ESRC Research Project
Education and Social Mobility in Scotland in the Twentieth Century

Working Paper 3

PATTERNS OF SOCIAL MOBILITY:

A COMPARATIVE STUDY OF ENGLAND, WALES AND SCOTLAND

Lindsay Paterson and Cristina Iannelli

September 2004

Lindsay Paterson, Department of Education and Society, Moray House School of Education, University of Edinburgh, St John's Land, Holyrood Road, Edinburgh, EH8 8AQ. Email: lindsay.paterson@ed.ac.uk

Cristina Iannelli, Centre for Educational Sociology, Moray House School of Education, University of Edinburgh, St John's Land, Holyrood Road, Edinburgh, EH8 8AQ. Email: c.iannelli@ed.ac.uk

Patterns of Social Mobility: a Comparative Study of England, Wales and Scotland

Abstract

We use the life history data in the British Household Panel Study to analyse change over time (birth cohorts) in patterns of social mobility in England, Scotland and Wales, and to compare these three countries. In several respects, our conclusions are similar to those reached by other authors on the basis of wider comparisons. There has been a large growth in non-manual employment since the middle of the twentieth century. This led first to a rise in upward mobility, but, as parents of younger people have now themselves benefited from that, has more recently induced a growth in downward mobility: more people are forced downward from their middle-class origins. As in other places, and other analyses of Britain, these changes have largely not been a growth in what Erikson and Goldthorpe call 'social fluidity': it is change induced by the occupational structure, not by the relative chances of ending up in certain destinations having started at specified points. These conclusions apply both to current class (in 1999) and to the class which people entered when they first entered the labour market. We found that education does not explain patterns of mobility at either initial class or current class, and that initial class does not explain patterns of mobility at current class. The conclusions were broadly the same for the three countries, but there was some evidence that in the youngest cohort (people born between 1967 and 1976) experience in Wales was diverging from that in England and Scotland, with rather greater amounts of downward mobility. We draw also two methodological conclusions. The first is that migration within the UK did not seem to make any important difference to our results. That is encouraging for analysis of surveys confined to one of the three countries, because it suggests that losing track of migrants would not distort the results. The second methodological conclusion is that the comparative study of social mobility can find interesting topics to investigate at social levels lower than that of the state, here the comparison of the three countries which make up Britain.

Acknowledgements

Cristina Iannelli's work was undertaken as part of the project 'Education and Social Mobility in Scotland in the 20th Century', funded by the UK Economic and Social Research Council (grant number R000239915). We are grateful to Dr Heather Laurie of the Institute for Social and Economic Research at Essex University and to staff in the Data Library at Edinburgh University for help in gaining access to and understanding the BHPS data.

Patterns of Social Mobility: a Comparative Study of England, Wales and Scotland

Introduction

There are six broad conclusions from research since the 1970s on comparative social mobility:

- The over-riding conclusion is that there continue to be high absolute levels of mobility in all developed societies: it is normal for people to occupy a different class to that in which they were brought up (Breen and Whelan, 1999; Goldthorpe, 1987; Marshall et al, 1988; Marshall et al, 1997; Payne, 1987; Saunders, 1995; Savage, 2000).
- Nevertheless, almost equally consistent in this research is that social fluidity has not changed (Breen, 2003; Erikson and Goldthorpe, 1992; Marshall et al, 1997, pp. 37-69). That is, as between different classes of origin, the relative chances of being in one destination class rather than another have hardly changed at all, and, where they have, this has mostly been due to the decline in agricultural employment.
- These first two questions indicate the importance of looking at both absolute and relative mobility. The main disagreements in the debate are essentially over whether the high levels of absolute mobility tell us anything very interesting about opportunity. Despite the cogency of the argument by, for example, Ringen (1997, pp. 129-48), Hellevik (1997), Noble (2000) and Payne and Roberts (2002) that absolute mobility merits serious attention, we are convinced by, for example, Swift (2000), Marshall and Swift (1993, 1999) and Swift and Marshall (1997) that understanding social fluidity is an important aspect of investigating social inequality and social justice, and hence that relative rates have to form the core of any investigation.
- However, it is important to understand also how the high and changing absolute rates may be reconciled with unchanging relative rates. This may be done by means of the further evidence (from these same studies) that the main influence on mobility chances has been the overall shape of the occupational distribution. Thus, because the service class has expanded, and the manual working classes have contracted, to a point where many developed societies may be described as 'post-industrial', most people interviewed in surveys in the late-20th century were bound to be found in a different class from that of their parents.
- Most of these processes have resulted in some convergence of mobility patterns among nations (Breen, 2003; Breen and Luijkx, forthcoming). The main reasons, again, have been the rapid decline of agricultural employment in those European countries where this sector was still large in the middle of the 20th century and the growth of the service class. But the convergence is not absolute, because modernisation has not entailed the uniformity that was expected by earlier theoriests of liberalism (Breen and Whelan, 1996; Marshall et al, 1997, pp. 38 and 44; Parsons in Grusky, 1994; Treiman, 1970; Whelan, 2004).

- There is variation among countries in the extent to which the changing distribution of educational attainment explains any changes in the association of origins and destinations: although social mobility may be increasingly mediated by education, as Halsey argued a quarter of a century ago (Halsey, 1977), that leaves scope for a great deal of variation among countries in the extent of the mediation for any particular cohort (Breen and Luijkx, forthcoming).

The countries of Britain have participated in these social processes as thoroughly as any, and have been included in most of the main comparative studies of social mobility since the 1970s. Within Britain, moreover, the occupational and mobility patterns of Scotland on the one hand and England and Wales on the other have been converging for much longer than the recent mobility studies indicate as the period of greatest convergence more widely (McCrone, 1992, pp. 55-87). Indeed, the striking feature of the economies of Scotland and of England is how similar they have been in employment structures since at least the early part of the 20th century.

Internal comparisons of this kind within Britain have not been carried out in the most recent waves of mobility studies, in contrast to those in the 1970s. We ask whether the patterns of difference or convergence that arise between three closely connected societies may be explained in similar terms to those that have been useful in studying societies that are governed by separate states. This paper therefore uses synthetic cohorts constructed from the British Household Panel Study to investigate the extent to which the largely common employment history of England, Wales and Scotland has led to these countries' sharing in the reported international experience of social mobility. As described in more detail in the Appendix, the BHPS was inaugurated in 1991 to track individual change over time. It is useful for our purposes because it collected rich information about respondents' life histories before that point, and also because, in 1999, the sample was increased in Wales and in Scotland therefore allowing reliable comparisons among the three countries of Britain. Thus, unlike most previous comparisons internal to Britain, we are able to study Wales separately from England.

Data and Methods

The surveys are described in the Appendix. Seven main variables are used in this paper; details of the names of these in the BHPS data sets are in the Appendix. Place of birth has simply been categorised as England, Wales and Scotland, and (apart from in Table 17) respondents who were not born in these three countries have henceforth been omitted; we sometimes refer to the retained sample as the 'British' sample. It contained 14,141 cases (of all ages 15 and over); this number falls further once we have omitted people with missing data and restricted the age range as noted belowThe variable recording place of birth is referred to as 'B'. We also use the gender of respondents, although – as reported later – we conclude that the patterns of social mobility in which we are primarily interested did not vary by gender. The five other variables were:

Birth cohort: variable 'C'

Any division into decades is arbitrary, but we use the categories 1937-46, 1947-56, 1957-66 and 1967-76; the rationale for this choice is summarised by Paterson and Iannelli (2004, Table 1). The age range 23-62 was chosen to reconcile the analysis of the BHPS

of 1999 with the analysis of the Scottish Household Survey of 2001, which forms the other main empirical base of our social mobility project. We confine ourselves to people born after the mid-1930s because the level of missing data on class of origin and current class rises sharply for older ages. We also include only people aged 23 and older in 1999, because most of them would have entered the labour market by then. The resulting sample consisted of 9,510 cases, 6,001 born in England, 1,492 born in Wales and 2,017 born in Scotland. In later tables, these numbers fall further because of the exclusion of missing data on class variables.

