, M16	Bottom 1/3	17.4	17.4	8.7	56.5	100
	Middle	23.7	25.0	11.8	39.5	100
	Top 1/3	31.3	9.0	9.0	50.7	100
NMH	Bottom 1/3	28.2	19.7	10.5	41.5	100
	Middle	21.4	21.4	14.3	42.9	100
	Top 1/3	31.0	23.8	11.9	33.3	100

Table 10: Household Status at 23 x Social Class in Childhood

<u>Household Status</u>	<u>Social Class</u>					Total
	NM7,16	MAN7,16	MAN7,NM16	NM7,MAN16	NMH	
Dependent	864 46.9%	1426 40.8%	239 41.3%	124 44.8%	280 37.1%	2933 2.2%
Independent Sharing	109 5.9%	67 1.9%	17 2.9%	10 3.6%	27 3.6%	230 3.3%
Independent	871 47.2%	1999 57.2%	322 55.7%	143 51.6%	448 59.3%	3783 54.5%
N = 100%	1844	3492	578	277	755	6946

2
 $\chi^2 = 101.3$ $p < .001$

Table 11: Household Status at 23 x Family Size in Childhood

<u>Household Status</u>	<u>Family size</u>		Total
	Three or Less	Four or More	
Dependent	2772 44.0%	1056 40.6%	3828 43.0%
Independent Sharing	225 3.6%	76 2.9%	301 3.4%
Independent	3300 52.4%	1471 56.5%	4771 53.6%
N = 100%	6297	2603	8900

²
 $\chi^2 = 13.2$ $p < .01$

Table 12: Household Status at 23 x Sex

<u>Household Status</u>	<u>SEX</u>		Total
	Male	Female	
Dependent	2898 54.9%	1631 31.0%	4529 43.0%
Independent sharing	181 3.4%	169 3.2%	350 3.3%
Independent	2197 41.6%	3460 65.8%	5657 53.7%
N = 100%	5276	5260	10536

$\chi^2 = 636.8$ $p < .001$

Table 13: Household Status at 23 x Parents' Education
(whether stayed beyond minimum leaving age)

<u>Household Status</u>	<u>Parents' Education</u>		Total
	Neither stayed	At Least one stayed	
Dependent	2205 40.9%	1687 46.1%	3892 43.0%
Independent Sharing	108 2.0%	199 5.4%	307 3.4%
Independent	3075 57.1%	1772 48.4%	4847 53.6%
N = 100%	5388	3658	9046

2
X = 119.7 p < .001

Table 14: Household Status at 23 x Father's Unemployment

Father's Unemployment

<u>Household status</u>	In employment at 11 & 16	Unemployment at one or both	Total
Dependent	2495 43.8%	318 40.6%	2803 43.3%
Independent Sharing	197 3.5%	17 2.2%	214 3.3%
Independent	2999 52.7%	458 58.5%	3457 53.4%
N = 100%	5691	783	6474

²
X = 7.27 p < .05

Table 15: Household Status at 23 X Neighbourhood at 16

Neighbourhood at 16

<u>Household Status</u>	Deprived	Best Off	Other	Total
Dependent	929 39.2%	1087 46.8%	2439 42.5%	4455 42.8%
Independent Sharing	65 2.7%	118 5.1%	164 2.9%	347 3.3%
Independent	1373 58.0%	1116 48.1%	3130 54.6%	5619 53.9%
N = 100%	2367	2321	5733	10421

2

X = 66.0 p < .001

Table 16: Crowding at 23 x Social Class In Childhood

<u>Crowding</u>	<u>Social Class</u>					Total
	NM 7 & 16	M 7 & 16	M7 NM16	NM7 M16	NMH	
- 1 Person per room	1646 96.3%	2953 87.9%	492 91.4%	231 87.8%	630 87.9%	5952 90.3%
> 1 Person per room	64 3.7%	408 12.2%	46 8.5%	32 12.2%	87 12.1%	637 9.6%
N = 100%	1710	3361	538	263	717	6589

²
 $\chi^2 = 98.7$ $p < .001$

Table 17: Crowding at 23 x Family Size in Childhood

<u>Crowding</u>	<u>Family Size</u>		Total
	Three or Less	Four or More	
- 1 Person per room	5601 93.7%	2003 81.2%	7604 90.0%
> 1 Person per room	378 6.3%	463 18.8%	841 10.0%
N = 100%	5979	2466	8445

