

FULL RESEARCH REPORT

Education and Social Mobility in Scotland in the 20th Century (Award Reference Number R000239915)

1. Background

Although Scotland has often been a unit of analysis in mobility studies in the past, until now the most recent data for such work was from the early 1970s, and it related only to men. Sufficient distinctiveness of mobility patterns was found in these earlier studies to make an up-to-date study potentially interesting; but sufficient similarity was also found between Scotland and other societies to make the Scottish case of potentially wider significance. This context provided the overall rationale for the research.

There is considerable disagreement about whether social-class inequalities in modern societies are reducing, remaining constant or deepening over time. Modernisation theories would claim that modern economies lead to the advent of open and meritocratic societies in which individuals are allocated to certain occupations according to their educational credentials and not according to family ties and via direct inheritance. Thus, according to these theories, the more meritocratic selection of job applicants would promote a process of equalisation of opportunities and hence would increase social mobility. These theories, however, do not pay adequate attention to the association between social class of origin and educational attainment. Education, instead of promoting an equalisation process, may have a function of reproducing social inequalities across generations. In this view middle-class families, facilitated by the larger availability of economic and cultural resources, tend to invest in their children's education more than other families. This ultimately results in a clear advantage when their children enter the labour market and ensures the transmission of social advantages across generations.

In Great Britain, studies of social mobility have shown that absolute mobility has increased and that, for at least the last 40 years, upward mobility has been more frequent than downward mobility. Although in some respects this is an equalisation process, the results relating to absolute mobility do not tell us much about changes in social-class inequalities, because relative differences may be preserved even though upward mobility is widespread. Studies of relative mobility show that the relative advantage of belonging to a middle class family compared with a working-class family has not changed over time. We follow these earlier authors by referring to relative mobility as social fluidity: it measures the difference in the chances of reaching particular class destinations between people from different class origins.

Results from the earlier studies showed Scotland to be similar to other developed societies. There was a large amount of absolute mobility, especially upward mobility, which benefited men in lower non-manual classes as well as those in the manual groups, but mainly because of the expansion of the service class. As a result, although many more men than before had been upwardly mobile, the relative chances of being upwardly mobile, comparing different classes of origin, had not changed. Such data related to the patterns of opportunity for men that prevailed between approximately the first and fifth decades of the twentieth century. The question is whether the patterns may have changed if we move forward by about a whole generation, to people born between the 1930s and the 1970s. Since that period also saw a sharp rise in the propensity of women to enter and to stay in the labour market, it becomes possible to look at their mobility patterns too. This gender revolution accompanied, and was to some extent a result of, structural change in the economy, exemplified in the growth of service-class jobs.

This period also saw a massive increase in educational participation, and the introduction of comprehensive secondary schooling. Scottish secondary schooling is more comprehensive than secondary schooling in the rest of UK and educational participation is generally higher in Scotland. Research on education in Scotland has found that the gap between pupils from middle-class and working-class families in educational attainment in public examinations has reduced over time. This decline in social inequalities has been attributed to comprehensive schooling. Given the similar labour market structure in all parts of Britain, a comparison of social mobility across Britain can test whether there are any independent effects of education system, keeping constant the structure of employment opportunities. Have these social and policy changes allowed absolute mobility to continue to expand, did social fluidity change, and is the Scottish experience distinctive?

2. Objectives

The original aims and objectives as set out in section 18 of our ESRC application form were as follows (the parts of section 4 below where they are addressed are noted under each).

- (1) To provide an up-to-date map of social mobility in Scotland during the twentieth century (4.1, 4.2 and 4.4).
- (2) To contribute to the understanding of the role of education in social mobility (4.3).
- (3) To analyse the extent to which the development of a comprehensive secondary education system has played a significant role in the process of social mobility in Scotland when compared to England and Wales (4.3).
- (4) To use the empirical evidence on changes in social structure and its determining factors to contribute to current policy debates about social inclusion (4.5).

We have met all these objectives and we have supplemented them with a further study:

- (5) a study of variation among religious groups in social mobility, taking advantage of the fortuitous conjunction of our research with policy debates on 'sectarianism' in Scotland (4.4).