Any analysis based on synthetic cohorts of this sort is liable to bias due to differential mortality or differential migration (Noble, 2000; Payne and Roberts, 2002). We consider this question in more detail later, but our conclusion is that, while we cannot be sure that there is no bias, the likely effect is small. We have guarded against the greatest threat to bias from migration by defining the spatial variable as where people were born rather than as where they were living at the time the survey was carried out, and we also replicate the main analysis on sub-samples restricted to people who were living in the same country as that in which they were born.

Class of origin: variable 'O'

This was derived from the information on fathers' and mothers' occupation when the respondent was aged 14. We follow the main literature in this area by using the Goldthorpe class scheme (Breen, 2001; Erikson and Goldthorpe, 1993, pp. 38-9; Marshall et al, 1997, pp. 21-35), condensed as shown in Table 1. Respondents were assigned to the class of the parent who had the higher status on the Goldthorpe scheme. The unweighted proportion of the British sample aged 23-62 allocated to an origin class from father's class was 56%, from mother's class was 22.4%, and from both equally was 10.9%; the remaining 10.6% had no information on either parent's class.

Destination class: variables 'D' and 'D_1'

We measure destination class in two ways. The main one is based on the respondent's occupation in 1999, again coded into the Goldthorpe scheme as shown in Table 1. Note that the reason we have retained six categories is the expansion of the service class mentioned in the Introduction: with more than one in six people in the upper service class, it becomes important to distinguish between it and the lower service class. Where respondent's class was missing, it has been imputed where possible as the class of the highest-class person in the household where the respondent was living in 1999. The unweighted proportion of the British sample aged 23-62 allocated from own class was 73.8%, and from someone else in the household was 11.7%; the remaining 14.5% remained without a current class. However, the conclusions seemed rather impervious to this imputation: the main models below (as reported in Tables 4 and 7) were re-run excluding the whole 26.2% who could not be allocated from their own class, and the results were very similar. We refer to this as 'current class', and denote it by 'D'.

We also have information on the respondent's 'first job after leaving full-time education'. This question was asked in two ways in the BHPS. For the whole main sample (as started in 1991), it was collected in wave three as part of a comprehensive account of respondents' employment history. For new respondents from wave eight onwards (thus including the whole extension samples in Wales and Scotland) it was

asked in the main baseline questionnaire. We have used these two sources to construct a measure of first job for every respondent who answered one or other version. We refer to this as 'initial class', and denote it by 'D_1'. Analysing initial class as well as current class allows us to overcome some of the conceptual problems of using synthetic cohorts (Payne and Roberts, 2002, para. 2.8): it standardises on a particular point in the occupational cycle, which is unaffected by the different ages of the cohorts at the time of the survey (except insofar as respondents' memory grows more unreliable with age).

Educational attainment: variable 'E'

The relationship between class of origin and the gaining of educational certificates is analysed more fully by Iannelli and Paterson (2004) and Paterson and Iannelli (2004). We use this variable here for the sole purpose of testing whether the changing distribution of attainment may explain any changes in the association of origins and destinations. The attainment variable has six categories: no certificates, certificates at levels lower than lower secondary schooling, certificates at the level of lower secondary schooling, certificates at the level of upper secondary schooling, certificates at higher education level below degree, and degrees.

Analysis

Thus we are primarily interested in the associations between the variable O and D, and any interaction of these with the variables B and C. We test this by log-linear modelling, using the software LEM developed by Jeroen Vermunt of the University of Tilburg (Vermunt, 1997). The general approach to log-linear modelling which we use is outlined by, for example, Erikson and Goldthorpe (1992, pp. 28-64) and Payne et al (1994). In our notation, single variables refer to main effects, for example O to the main effect of class of origin. Concatenations of variables refer to interactions: for example, OD refers to the interaction of origin and current classes. Thus, unlike some authors, we do not use 'OD' to include the main effects, and we would always write the saturated model for the OxD table as O + D + OD. The fit of models is measured in the usual way by the L^2 statistic, which is the same as the log likelihood ratio and thus is (under the relevant null hypothesis) approximately distributed as a chi-squared statistic. In descriptive tables, we also use the dissimilarity index. For example, in each segment of Table 1, it is calculated as one half of the sum of the absolute differences between the percentage in the 'origin' column and the percentage in the 'destination' column. The dissimilarity index is a widely used descriptive measure of the extent to which two distributions do not resemble each other: it may be thought of as the proportion of either distribution that would have to change category for the two distributions to be identical.

The statistical models in which we are mainly interested are as follows:

(1) Are there any national differences in the extent to which class of origin is associated with current class? This is assessed by testing whether there is a need for an ODB interaction in the OxDxB table.

(2) If we do not find any such national differences, do any become evident if we remove the extent to which the distribution of destinations varies among the three countries? This means dropping the interaction DB. So the question is: does adding the ODB interaction make any difference to the model O + D + B + OD + OB? Note that the

resulting models will be non-hierarchical because ODB is included but DB is not. The model with DB included may be thought of as estimating what ODB would be if the occupational structure were (counterfactually) the same in the three countries. The model without DB therefore estimates ODB when the occupational structure varies among the countries in the manner observed in the data. We choose to use DB to reflect changing occupational structure because it is directly relevant to describing the impact of occupational change on our respondents. OB would also reflect occupational change, but lagged by one generation.

(3) Does the association of origin and destination vary over time? This will assess whether social mobility has changed over time. We test it first by calculating whether the interaction ODC adds anything to the model O + D + C + OD + OC + DC, and then – analogously to (2) – after removing the term DC.

(4) Where we do find an ODC interaction, we also summarise it more concisely by the so-called 'unidiff' model (Erikson and Goldthorpe, 1992, pp. 91-2; Payne et al, 1994, pp. 67-9). The full three-way interaction ODC may be thought of as fitting OD separately for each cohort, thus in each cohort yielding a completely different set of the OD parameters. A unidiff (or 'uniform difference') model simply constrains the ways in which these parameters may vary: they vary between cohorts only by a constant scaling factor that operates multiplicatively on the logarithmic scale on which the parameters in a log-linear model are estimated. The unidiff parameters thus represent strengthening or weakening of the association between O and D, relative to a baseline which we will set to be the oldest cohort: a value of the unidiff parameter greater than 1 indicates a strengthening, a value less than 1 a weakening. Thus these scaling factors give a succinct measure of any trends in the strength of the O-by-D association: the higher the factor, the stronger the association.

(5) Does any ODC interaction vary among the countries? This will test whether there has been convergence in the mobility patterns among the three countries. The first way of testing this is whether the interaction ODCB adds anything to a baseline model that contains all the main effects, all the 2-way interactions, and all the 3-way interactions.

(6) Analogously to (2), does the answer to (5) change if we remove from the baseline model against which ODCB is compared all terms that might reflect different current occupational structures in the three countries and different trajectories in these over time? That is, from the baseline model summarised in (5), we remove the interactions DB (different structures), DC (changing structures over time) and DCB (differences among countries in any changes in the occupational structure over time).

(7) Finally, we repeat all these steps for initial class rather than current class.

The approach adopted here to understanding higher-order interactions such as ODB is analogous to that outlined theoretically by Ringen (1997, pp. 129-48) and Swift (2000) and developed by Ringen and by Breen (2004). However, as we noted in the introduction, we are not suggesting that measures of association are not useful. Our models that omit certain margins (such as (2), (3) and (6)) are offered not as alternatives to standard hierarchical log-linear models but as ways of explaning why, in them, apparent social fluidity might not be detectable.