²
 $\chi^2 = 299.1$ p < .001

Table 18: Crowding at 23 x Sex

<u>Crowding</u>	<u>Sex</u>		Total
	Male	Female	
- 1 person per room	4461 89.6%	4507 90.0%	8968 89.8%
> 1 person per room	618 10.4%	499 10.0%	1017 10.2%
N = 100%	4979	5006	9985

$\chi^2 = 0.45$ $p > .05$

Table 19: Crowding at 23 X Parents' Education
(Whether stayed beyond minimum leaving age)

<u>Crowding</u>	<u>Parents' Education</u>		Total
	Neither stayed	At least one stayed	
- 1 person per room	4605 88.7%	3176 93.9%	7781 90.7%
> 1 person per room	588 11.3%	207 6.2%	795 9.3%
N = 100%	5193	3383	8576

²
X = 65.8 p <.001

Table 20: Crowding at 23 X Father's Unemployment

Father's Unemployment

<u>Crowding</u>	In employment at 11 and 16	Unemployed at one or both	Total
- 1 person per room	4903 91.0%	623 83.8%	5526 90.1%
> 1 person per room	484 8.9%	120 16.2%	604 9.9%
N = 100%	5387	743	6130

²
 $\chi^2 = 103.2$ p < .001

Table 21: Crowding at 23 X Neighbourhood at 16

Neighbourhood at 16

<u>Crowding</u>	Deprived	Best Off	Other	Total
- 1 person per room	1956 86.1%	2048 94.6%	4867 89.5%	8871 89.8%
.> 1 person per room	315 13.9%	116 5.4%	573 10.5%	1004 10.2%
N = 100%	2271	2164	5440	9875

²
 $\chi^2 = 89.6 \quad p < .001$

Table 22: Amenities at 23 X Social Class in Childhood

<u>Amenities</u>	<u>Social Class</u>					TOTAL
	NM7,16	MAN7,16	MAN7, NM16	NM7, MAN16	NMH	
Yes	1703 94.7%	3314 96.4%	534 95.9%	261 94.9%	696 94.4%	6508 95.6%
No	95 5.3%	123 3.6%	23 4.1%	14 5.1%	41 5.6%	296 4.4%
N = 100%	1798	3437	557	275	737	6804

2
 $\chi^2 = 11.7$ $p < .05$

Table 23: Amenities at 23 X Family size in Childhood

<u>Amenities</u>	<u>Family Size</u>		Total
	Three or Less	Four or More	
Yes	5903 95.7%	2427 95.3%	8330 95.5%
No	268 4.3%	120 4.7%	388 4.5%
N = 100%	6171	2547	8718

$\chi^2 = 0.49$ $p > .05$

Table 24: Amenities at 23 X Sex

<u>Amenities</u>	<u>SEX</u>		Total
	Male	Female	
Yes	4907 95.3%	4942 95.6%	9849 95.5%
No	240 4.7%	229 4.4%	469 4.5%
N = 100%	5147	5171	10318

$\chi^2 = 0.27$ $p > .05$

Table 25: Amenities at 23 X Parents' Education
 (Whether stayed beyond minimum leaving age)

Parents' Education

<u>Amenities</u>	Neither Stayed	At least one stayed	Total
Yes	5117 96.5%	3357 94.4%	8474 95.6%
No	188 3.5%	198 5.6%	386 4.4%
N = 100%	5305	3555	8860

$\chi^2 = 20.5 \quad p < .001$

Table 26: Amenities at 23 X Father's Unemployment

Father's Unemployment

<u>Amenities</u>	In Employment at 11 and 16	Unemployed at one or both	Total
Yes	5325 95.6%	736 95.6%	6061 95.6%
No	247 4.4%	31 4.4%	278 4.4%
N = 100%	5572	767	6339

2
 $\chi^2 = .22 \quad p > .05$

Table 27: Amenities at 23 X Neighbourhood at 16

Neighbourhood at 16

<u>Amenities</u>	Deprived	Best Off	Other	Total
Yes	2239 96.1%	2143 94.7%	5357 95.5%	9739 95.4%
No	92 3.9%	120 5.3%	254 4.5%	466 4.6%
N = 100%	2331	2263	5611	10205

2
 $\chi^2 = 4.9$ p >.05

Table 28: Homeless by 23 X Social Class in Childhood

<u>Homeless</u>	<u>Social Class</u>					TOTAL
	NM7,16	MAN7,16	MAN7,NM16	NM7,MAN16	NMH	
Yes	140 7.6%	181 5.2%	41 7.1%	23 8.3%	54 7.2%	439 6.3%
No	1701 92.4%	3311 94.8%	537 92.9%	254 91.7%	700 92.8%	6503 93.7%
N = 100%	1841	3492	578	277	754	6942