3. Methods

The project was based on the secondary analysis of three large social surveys, which are briefly described below. The use of the first survey (3.1) was as in the proposal; the other two (3.2 and 3.3) were added to broaden and deepen the analysis.

3.1 Scottish Household Survey (SHS)

The SHS has been carried out annually since 1999 on behalf of the Scottish Executive. A module of questions on parental occupation when respondents were 14 was included in the 2001 survey, and it is this which forms the basis of the analysis here. The survey obtained responses from over 15,000 adults; we used at most about 8,500 of these because we restrict attention to people of working age (25 to 64). Four birth-cohorts were selected to analyse trends during the 20th century; the rationale for selecting them was set out in the proposal, and may be summarised briefly as:

1937-1946: those who experienced a stable dual system of secondary schooling and entered the labour market during the years of post-war economic reconstruction;

1947-1956: those who experienced a mature dual system and the period of the post-war economic boom;

1957-1966: those who experienced a comprehensive education system and the last years of post-war economic boom;

1967-1976: those who experienced a comprehensive education system and the period of de-industrialisation.

This survey also provided information about respondents' religion, and so was used for our extra analysis on religious groups.

3.2 *Scottish Mobility Study (SMS), 1974*

The SMS of 1974 is a cross-sectional survey of men aged between 20 and 64 resident in Scotland. The study collected very detailed information on parental occupation and respondents' occupation. We selected a sample of men born between 1910 and 1949 (that is aged 25-64 at the time of the survey) and compared them with men born between 1937 and 1976 in the SHS. The sample size available for analysis was at most 4079. The aim was to compare mobility patterns at two widely separated points in time. This allowed us to look at a longer observation window which dated back to people born nearer the beginning of the twentieth century than the SHS allowed. We also used the information on sector of activity present in both the SMS and the SHS to examine variations across sectors in absolute and relative mobility.

3.3 *British Household Panel Study (BHPS)*

The BHPS is used here essentially as a high-quality cross-sectional survey, not as a true panel. In 1999, the original (1991) panel was enhanced in Scotland and Wales to give around 3,000 sample members in each of these countries, in addition to the approximately 9,000 sample members in England. Because of the survey's rich life-history data, it allowed us to compare social mobility in England, Scotland and Wales, using the same birth-cohorts approach as outlined in 3.1 above. We examined mobility according to where respondents were born, and thus were able to assess whether using place of current residence (as we were forced to do in the SHS) might have biased the results. In fact, the same conclusions were reached with place of birth and place of residence (WP3). Moreover, we analysed mobility patterns using also the information on first job entered and, once again, the main findings were not substantially different from the ones related to current job. Although the BHPS was thus valuable for comparative purposes, its Scottish sample size was much less than in the SHS.

3.4 *Use of birth cohorts*

Throughout the duration of the project we tried to address a number of possible limitations related to the use of cohort analysis. In brief, our conclusions on this issue are that both mortality and migration may have biased our results in a conservative direction, in the sense of underestimating change in absolute mobility (WP1 and WP3). Moreover, our results related to the youngest cohort - those aged 26-34 in 2001 - could be biased by the fact that they would not yet have reached occupational maturity. In our presentation of the results, changes in patterns of social mobility in this cohort were interpreted as important only if they were supported by a similar change in the previous cohort (1957-66).

3.5 *Social class*

Social class of both origin and destination is measured by the Goldthorpe schema, as is standard in the international studies of social mobility with which we wanted to compare our results. In fact, though, similar patterns were found from the SHS when Registrar General's class was used instead. In most of our work we analysed five classes: service class professionals (Classes I and II), routine non-manual workers (Class III), petty bourgeoisie (Class IV), skilled workers (Classes V and VI) and non-skilled workers (Class VII). The small sample sizes for Classes IVc (farmers) and VIIb (agricultural labourers) prevented us from using the 7-class Goldthorpe schema. We sometimes distinguished between Class I and Class II to investigate whether our results would have changed using a more detailed classification but in fact they did not. Social class of destination was determined by the individual's own current or latest occupational status. Social class of origin was constructed

in a synthetic way using the method of dominance: in the cases in which one parent was unemployed or inactive, the social class of origin is determined by the occupational status of the employed parent. If both parents were employed, the parent with the highest occupational status is used.