Results

Current class

Table 1 shows the classes of origin and destination by country of birth. The main point to note is the extent to which the countries resemble each other: for example, on origins, 41-44% are in the manual class, a proportion that drops in each country to 29-34% among destinations. The dissimilarity indexes in that table do show that there is greater disparity between origins and destinations among people born in Scotland and England than among those born in Wales. The dissimilarity indexes in the rows labelled 'all' in Table 2 confirm that Wales is somewhat different: its dissimilarity index on origins is 6 in the comparison with England and 8 in the comparison with Scotland, greater than the 4 comparing Scotland and England. Although (as reflected in the comparison of origins with destinations) Scotland and England may have grown closer together, there is no evidence that Wales has converged with either: for current class, the differences of Wales from England (8) and Scotland (10) are even greater, whereas that between Scotland and England is only 3. Table 3, however, further shows that the overall amount of mobility is very similar in each country: from each, around 44-45% have been upwardly mobile, around 22-24% have been immobile, and around 31-33% have been mobile downward.

The broad similarity of the mobility patterns in each country is confirmed by the modelling summarised in Table 4. The model 1 which contains all three main effects and all three 2-way interactions provides a satisfactory fit to the data, and so there is no need for the 3-way interaction ODB that would indicate country differences in the extent of relative mobility. However, the importance of the differences which were evident from Tables 1 and 2 is shown in the next pair of models, which do not contain the interaction DB: now there is some evidence of an ODB interaction. In other words, the different destination distributions have induced different patterns of mobility. The *relative* mobility chances do not vary among the countries (model 1); but more people in Wales than in England or Scotland moved downward from origins in the middling classes: the total downward mobility from the lower professional class was 57% in Wales, 50% in England and 45% in Scotland, and from the intermediate non-manual class was 38% in Wales, 36% in England and 32% in Scotland. We would emphasis that we are not suggesting that model 3 is a better way of representing the data than model 1: the purpose of model 3 is to help us understand how model 1, showing no country differences in inequality, is consistent with the apparent such differences in Tables 1 and 2.

Controlling for the different distributions of educational attainment in the three countries makes almost no difference to this conclusion. We did this by fitting models analogous to models 2 and 3 in Table 4, but allowing all the terms in the baseline model 2 to interact with the attainment variable E. Thus model 2 was augmented by the terms E, OE, DE, BE, ODE and OBE. Then, as in Table 4, the interaction ODC was added. The change in L^2 was 63.0, still on 50 degrees of freedom, similar to that in Table 4.

These comparisons of origins and destinations all imply a need to investigate changes over time. The descriptive summary data are in Table 5, which shows origins and destinations by birth cohort and country of birth. For each country, the growth in non-manual employment (the first four class categories) is clear by comparing the destinations of the youngest cohort with the origins of the oldest: for England, 68% against 42%; for

Wales, 57% against 46%; for Scotland 68% against 44%. The dissimilarity indexes in that table, comparing origins and destinations, show clear falls over time. The result, as shown in Table 6, is that, although total mobility has not changed much, there has been a shift towards downward mobility away from upward, as more people in the younger cohorts than in the older start in middle-class families. Nevertheless, that change has been less marked among people born in Wales than in England and Scotland. Furthermore, the dissimilarity indexes in Table 2 show that, whereas the experience of people born in all three countries was converging in the middle cohorts, those born in Wales started to diverge again in the youngest, whereas those born in Scotland and England grew closer together.

The formal tests of these points are in the sequence of models in Table 7. The first pair shows hierarchical log-linear models assessing whether there is a need for an ODC interaction; the conclusion is that there is not. That is, there is no evidence that (averaged over countries of origin) the relative mobility chances change over cohorts. (We return to model 3 shortly.) The pair of models 4 and 5 then do the same as models 1 and 2, but without the terms DB and DC; now we conclude that there is evidence of an ODC interaction. These two omitted terms measure the extent to which the current occupational structure differs among countries of origin or among cohorts. So the conclusion from models 4 and 5 is that the variations in current occupational structure have induced variations over cohort in social mobility; the contrast with the conclusion from models 1 and 2 indicates that that variation over cohort is entirely driven by changing occupational structure, and cannot be attributed to changing relative chances of mobility. Put differently, the changing patterns of mobility shown in Table 6 are due to changes in the opportunities available to people who were born at different times.

As with Table 4, moreover, controlling for educational attainment did not lead us to modify this conclusion. This was done by adding to the baseline model 4 in Table 7 the interaction of each of its terms with variable E. The interaction ODC was then added, as for model 5 in Table 7; the reduction in L^2 was 204.5, still on 75 degrees of freedom. There was certainly no evidence, then, that the ODC interaction could be explained by changes in the distribution of attainment. The reason is illustrated in Table 8, which shows the proportion who have been upwardly mobile in each cohort according to their broad level of attainment (grouping together the two lowest levels to give reasonable sample sizes): there is very little variation in mobility that could be attributed to education, and even less variation in that respect over time.

Models 6 and 7 in Table 7 then show, further, that there is some evidence of differences among countries in the variation of social mobility over cohorts (that is, the ODC interaction varies by country of origin), if the interactions DB and DC are excluded; note that a similar conclusion would also have been reached from model 3, even though models 1 and 2 would have led us to believe that there was no variation in social mobility over cohorts.

The nature of these changes in patterns of mobility may be clarified by the results of model 5a, which – as explained in the methods section earlier – substitutes for the full ODC interaction a simplified structure in which the O-by-D association varies only by a log-multiplicative scaling factor over cohorts. The details are in Table 9. The model is an improvement over that in model 4 (45.3 on 28 degrees of freedom), but it is not as good

as the full ODC interaction contained in model 5 (by 101.9 on 47 degrees of freedom). So this log-multiplicative model does not capture all the change in OD that is present in model 5; nevertheless, it captures some of the changes. The next part of Table 9 shows the results of these models fitted separately for people born in each country. The conclusions for each country are similar to the conclusions reached from models 4 and 5 in Table 7: there is evidence that mobility changes over cohort (a significant ODC term), when no control is included for changing occupational distributions over cohort (no DC term). The patterns of these changes over cohorts are then in the final segment of Table 9. In each country, the association between origins and destinations strengthened between the first and the second cohort: that is, the log-multiplicative parameter rose from a reference value of 1 by 40-50%. For each country, however, the association then fell again in each of the two remaining cohorts.

So, although these unidiff models do not capture the whole ODC pattern, they suggest that an important part of it involves a strengthening and then a weakening of the association between origins and destinations. The changing occupational structure may be the only reason why the OD association has changed over time, as we concluded above, but that does not itself tell us how strong the association will be at any point in time. Consider, in illustration, the effect of the contraction of manual employment, which for the purposes of this example we take to be the two lowest classes in the Goldthorpe scheme. The second cohort – people entering the labour market roughly in the 1960s – showed a tighter association of origin and destination because the growth in their parents' non-manual employment had not yet outstripped their own opportunities for non-manual employment: in England, the proportion of people of non-manual origin who were in non-manual jobs was 81% in both these cohorts; in Scotland it rose from 72% to 81%; and, although it dropped in Wales from the very high 89% in the first cohort, it remained quite high at 70%. But, by the third and fourth cohorts, the non-manual opportunities for parents had grown more rapidly than the non-manual opportunities for respondents, and so these new positions could be filled only by a partial reduction in the association with parents' class. Thus the proportion of people of non-manual origins who were in non-manual jobs had dropped to 75% in England (from a high of 81%), to 71% in Scotland (also from a high of 81%) and to 61% in Wales (from a high of 89%). Indeed, by the youngest cohort, the parents would themselves have been in competition with the next generation for such jobs: the proportions of respondents in non-manual employment in Table 5 were almost the same as amongst their parents.