2

X = 16.1 p < .05

Table 29: Homeless by 23 X Family Size in Childhood

<u>Homeless</u>	<u>Family Size</u>		Total
	Three or Less	Four or more	
Yes	361 5.7%	189 7.3%	550 6.2%
No	5934 94.3%	2414 92.7%	8348 93.8%
N = 100%	6295	2603	8898

$\chi^2 = 7.1$ $p < .01$

Table 30: Homeless by 23 X Sex

<u>Homeless</u>	<u>SEX</u>		Total
	Male	Female	
Yes	326 6.2%	333 6.3%	659 6.3%
No	4949 93.8%	4919 93.7%	9868 93.7%
N = 100%	5275	5252	10527

2
 $\chi^2 = 0.1$ p > .05

Table 31: Homeless by 23 X Parents' Education (whether stayed beyond minimum leaving age)

<u>Homeless</u>	<u>Parents' Education</u>		Total
	Neither Stayed	At Least One Stayed	
Yes	277 5.1%	280 7.7%	557 6.2%
No	5108 94.9%	3375 92.3%	8483 93.8%
N = 100%	5385	3655	9040

$\chi^2 = 23.4$ p < .001

Table 32: Homeless by 23 X Father's Unemployment

Father's Unemployment

<u>Homeless</u>	In employment at 11 and 16	Unemployed at one or both	Total
Yes	325 5.7%	67 8.6%	392 6.1%
No	5363 94.3%	716 91.4%	6079 93.9%
N = 100%	5688	783	6471

²
X = 9.8 p < .01

Table 33: Homeless by 23 X Neighbourhood at 16

<u>Homeless</u>	<u>Neighbourhood at 16</u>			Total
	Deprived	Best Off	Other	
Yes	146 6.2%	195 8.0%	325 5.7%	656 6.3%
No	2218 93.8%	2133 92.0%	5404 94.3%	9755 93.7%
N = 100%	2364	2318	5729	10411

2
 $\chi^2 = 14.9$ $p < .001$

National Child Development Study User Support Group Working Paper Series

This Working Paper is one of a number, available from the National Child Development Study User Support Group, which report on the background to the Study and the research that has been based on the information collected over the years. Other Working Papers in the series are listed below.

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No.	Title	Author(s)	Date
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NATIONAL CHILD DEVELOPMENT STUDY

The National Child Development Study (NCDS) is a continuing longitudinal study which is seeking to follow the lives of all those living in Great Britain who were born between 3 and 9 March, 1958.

It has its origins in the Perinatal Mortality Survey (PMS). This was sponsored by the National Birthday Trust Fund and designed to examine the social and obstetric factors associated with the early death or abnormality among the 17,000 children born in England, Scotland and Wales in that one week.

To date there have been four attempts to trace all members of the birth cohort in order to monitor their physical, educational and social development. These were carried out by the National Children's Bureau in 1965 (when they were aged 7), in 1969 (when they were aged 11), in 1974 (when they were aged 16) and in 1981 (when they were aged 23). In addition, in 1978, details of public examination entry and performance were obtained from the schools, sixth-form colleges and FE colleges.

For the birth survey information was obtained from the mother and from medical records by the midwife. For the purposes of the first three NCDS surveys, information was obtained from parents (who were interviewed by health visitors), head teachers and class teachers (who completed questionnaires), the schools health service (who carried out medical examinations) and the subjects themselves (who completed tests of ability and, latterly, questionnaires). In addition the birth cohort was augmented by including immigrants born in the relevant week in the target sample for NCDS1-3.

The 1981 survey differs in that information was obtained from the subject (who was interviewed by a professional survey research interviewer) and from the 1971 and 1981 Censuses (from which variables describing area of residence were taken). Similarly, during the collection of exam data in 1978 information was obtained (by post) only from the schools attended at the time of the third follow-up in 1974 (and from sixth-form and FE colleges, when these were identified by schools). On these last two occasions case no attempt was made to include new immigrants in the survey.

All NCDS data from the surveys identified above are held by the ESRC Data Archive at the University of Essex and are available for secondary analysis by researchers in universities and elsewhere. The Archive also holds a number of NCDS-related files (for example, of data collected in the course of a special study of handicapped school-leavers, at age 18; and the data from the 5% feasibility study, conducted at age 20, which preceded the 1981 follow-up), which are similarly available for secondary analysis.

Further details about the National Child Development Study can be obtained from the NCDS User Support Group.