3.6 Statistical methods

The data were mainly analysed using mobility tables, odds-ratios and log-linear modelling implemented in the package LEM, and following the general approach to modelling mobility tables in the literature.

4. Results

4.1 Trends in social mobility

There remains a great deal of absolute social mobility, and upward mobility clearly predominates over downward (WP1, Paterson, Iannelli, Bechhofer, McCrone, 2004). Among adults of working age in 2001, two thirds had been socially mobile from their childhood, and more than two thirds of that mobility had been in an upward direction. Nevertheless, social mobility is now coming together with the slowing down of long-term occupational change to give the first evidence that the rise in this kind of mobility might be coming to an end. Because upward mobility has been common for at least five decades, the parents of people born since the 1960s have themselves benefited from it to such an extent that there is less room for their children to move further up. This process is exacerbated by a reduction in the rate of increase in the proportion of jobs that are non-manual, and, within that, the proportion that are professional. There is little evidence that downward mobility is growing, but, for people born since the 1960s, there has been a rise of immobility. These broad patterns from the SHS were replicated in the BHPS, and were also there seen to be similar to those in England and Wales (WP3).

Patterns of social mobility continue to be driven by the overall structure of the economy: in the loglinear model of origin, destination and cohort, the association between origin and destination has barely changed for fifty years. Thus rates of absolute mobility are determined by the relative sizes of the categories in the margins, and do not reflect changing patterns of social inequalities in the chances of being mobile. This was a firm conclusion of earlier mobility studies when upward mobility was probably at its maximum. It remains true now. Again, these conclusions were similar for England and for Wales, as found in the analysis of the BHPS (WP3). Through comparison with recent British and international studies, we can also then conclude that Scotland is similar to most developed societies.

Nevertheless, by comparing the 2001 SHS with the 1974 SMS, we can conclude that, over a longer time period, there has been a rise in social fluidity in Scotland: among people who entered the labour market after the second world war, the relative chances of being mobile have become more equal than they were among people who entered no later than the 1950s (WP6). In the summary of trends in relative mobility reported by Breen at the project's specialist seminar in October 2004, Scotland moved from being, in international terms, at the upper end of inequality of mobility chances among surveys conducted in the 1970s to being in the middle of the range among surveys conducted around the turn of the new century.

4.2 Gender

Patterns of both absolute and relative mobility differ little between men and women on average. The major differences are related to the segmentation of the labour market in which women are more likely to occupy lower non-manual occupations and men skilled-manual occupations. In the youngest cohorts, women have caught up with men and nowadays they are equally or even more likely to occupy service-class positions (even though at lower levels) than men (WP1 and WP3). However, there are gender differences within particular

industrial sectors. Women's main opportunity for upward mobility has been in services (e.g. finance, health and education) and in these sectors, inequality of mobility is greater among women than among men: reaching a professional position in e.g. banking and insurance depends more on class origin for women than for men (WP7).

4.3 Education

We undertook the analysis of the role of education in the process of intergenerational social mobility in two phases. The first was to understand the extent to which, if at all, social-class inequalities in educational outcomes had been mitigated over the four cohorts. This question was pursued mainly by means of the BHPS (WP2). This analysis led us to propose a refinement of the well-known two-stage model of Raftery and Hout of 'maximally maintained inequality'. By detailed analysis of inequality, overall attainment, and stages of educational reform in the three countries, we concluded that the Raftery and Hout model of change needed to have four stages, not two:

Elite systems, characterised by low levels of average attainment and high levels of inequality.

Tracked merit selection, showing less inequality than elite systems because able members of disadvantaged classes are selected into academic tracks.

Untracked merit selection, the result of attempts to base the whole system on truly merit-based selection. This stage yields a large rise in overall attainment, but, because the middle classes prove adept at taking advantage of the new opportunities on offer, educational inequality rises again.

Universal: It would be only at this final stage that the full strength of Raftery and Hout's second stage would come into effect.