All of the models shown in Tables 4 and 7 were run separately for men and women, and the patterns were very similar. For example, in all three countries the proportions of both men and women of high professional origin (class I) whose destination was in classes I-IV was around 80-90%. Likewise, among people of unskilled origin (class VII), although more women than men entered these classes, the differential was the same in each country: 45-55% of men, and 62-66% of women.Thus there is no evidence of any differences among the countries in the ways in which origin and destination are associated within the genders.

We re-ran the models in Tables 4 and 7 for people who were living in the same country as that in which they were born (6611 people out of the 7330 used for these tables). The pattern of results was almost the same as shown in the tables. In particular, it

would still be concluded, as from models 2 and 3 in Table 4, that there was evidence of an ODB interaction when DB was not in the model, and it would still be concluded, as from models 4 and 5 in Table 7, that there was evidence of an ODC interaction when DB and DC were not in the model. The only difference between the model restricted to non-migrants was that the evidence for an ODCB interaction, analogous to that between models 6 and 7 in Table 7, was somewhat weaker: 175.8 on 150 degrees of freedom, compared to 191.5 in Table 7. The corresponding exact p-values were 0.074 and 0.012, a difference that is not in fact very large even though it spans the conventional threshold of 0.05.

Initial class

Examining the class which people occupied when they first entered the labour market allows us to understand further the ways in which these patterns of social mobility have come about. Table 10 is analogous to Table 1; there is much greater dissimilarity between origin and initial class than between origin and current class. The dissimilarity indexes comparing countries of origin in Table 11 are analogous to those in Table 2. On the whole, the countries are closer on initial class than on current class, but the divergence of Wales from England and Scotland across cohorts is found for initial class almost as strongly as for current class. Table 12 in comparison to Table 3 shows that upward mobility at initial class was less, and downward mobility greater, than at current class, which is to be expected. The models in Table 13 then show similar kinds of evidence for differences among the countries in social mobility at initial class as at current class. This conclusion was unaffected when we added a control for educational attainment in the same way as we did for Table 4: the reduction in L^2 associated with OD_1B was then 77.4, very close to the 78.0 in Table 13.

The variation across cohorts is shown in Table 14. The dissimilarity indexes comparing the distributions of origin and initial class vary less across cohorts than the analogous indexes did for current class in Table 5, and – at least for cohorts after the oldest (people born after the mid-1940s) – there is little evidence of any trend towards greater similarity between origin and initial destination. The dissimilarity indexes comparing countries, in Table 11, show that, as with current class, Scotland and England are closer together on both origins and destinations than either is to Wales.

The convergence of origin and initial class is one reason why the reduction in upward mobility and increase in downward mobility are much sharper for initial class (Table 15) than for current class (Table 6). The explanation is similar to the discussion at the end of the section on current class. For initial class, the proportion of parents in non-manual classes outstripped the proportion of children in non-manual classes from the third cohort onwards in each country, and in the youngest cohort the gap in all three was large: from Table 5, 70% (origin class) compared to 49% (initial class) in England, 58% compared to 45% in Wales, and 64% compared to 51% in Scotland. In such circumstances, substantial downward mobility was as inevitable as large amounts of upward mobility were earlier in the century when non-manual employment was expanding for cohorts whose parents were mostly working class.

The final comparison between initial and current class concerns the models in Table 16, analogous to those in Table 7. As with current class, there is evidence of change over

time in the association of origins and initial class when the model does not include the 2-way interactions reflecting the changes in destinations over time (D_1C) and the variation in destinations among countries (D_1B): see the comparison of models 4 and 5 in Table 16 (a reduction in L^2 of 146.9 on 75 degrees of freedom), and compare that with the very similar comparison between models 4 and 5 in Table 7 (147.2 on 75 degrees of freedom). Controlling for education (as in our modification to Table 7) did not weaken this conclusions: the change in L^2 for OD_1C was if anything stronger, at 221.0 instead of 146.9. There was no evidence for initial class that the interaction of origin, destination and cohort varies among countries: see the comparison of models 6 and 7 in Table 16.

Taking these results with the conclusions on current class raises the possibility that all the changes in the association between origins and current class (OD) over time, or all its variation among countries, happen before people first enter the labour market. In fact, though, there is only weak evidence to support this. For the variation in OD among countries (the ODB interaction), we may incorporate initial class in the models 2 and 3 in Table 4 of current class in the same way as we included education earlier. Thus the question is whether there continues to be evidence of an ODB interaction when D_1 is included in this way. The answer is that, although the reduction in L^2 associated with this interaction falls, the change is relatively slight – from from 69.9 in Table 4 to 60.7 (both on 50 degrees of freedom, respective p-values thus being 0.03 and 0.14).

For the variation in OD over cohorts, we may do the same to a pair of models analogous to models 4 and 5 in Table 7; the approach is again analogous to including education. The reduction in L^2 associated with ODC is, with D_1 included, 132.7, not much less than the 147.2 in the comparison of models 4 and 5 in Table 7.

In summary of these conclusions, we can say that education does not explain any of the variation in OD or OD_1 that we have been looking at – whether the variation across countries (ODB and OD_1B) or the variation across cohorts (ODC and OD_1C). Furthermore, initial class does not explain any of that variation in OD.

Once more, gender made no difference to these conclusions: the patterns shown by the models in Tables 13 and 16 were very similar for men and women. For example, in each country there was a similar gender difference in proportions of people of high professional origins (class I) whose first job was in classes I-IV: around 52-58% among men, and 83-85% among women. Likewise, there were no large country differences in the gender difference in the proportions reaching these classes among people with origins in the unskilled class VII: 11-23% for men, 56-60% for women. Restricting attention to people who were living in the same country as that in which they were born likewise made no difference to the conclusions drawn from these tables.

Effects of differential mortality and migration

Using a cross-sectional survey to study social change is the only option we have in the absence of regularly repeated surveys over a long period of time. The main threats to validity are selective mortality and selective migration, especially with respect to social class. If we imagine for the moment a 2-by-2 table defined by a dichotomous origin class and a dichotomous destination class, each ‘working class’ versus ‘middle class’, then we might expect that the longevity would be greatest among the stable middle class, lowest among the stable working class, and probably second highest among the upwardly

mobile. (Indirect support for this may be inferred from, for example, Blane et al (1999, p. 175), who show mean height varying in just this way, and note (p. 180) that height is a good indicator of later health.) That means that in the oldest cohorts we will almost certainly be over-estimating upward mobility and under-estimating downward mobility. So, in our conclusions, we may be exaggerating the fall in upward mobility, and the increase in downward mobility, across cohorts. However, since we found, on the whole, that the greatest changes of this type (in Table 6) were between the two youngest cohorts – the oldest of whom were aged only 42 in 1999 – it might be reasonable to conclude that the broad pattern of our findings has not been too distorted by differential mortality.

On migration, we can use the BHPS itself to look at migration among the four countries within the UK. The data are in Table 17; unlike all the other tables, it refers to the whole of the UK. It shows the percentage of people living in 1999 in a different country of the UK from that in which they were born, classified by whether they had been socially mobile. The main point to note is that there is little variation with respect to social mobility: for example, the average proportions who had migrated were 13% among the downwardly mobile, 10% among the immobile and 12% among the upwardly mobile. There might be a slight bias in the oldest cohort, but even there it is not great. Detailed inspection of the origin-by-destination table showed that the highest levels of migration are among those whose origin is in the higher-grade professional class and also among those whose origin is in the small self-employed class. If this pattern applies to migration out of Britain, then our analysis will have under-estimated downward mobility and probably also immobility, especially in older cohorts. As with differential mortality, therefore, this would tend to bias our methods towards exaggerating the rise in downward mobility, but perhaps again not for the two younger cohorts.

It should be emphasised again that the actual patterns of internal migration shown in Table 17 do not themselves bias our results, because we have used place of birth as our spatial variable, and have also re-run our models for people who were living in the same country as that in which they were born. The sole purpose of constructing Table 17 is to estimate the association between migration and social mobility with a view to reflecting on any possible effects of migration out of Britain. Thus, for this to be relevant to our study, it has to be postulated that migration of that type follows broadly the same patterns with respect to social mobility as migration among countries within the UK.

Conclusions

In several respects, this comparison of the experience of people born in England, Wales and Scotland leads us to similar conclusions to those reached by other authors on the basis of wider comparisons. There has been a large growth in non-manual employment. This has induced recently a growth in mobility, as more people are forced downward from their middle-class origins, but that is largely not a growth in what Erikson and Goldthorpe call ‘social fluidity’: it is change induced by the occupational structure, not by the relative chances of ending up in certain destinations having started at specified points.

The similarities of these three countries may be developed in more detail. They each show similar convergence of their origin and destination distributions over time (or at least across birth cohorts), and they each show similar amounts of downward and of

upward mobility within each cohort. Thus the apparent changes in mobility over time are also similar. Moreover, none of these conclusions may be explained by changing patterns of educational attainment: our analysis would thus endorse the conclusion reached by Breen and Luijkx that 'the extent to which education mediates the impact of origins on destinations' is relatively weak in Britain.

However, in two respects this analysis has perhaps supplemented conclusions reached by the wider comparative studies. The first concerns divergence. Although the experience of people born in Scotland and England may be converging, just as has been found in the 1990s wave of comparative mobility studies (Breen and Luijkx, forthcoming), the same cannot be said of people born in Wales. This conclusion raises as many questions as it answers. Why has Wales diverged? Is it related to its previous very heavy reliance on industrial and extractive employment, both of which have collapsed since the 1980s? That might explain why, in Tables 2 and 11, the divergence from England is rather greater than that from Scotland where these same industries were significant, but not as significant as in Wales. Whatever the explanation, our conclusions do point to the importance of continuing to compare societies which may have converged in the past. Not only does modernisation not entail convergence (as Marshall et al (1997) argue), it does not preclude re-divergence.

The second conclusion arises from comparing mobility at current class with mobility at initial class. These analyses led to similar results, notably concerning the increase in downward mobility in recent cohorts and the growing divergence of Wales from Scotland and England. We have found that (broadly speaking) education does not explain patterns of mobility at either initial class or current class, and that initial class does not explain patterns of mobility at current class. If, in Britain, education does not strongly mediate the association of origins and destinations, then it is perhaps not surprising that the initial pattern of that association – mostly just after people have left full-time education – does not tell us what will happen later in their lives. The dynamics of the differences among these three countries in mobility to current class, and of the changes in it over time, must derive, not mainly from initial experiences in the labour market, but from its subsequent effects on people's careers and from the ways in which it rewards characteristics not captured by formal credentials, some of them indeed built up during careers themselves. This reminds us that class position – especially perhaps initial class position – may be as much about potential as about actual relative advantage, a point argued by, for example, Gershuny (2002a,b), Breen (2004), Noble (2002), Pahl (1996[1989], p.89) and Sørensen (1991). For aggregates of people, then, the patterns of association between origins and initial class are not any more valid as an indicator of transmission than are the patterns between origins and current class, even though the latter is inevitably taken at arbitrary points in individuals' lives. Investigating current class, which most studies of social mobility are constrained to do, remains, for this reason, important.

Our final pair of conclusions is methodological. The first of these is that migration within the UK did not seem to make any important difference to our results: we would have reached the same conclusions by restricting attention to those who were living in the country in which they were born as we have by including those who have moved around Britain. That is encouraging for analysis of surveys confined to one of the three countries, because it suggests that losing track of migrants would not distort the results.

The second methodological conclusion is that the comparative study of social mobility can find interesting topics to investigate at social levels lower than that of the state. The theories which are usually put forward to explain comparisons among state-defined territories tend, on the whole, to make no reference to states as such: they are theories such as modernisation or post-industrialism. To be truly general, such theories have to be able to explain sub-state comparisons as well. They work here for the comparison of Scotland with England, but the Welsh partial divergence suggests that these theories do not apply without modification.

Appendix : The British Household Panel Study

The data are from the first nine sweeps of the British Household Panel Study, 1991-1999. The BHPS was inaugurated in 1991 primarily – as the name implies – to track individuals' experience over time; it is funded by the ESRC and is carried out by the Research Centre on Micro-Social Change at Essex University. A rich set of information was collected in the first few waves of the survey on respondents' earlier lives, including date and country of birth, and the work which the respondents' parents were doing when the respondent was aged 14 (from which social class schemes may be derived). These baseline data were also then collected in 1999 from enhanced samples in Scotland and Wales. The objective of the original survey was to have 5,000 households throughout the UK, and thus about 10,000 adults (aged at least 16, although a few 15-year-olds appear in the data set), adding in all new adult members of households which these members subsequently formed; the sample was selected from the Postcode Address File, with households selected randomly within addresses. The 1999 enhancements augmented the Scottish and Welsh samples to about 1,500 households each, yielding total samples sizes in these countries of around 3,000 adults (including the surviving members from the original sample); there are approximately 9,000 sample members in England. The new sample included full representation of the area north and west of the Great Glen in Scotland, although the original sample did not. The present analysis uses only those sample members from the earlier waves who were still in the study at wave nine. Weights are used to compensate for non-response, and – when analysing data from the whole of Britain – to compensate for what is now the over-sampling of Scotland and Wales. Because people who have not answered a particular question at one wave may be asked it again at a later wave, and because some information (such as current employment) is up-dated at each wave, the data set used here has been collated by matching all of the first nine waves. Further information is available from the survey's web site, at www.iser.essex.ac.uk/bhps/index.php.

The BHPS variables we have used are as follows. In the convention of the BHPS documentation, we refer to waves of the survey by the prefix 'w'. Thus, for example, 'wqfedhi' means the information on educational attainment as recorded in wave 'w', where, in BHPS terminology, w can run from a to i.

Place of birth (B)

Constructed from wPLBORND and wPLBORNC, available for w = a to i.

Place of residence in 1999

Constructed from IREGION.

Gender

As recorded in wave i: ISEX.

Class of origin (O)

Constructed from father's class (APAGOLD, HPAGOLD, IPAGOLD) and mother's class (AMAGOLD, HMAGOLD AND IMAGOLD). Parents' class was not collected at other waves.

Birth cohort (C)

Constructed from age at wave i: IAGE.

Current class (D)

Constructed from respondent's current class (IJBGOLD) and, where that was missing, the current class of other people in the same household at wave i (as defined by IHID).

Initial class (D_1)

For respondents in the main BHPS sample, constructed from information collected at wave c: the variable CJ1GOLD as measured for the job recorded in variable CLJSEQ as the respondent's first job after leaving full-time education. For respondents entering the sample from wave h onwards the variables HJ1GOLD and IJ1GOLD, the latter thus being the main source for the samples in Wales and Scotland.

Educational attainment (E)

Constructed from cumulative highest attainment as recorded at wave i: IQFEDHI.

Miscellaneous

The weighting variable is IXRWTSW1. Matching between waves is done by PID.

References

Blane, D., Davey Smith, G. and Hart, C. (1999), 'Some social and physical correlates of intergenerational social mobility: evidence from the West of Scotland Collaborative Study', *Sociology*, 33, pp. 169-83.

Breen, R. (2001), 'A Weberian approach to class analysis', in Wright, E. O. (ed.), *Alternative Foundations of Class Analysis*, University of Wisconsin, Maddison, pp. 40-59.

Breen, R. (2003), 'The comparative study of social mobility: a review', paper prepared for the Changequal Network meeting, Mannheim, April 2003.

Breen, R. (2004), 'Social fluidity', working paper, Nuffield College, Oxford.

Breen, R. and Luijkx, R. (forthcoming), 'Social mobility in Europe between 1970 and 2000', ch. 3 in Breen, R. (ed.), *Social Mobility in Europe*, Oxford: Oxford University Press.