In the 1960s, we suggested, Scotland moved closer to the third stage than England and Wales. Only when the comprehensive secondary system had settled down in the 1980s did Scottish inequality fall, when overall levels of attainment were higher in Scotland than in England and Wales.

The second phase of our analysis of education was to investigate the role of education in the process of intergenerational social mobility and whether these educational reforms had any effect on social mobility. We found that education plays an intermediary role between origin and destination but does not account for most of their association (WP5). In the youngest cohorts, its mediating effect has weakened which suggests that other ways are emerging through which middle-class parents transmit class advantages to their children. Moreover, the association between social class of origin and social class of destination was weaker for more educated people than for less educated people. This means that, once a person reaches an upper-secondary or tertiary qualification, the effect of social class of origin is less important in determining their later social class than for a person who has only compulsory education or less. The same result can be interpreted in a different way: if middle-class children do not reach the highest educational qualifications, they have other family resources (eg financial support or social networks) that enable them to maintain their social class of origin.

In relation to the effect of educational reforms on social mobility, our conclusion was that there was none (WP5 and WP2): the main explanation of changing patterns of mobility was the changing occupational structure. We would tentatively suggest that the reason for this might be the complexity of the relationship between origins and attainment outlined in our refinement of the model of Raftery and Hout: if expanding education first leads to increasing inequality, then it is unlikely to lead to a reduction of inequality in social mobility.

4.4 Sector of activity, region and religion

The conclusion from the results summarised in 4.1 is thus that mobility is mainly driven by changes to the overall occupational structure. There are two aspects to this. One is again the

point that, as a greater proportion of the workforce came to be in professional and managerial jobs, the opportunity to move up the ladder increased, but also that as the process came to affect origin class as well as destination class, the scope for movement was constricted. The other point, however, has to do with the structural explanation of this: did expanding sectors of the economy tend to have more mobility than contracting ones? Limited evidence on this was available from the SHS, in which we could analyse rates of social mobility according to broad sectors of current employment (WP7). It was found that the expanding service sector did indeed have greater amounts of upward mobility than the manufacturing sector or the primary sector of agriculture, fishing and extractive industries; this was true of both what are sometimes called public services (e.g. education, health) and private services (e.g. finance, real estate). However, these service sectors also had greater inequality of mobility than the manufacturing and primary sectors: that is, the chance of being mobile was more tightly tied to origin class in the service sectors than in the other two.

There was also regional variation in mobility, of a similar sort: the economically expanding east of Scotland had greater inequality of mobility than the economically stagnant west and south (although there were no differences in absolute mobility) (WP7). This regional variation was only partly explained by the fact that the economy of the east has a larger service sector than the economy of the other regions.

Nevertheless, there was only a limited amount that the surveys allowed us to say about sector and region, because there was no information on the sectors through which respondents had passed in their careers, on the areas where they had been resident from the point in time when their origin class was measured, or on the sector of parents' social class. Only longitudinal data can allow us to investigate these topics. A fuller analysis of the longitudinal aspects of sector and region will be included in further work, as outlined in section 8 below.

On religion, the story was consistent with the overall one (WP4). For every cohort, there were no religious differences in social fluidity. Older Catholics had origins that were more likely to be working-class than any other religious group, but also had much higher rates of upward mobility. Younger Catholics were less disadvantaged in origin, and had absolute mobility experiences that were almost identical to other religious groups. This religious comparison thus offered a different test of the general claim that changes in absolute mobility are driven mainly by changes in occupational structure: the reasons why younger Catholics have a class pattern that is the same as other people of similar age is because the same opportunities of expanding professional employment have been opened to all.

4.5 Policy implications

The analysis has allowed us to draw two conclusions about the effects of social policy on social mobility and hence on social exclusion. The first is historical, and is inferred from the lack of any impact on social mobility of Scotland's fairly thorough introduction of comprehensive secondary schooling in the 1970s. If education could have an *independent* effect, then Scotland should show it; but it does not. The similarity of social mobility experience to England and Wales shows that wider social and economic reforms are more important. So if policy is relevant it has been Swedish kinds of redistributive social democracy, or perhaps policy on a social market of the type found in France and the Netherlands: these are countries where social fluidity has grown, unlike in any of the countries of Britain.