Breen, R. and Whelan, C. T. (1992), 'Explaining the Irish pattern of social fluidity: the role of the political', in Goldthorpe, J. H. and Whelan, C. T. (eds), *The Development of Industrial Society in Ireland*, Oxford: Oxford University Press, pp.

Breen, R. and Whelan, C. T. (1999), 'Social mobility in Ireland: a comparative analysis', in Heath, A. F., Breen, R. and Whelan, C. T. (eds), *Ireland North and South: Perspectives from Social Science*, Oxford: Oxford University Press and British Academy, pp. 319-39.

Erikson, R and Goldthorpe, J. H. (1993), *The Constant Flux: A Study of Class Mobility in Industrial Societies*, Oxford: Clarendon Press.

Gershuny, J. (2002a), 'A new measure of social position: social mobility and human capital in Britain', *Working Papers of the Institute for Social and Economic Research*, paper 2002-2, Colchester: University of Essex.

Gershuny, J. (2002b), 'Beating the odds (2): a new index of intergenerational social mobility', *Working Papers of the Institute for Social and Economic Research*, paper 2002-18, Colchester: University of Essex.

Goldthorpe, J. H. (1987), *Social Mobility and Class Structure in Modern Britain*, Oxford: Clarendon Press, second edition.

Halsey, A. H. (1977), 'Towards meritocracy? The case of Britain', in Karabel, J. and Halsey, A. H. (eds), *Power and Ideology in Education*, Oxford: Oxford University Press, pp. 173-86.

Hellevik, O. (1997), 'Class inequality and egalitarian reform', *Acta Sociologica*, 40, pp. 377-98.

Iannelli, C. and Paterson, L. (2004), 'Education and social mobility in Scotland', working paper, Centre for Educational Sociology, Edinburgh University.

Marshall, G., Rose, D., Newby, H. and Vogler, C. (1988), *Social Class in Modern Britain*, London: Hutchinson.

Marshall, G. and Swift, A. (1993), 'Social class and social justice', *British Journal of Sociology*, 44, pp. 187-211.

Marshall, G. and Swift, A. (1999), 'On the meaning and measurement of inequality', *Acta Sociologica*, 1999, pp. 241-50.

Marshall, G., Swift, A. and Roberts, S. (1997), A*gainst the Odds? Social Class and Social Justice in Industrial Societies*, Oxford: Clarendon Press.

McCrone, D. (1992) *Understanding Scotland: The Sociology of a Nation*. London: Routledge.

Noble, T. (2000), 'The mobility transition: social mobility trends in the first half of the twenty-first century', *Sociology*, 34, pp. 35-51.

Pahl, R. (1996 [1989]), 'Is the emperor naked? Some questions on the adequacy of sociological theory', in Lee, D. J. and Turner, B. S. (eds), *Conflicts About Class*, London: Longman, pp. 89-97 (abridged from *International Journal of Urban and Regional Research*, 13, pp. 109-20).

Parsons, T. (1994), 'Equality and inequality in modern society, or social stratification revisited', in Grusky, D. (ed.), *Social Stratification. Class, Race and Gender in Sociological Perspective*, Boulder: Westview Press, p p.670-85.

Paterson, L. and Iannelli, C. (2004), 'Social class and educational attainment: a comparative study of England, Wales and Scotland', working paper, Centre for Educational Sociology, Edinburgh University.

Payne, C., Payne, J. and Heath, A. (1994), 'Modelling trends in multi-way tables', in Dale, A. and Davies, R. B. (eds), *Analysing Social and Political Change*, London: Sage, pp. 43-74.

Payne, G. (1987), *Employment and Opportunity*, London: MacMillan Press.

Payne, G. and Roberts, J. (2002), 'Opening and closing the gates: recent developments in male social mobility in Britain', *Sociological Research Online*, 6.

Ringen, S. (1997), *Citizens, Families and Reform*, Oxford: Clarendon.

Saunders, P. (1995), 'Might Britain Be a Meritocracy', *Sociology*, 29, pp. 23-41.

Savage, M. (2000), *Class Analysis and Social Transformation*, Buckingham: Open University Press.

Sørensen, A. B. (1991), 'On the usefulness of class analysis in research on socila mobility and socioeconomic inequality', *Acta Sociologica*, 34, pp. 71-87.

Swift, A. (2000), 'Class analysis from a normative perspective', *British Journal of Sociology*, 51, pp. 663-79.

Swift, A. and Marshall, G. (1997), 'Meritocratic equality of opportunity: economic efficiency, social justice, or both?', *Policy Studies*, 18, pp. 35-48.

Vermunt, J. K., (1997), *LEM: A General Program for the Analysis of Categorical Data*, available from the web site of the University of Tilburg at http://www.tilburguniversity.nl/.

Treiman, D. J. (1970), 'Industrialisation and social stratification', in Laumann, E. O. (ed.) *Social Stratification: Research and Theory for the 1970s*, Indianapolis: Bobbs-Merrill, pp.207-34.

Whelan, C. T. (2004), 'Economic boom and social mobility: the Irish experience', working paper, Dublin: Economic and Social Research Institute.

Table 1

Distribution of origins and destinations, by country of birth, among people aged 23-62 in 1999

Class	born in England		born in Wales		born in Scotland	
	origin	destination	origin	destination	origin	destination
Higher grade professional (I)	15.1	18.2	13.2	20.5	16.0	17.1
Lower grade professional (II)	14.4	22.0	15.5	17.3	11.1	22.3
Routine non-manual (IIIa,b)	17.0	21.0	14.1	17.5	18.1	22.3
Self-employed (IVa,b,c)	11.8	9.2	11.4	9.9	11.1	7.2
Skilled (V,VI)	24.5	13.9	23.8	16.4	24.8	14.6
Unskilled (VIIa,b)	17.1	15.6	22.0	18.4	18.9	16.5
Dissimilarity index comparing origins and destinations	15		13		17	
Sample size	*4754*		*1053*		*1523*	

Origin class defined by dominance rule; destination class defined by highest-class person in household when respondent had no class. Omits others. Categories of Goldthorpe scheme contributing to each summary category are shown in brackets.

Weighted; sample sizes unweighted.

Table 2

Dissimilarity index comparing countries of birth, by birth cohort

	born in Wales		born in Scotland	
	comparing origins	comparing destinations (current job)	comparing origins	comparing destinations (current job)
born in England:				
all	6	8	4	3
born 1937-46	15	13	11	12
born 1947-56	7	11	6	6
born 1957-66	8	6	6	6
born 1967-76	14	12	9	3
born in Wales:				
all			8	10
born 1937-46			11	24
born 1947-56			9	13
born 1957-66			13	11
born 1967-76			16	13

sources: Tables 1 and 5.

Table 3

Social mobility, by country of birth, among people aged 23-62 in 1999

mobility	born in England	born in Wales	born in Scotland
downward	31.2	31.6	30.6
immobile	24.2	22.8	24.3
upward	44.5	45.6	45.1
Sample size	*4754*	*1053*	*1523*

Based on class categories shown in Table 1.
Weighted; sample sizes unweighted.

Table 4

Results of log-linear models of origin class, current class and birthplace

	Model	df	L^2
1	O, D, B, OD, OB, DB	50	51.3
2	O, D, B, OD, OB	60	89.0*
		(-50)	(-69.9)*
3	O, D, B, OD, OB, ODB	10	19.1*

Unweighted data. An asterisk indicates p-value less than 0.05.

df = residual degrees of freedom.

O = origin class (Goldthorpe with 6 categories).

D = current class (Goldthorpe with 6 categories).

B = birthplace (England, Wales, Scotland).

Table 5

Distribution of origins and destinations, by birth cohort and country of birth, among people aged 23-62 in 1999

Class	born in England							
birth cohort	1937-46		1947-56		1957-66		1967-76	
	origin	dest'n	origin	dest'n	origin	dest'n	origin	dest'n
Higher grade professional	8.8	16.7	11.4	18.0	18.7	20.5	20.0	16.6
Lower grade professional	11.2	19.6	14.7	20.6	14.0	22.9	17.5	24.4
Routine non-manual	10.2	21.2	16.7	22.1	18.8	19.9	20.7	21.1
Self-employed	12.0	11.3	10.7	9.6	11.6	9.9	13.2	6.2
Skilled	33.3	12.9	27.1	14.2	21.7	12.4	17.8	16.6
Unskilled	24.5	18.3	19.3	15.5	15.2	14.4	10.9	15.1
Dissimilarity index comparing origins and destinations	27		18		12		12	
Sample size	*806*		*1216*		*1482*		*1250*	
	born in Wales							
birth cohort	1937-46		1947-56		1957-66		1967-76	
	origin	dest'n	origin	dest'n	origin	dest'n	origin	dest'n
Higher grade professional	12.3	17.2	8.6	22.1	20.0	22.9	10.8	17.6
Lower grade professional	15.8	19.0	16.2	14.4	16.2	19.0	13.5	17.6
Routine non-manual	3.5	13.8	18.1	17.3	11.4	19.0	20.3	17.6
Self-employed	14.0	17.2	8.6	9.6	11.4	10.5	13.5	4.1
Skilled	24.6	19.0	24.8	15.4	21.9	11.4	24.3	21.6
Unskilled	29.8	13.8	23.8	21.2	19.0	17.1	17.6	21.6
Dissimilarity index comparing origins and destinations	22		15		13		15	
Sample size	*177*		*296*		*328*		*252*	
	born in Scotland							
birth cohort	1937-46		1947-56		1957-66		1967-76	
	origin	dest'n	origin	dest'n	origin	dest'n	origin	dest'n
Higher grade professional	9.8	13.7	12.8	20.7	16.4	16.4	23.7	15.8
Lower grade professional	7.6	16.0	10.1	23.4	11.9	22.8	13.9	25.1
Routine non-manual	11.4	24.4	16.0	21.3	19.6	21.5	23.1	23.4
Self-employed	15.2	9.2	10.6	6.9	11.9	8.2	7.5	4.1
Skilled	25.8	9.9	27.7	13.8	26.5	16.4	19.1	17.0
Unskilled	30.3	26.7	22.9	13.8	13.7	14.6	12.7	14.6
Dissimilarity index comparing origins and destinations	25		27		14		13	
Sample size	*221*		*390*		*503*		*409*	

Origin class defined by dominance rule; destination class defined by highest-class person in household when respondent had no class. Omits others.

Weighted; sample sizes unweighted.

Table 6

Social mobility, by birth cohort and country of birth, among people aged 23-62 in 1999

Mobility				born in England	
	birth cohort	1937-46	1947-56	1957-66	1967-76
downward		24.5	27.8	32.9	38.7
immobile		23.7	23.5	23.9	26.0
upward		51.9	48.7	43.2	35.2
Sample size		*806*	*1216*	*1482*	*1250*
				born in Wales	
	birth cohort	1937-46	1947-56	1957-66	1967-76
downward		29.8	29.8	32.4	33.8
immobile		21.1	17.3	29.5	23.0
upward		49.1	52.9	38.1	43.2
Sample size		*177*	*296*	*328*	*252*
				born in Scotland	
	birth cohort	1937-46	1947-56	1957-66	1967-76
downward		27.6	26.1	32.0	36.6
immobile		26.1	20.2	25.1	25.6
upward		46.3	53.7	42.9	37.8
Sample size		*221*	*390*	*503*	*409*

Based on class categories shown in Table 5.

Weighted; sample sizes unweighted.

Table 7

Results of log-linear models of origin class, current class, birthplace and birth cohort

	Model	df	L^2
1	all main effects, all 2-way interactions	335	390.7*
		(-75)	(-71.8)
2	all main effects, all 2-way interactions, ODC	260	318.9*
3	all main effects, all 2-way interactions, all 3-way interactions	150	189.5*
4	O, D, C, B, OD, OB, OC, CB	360	525.5*
		(-75)	(-147.2)*
5	O, D, C, B, OD, OB, OC, CB, ODC	285	378.3*
5a[1]	O, D, C, B, OD, OB, OC, CB, unidiff for OD interaction with C	332	480.2*
6	O, D, C, B, OD, OB, OC, CB, ODB, ODC, OCB	205	275.5*
		(-150)	(-191.5)*
7	O, D, C, B, OD, OB, OC, CB, ODB, ODC, OCB, ODCB	55	84.0*

Unweighted data. An asterisk indicates p-value less than 0.05.

df = residual degrees of freedom.

O = origin class (Goldthorpe with 6 categories).

D = current class (Goldthorpe with 6 categories).

B = birthplace (England, Wales, Scotland).

C = birth cohort (4 categories: 1937-46, 1947-56, 1957-66, 1967-76).

[1] *See Table 9.*

Table 8

Upward mobility by educational attainment and birth cohort, among people aged 23-62 in 1999

	birth cohort			
% who have been upwardly mobile at current class	1937-46	1947-56	1957-66	1967-76
Lower than lower secondary education	48.0	40.0	36.2	38.7
sample size	*247*	*233*	*170*	*77*
Lower secondary education	55.5	50.8	46.2	33.5
sample size	*107*	*166*	*238*	*141*
Upper secondary education	41.4	54.0	42.5	34.1
sample size	*40*	*107*	*123*	*117*
Higher education below degree	54.3	53.0	44.2	38.1
sample size	*167*	*289*	*275*	*206*
Degree	55.8	56.1	43.2	34.9
sample size	*51*	*132*	*160*	*137*

Weighted; sample sizes unweighted.

Combines those born in England, Wales and Scotland.

Table 9

Results of unidiff models
(Details and expansion of models 4, 5 and 5a in Table 7)

Model (numbers from Table 7)		df	L^2
5a	O, D, C, B, OD, OB, OC, CB, unidiff for OD interaction with C	332	480.2*
	comparison with model 4	(-28)	(-45.3)*
	comparison with model 5	(+47)	(+101.9)*

Separately for each country:		df	born in England	born in Wales	born in Scotland
4C: analogous to 4	O, D, C, OD, OC	90	158.3*	120.2*	113.2*
		(-75)	(-128.9)*	(-102.9)*	(-97.5)*
5C: analogous to 5	O, D, C, OD, OC, ODC	15	29.4*	17.3	15.7
analogous to 5a	O, D, C, OD, OC, unidiff for OD interaction with C	62	99.3*	79.3 (p=0.07)	75.0 (p=0.13)
	comparison with model 4C	(-28)	(-59.0)*	(-40.9)	(-38.2)
	comparison with model 5C	(+47)	(+69.9)*	(+62.0)	(+59.3)

unidiff log-multiplicative parameters (cohorts)			
1937-46 [reference category]	1	1	1
1947-56	1.40	1.47	1.41
1957-66	1.03	1.23	1.15
1967-76	0.95	1.01	1.10

Unweighted data. An asterisk indicates p-value less than 0.05.

df = residual degrees of freedom.

O = origin class (Goldthorpe with 6 categories).

D = current class (Goldthorpe with 6 categories).

B = birthplace (England, Wales, Scotland).

C = birth cohort (4 categories: 1937-46, 1947-56, 1957-66, 1967-76).

Table 10

Distribution of origins and first job after leaving full-time education, by country of birth, among people aged 23-62 in 1999

Class	born in England		born in Wales		born in Scotland	
	origin	destination	origin	destination	origin	destination
Higher grade professional (I)	13.7	3.8	11.8	3.9	13.5	4.1
Lower grade professional (II)	14.0	10.4	14.4	9.7	10.9	10.5
Routine non-manual (IIIa,b)	16.4	39.5	13.4	33.8	16.3	36.9
Self-employed (IVa,b,c)	12.0	1.0	11.0	1.3	10.8	1.1
Skilled (V,VI)	25.3	22.3	25.5	20.9	26.8	22.7
Unskilled (VIIa,b)	18.7	22.9	23.9	30.4	21.6	24.7
Dissimilarity index comparing origins and destinations	27		27		24	
Sample size	*4501*		*1218*		*1649*	

Origin class defined by dominance rule. Omits those with no information on origin class or initial class.
Weighted; sample sizes unweighted.

Table 11

Dissimilarity index comparing countries of birth, by birth cohort

	born in Wales		born in Scotland	
	comparing origins	comparing destinations (first job)	comparing origins	comparing destinations (first job)
born in England:				
all	6	8	5	3
born 1937-46	10	12	8	5
born 1947-56	7	5	6	6
born 1957-66	10	10	5	6
born 1967-76	12	14	9	6
born in Wales:				
all			6	6
born 1937-46			7	13
born 1947-56			9	7
born 1957-66			11	10
born 1967-76			12	13

sources: Tables 10 and 14.

Table 12

Social mobility at first job after leaving full-time education, by country of birth, among people aged 23-62 in 1999

mobility	born in England	born in Wales	born in Scotland
downward	41.8	43.6	39.3
immobile	25.5	25.5	26.5
upward	32.6	31.0	34.2
Sample size	*4501*	*1218*	*1649*

Based on class categories shown in Table 10.

Weighted; sample sizes unweighted.

Table 13

Results of log-linear models of origin class, initial class and birthplace

	Model	df	L^2
1	O, D_1, B, OD_1, OB, D_1B	50	66.0
2	O, D_1, B, OD_1, OB	60	99.6*
		(-50)	(-78.0)*
3	O, D_1, B, OD_1, OB, OD_1B	10	21.6*

Unweighted data. An asterisk indicates p-value less than 0.05.

df = residual degrees of freedom.

O = origin class (Goldthorpe with 6 categories).

D_1 = initial class (Goldthorpe with 6 categories).

B = birthplace (England, Wales, Scotland).

Table 14

Distribution of origins and first job after leaving full-time education, by birth cohort and country of birth, among people aged 23-62 in 1999

	born in England							
birth cohort	1937-46		1947-56		1957-66		1967-76	
	origin	dest'n	origin	dest'n	origin	dest'n	origin	dest'n
Higher grade professional	9.2	3.7	11.0	4.0	17.5	4.8	17.7	2.1
Lower grade professional	10.4	7.8	14.2	13.3	14.6	11.1	17.8	8.1
Routine non-manual	9.9	41.2	16.9	41.2	19.2	38.2	19.6	36.8
Self-employed	12.5	0.4	10.8	0.4	11.1	1.3	14.7	2.3
Skilled	32.5	24.3	26.6	21.1	22.0	20.0	18.8	25.5
Unskilled	25.5	22.6	20.6	20.0	15.7	24.4	11.4	25.3
Dissimilarity index comparing origins and destinations	31		24		28		38	
Sample size	*956*		*1203*		*1412*		*930*	
	born in Wales							
birth cohort	1937-46		1947-56		1957-66		1967-76	
	origin	dest'n	origin	dest'n	origin	dest'n	origin	dest'n
Higher grade professional	12.0	3.7	7.8	6.1	15.6	0.9	12.2	5.5
Lower grade professional	10.8	6.1	17.2	13.0	15.6	9.1	12.2	8.2
Routine non-manual	6.0	31.7	17.2	37.4	11.0	34.5	18.9	28.8
Self-employed	10.8	1.2	7.8	0.0	12.8	1.8	14.9	2.7
Skilled	27.7	23.2	25.9	20.9	23.9	20.9	24.3	19.2
Unskilled	32.5	34.1	24.1	22.6	21.1	32.7	17.6	35.6
Dissimilarity index comparing origins and destinations	27		20		35		28	
Sample size	*277*		*336*		*348*		*257*	
	born in Scotland							
birth cohort	1937-46		1947-56		1957-66		1967-76	
	origin	dest'n	origin	dest'n	origin	dest'n	origin	dest'n
Higher grade professional	10.6	2.8	11.7	4.0	15.2	4.9	17.2	5.2
Lower grade professional	6.1	10.0	9.6	7.6	12.5	12.9	15.9	11.1
Routine non-manual	8.3	40.6	15.7	41.4	18.8	32.0	22.5	33.3
Self-employed	12.8	1.1	10.2	1.0	11.6	1.3	8.6	1.3
Skilled	30.6	20.6	27.4	23.2	26.8	22.7	21.2	24.8
Unskilled	31.7	25.0	25.4	22.7	15.2	26.2	14.6	24.2
Dissimilarity index comparing origins and destinations	36		26		25		24	
Sample size	*322*		*426*		*518*		*383*	

Origin class defined by dominance rule. Omits those with no information on origin class or initial class.

Weighted; sample sizes unweighted.

Table 15

Social mobility at first job after leaving full-time education, by birth cohort and country of birth, among people aged 23-62 in 1999

		born in England		
birth cohort	1937-46	1947-56	1957-66	1967-76
downward	32.5	36.1	46.9	55.4
immobile	26.8	27.4	24.9	21.9
upward	40.8	36.5	28.1	22.7
Sample size	*956*	*1203*	*1412*	*930*
		born in Wales		
birth cohort	1937-46	1947-56	1957-66	1967-76
downward	36.6	36.2	53.6	48.6
immobile	31.7	25.9	20.9	24.3
upward	31.7	37.9	25.5	27.0
Sample size	*277*	*336*	*348*	*257*
		born in Scotland		
birth cohort	1937-46	1947-56	1957-66	1967-76
downward	29.4	35.5	44.0	48.7
immobile	28.3	22.3	28.9	26.3
upward	42.2	42.1	27.1	25.0
Sample size	*322*	*426*	*518*	*383*

Based on class categories shown in Table 10.

Weighted; sample sizes unweighted.

Table 16

Results of log-linear models of origin class, initial class, birthplace and birth cohort

	Model	df	L^2
1	all main effects, all 2-way interactions	335	350.1
		(-75)	(-89.5)
2	all main effects, all 2-way interactions, OD_1C	260	260.6
3	all main effects, all 2-way interactions, all 3-way interactions	150	126.6
4	O, D_1, C, B, OD_1, OB, OC, CB	360	467.5*
		(-75)	(-146.9)*
5	O, D_1, C, B, OD_1, OB, OC, CB, OD_1C	285	320.6
6	O, D_1, C, B, OD_1, OB, OC, CB, OD_1B, OD_1C, OCB	205	218.1
		(-150)	(-143.7)
7	O, D_1, C, B, OD_1, OB, OC, CB, OD_1B, OD_1C, OCB, OD_1CB	55	74.4*

Unweighted data. An asterisk indicates p-value less than 0.05.

df = residual degrees of freedom.

O = origin class (Goldthorpe with 6 categories).

D_1 = initial class (Goldthorpe with 6 categories).

B = birthplace (England, Wales, Scotland).

C = birth cohort (4 categories: 1937-46, 1947-56, 1957-66, 1967-76).

Table 17

Migration within the UK, by social mobility and birth cohort, among people aged 23-62 in 1999

% not living in country of birth[1]	birth cohort				All
mobility[2]	1937-46	1947-56	1957-66	1967-76	
downward	15.9	15.9	12.8	9.0	13.0
immobile	13.8	9.9	11.2	7.2	10.4
upward	9.2	13.9	11.8	9.7	11.5
All	12.0	13.6	12.0	8.8	11.7

[1] *'Country' is defined as England, Wales, Scotland and Northern Ireland; by definition of the sample, all respondents are resident in the UK. Place of residence is where respondent was living in 1999.*

[2] *Mobility is defined as for current class in the earlier tables.*

Percentages are weighted.