The second conclusion for policy is what might happen now that upward mobility is slowing down for the reasons explained in 4.1 above. There are two possible scenarios for the future. One is that educational expansion continues so that educational inequalities do start to fall significantly; this would happen as we move into the fourth stage of the model of educational expansion outlined in 4.3 above. If recruitment into the labour market remains broadly meritocratic, then that would, in due course, lead to an increase in social fluidity.

That would be the optimistic scenario. The pessimistic one would concern what might happen to educational policy in these same circumstances. Increasing social fluidity now entails an increase in absolute downward mobility, again because a much higher proportion of parents are middle-class than in the 1960s and earlier. As middle-class families seek to prevent their children from falling down the social ladder, there might be political pressure to differentiate attainment at the top end, an example of which would be differentiating between the status of particular higher education institutions, perhaps by charging differential fees: the best labour market rewards might then go to graduates from the highest-status universities populated by the most middle-class students. In such circumstances, social fluidity would at best remain unchanged and could start to worsen for the first time in at least half a century.

The overall conclusion for policy that sought to increase social fluidity would then be the importance of ensuring that the fourth stage of the model of educational expansion does lead to a reduction of inequality (for example, by not allowing differential fees), and also of ensuring that the labour market was encouraged to operate at least as meritocratically as it has been doing for the past half century.

5. Activities

The project has engaged in many dissemination activities as listed below:

22 January 2003, Oxford

Iannelli accepted an invitation to present a preliminary version of the paper *Education and Social Mobility in Scotland* at the Nuffield College Sociology Seminar.

17-18 May 2004, Paris

Iannelli was invited to participate in a conference on social indicators organised by the European research network ChangeQual (The Economic Change, Unequal Life-Chances and Quality of Life research network). The event was an important occasion for making contacts and speaking about the research with a number of very prominent international academics in social mobility studies and related fields.

8 October 2004, Edinburgh University

Invitational project seminar at which experts in social mobility debated the provisional conclusions of the project in the light of international experience. Speakers, as well as Iannelli and Paterson, were John Goldthorpe (Nuffield), Richard Breen (Nuffield) and Chris Whelan (ESRI, Dublin). Attendance (22) was from the universities of Aberdeen, Edinburgh, Oxford, Stirling and Strathclyde, from the Education and the Development Departments of the Scottish Executive and from the Scottish Higher Education Funding Council.

29 November 2004, Oxford

Iannelli was invited to present some results of the project at the Sociology Seminar Series in the University of Oxford. Her presentation entitled *Period and Cohort Effects in Social Mobility in Scotland* summarised the main project findings based on the analyses of the SHS and the SMS data.

1 March 2005, Edinburgh

Iannelli and Paterson accepted an invitation to present the results of their work to a public seminar organised by the Scottish Executive for users of the SHS. The audience of around 100 was mainly researchers from the Scottish Executive, Scottish local authorities, and other Scottish public-sector agencies.

21 March 2005, Edinburgh

Iannelli and Paterson met Adam Gamoran, Professor of Sociology of Education in the University of Wisconsin and Director of the Wisconsin Center for Education Research, to discuss the project results and receive advice on how to develop their research.

7 May 2005, Oslo

Iannelli presented the paper *Social Class and Educational Attainment: a Comparative Study of England, Wales and Scotland Education* at the Research Committee 28 on Social Stratification and Social Mobility of the International Sociological Association.

13 June 2005, Edinburgh University

End-of-project public conference at which the policy implications of the research results were discussed. Speakers, as well as Iannelli and Paterson, were Adam Swift (Balliol) and Steve Baron (London Institute of Education and Strathclyde); the event was chaired by Robert Cormack, principal of the UHI Millennium Institute. Attendance (66) came from eight universities in England and Scotland, the Scottish Executive, three Scottish local authorities, various public bodies in Scottish education, and various voluntary-sector organisations in Scottish education. At this conference, free places were made available to postgraduate research students, and 16 availed themselves of the offer.

31 March 2006, University of Ulster

Paterson has been invited to give the annual lecture at The Social and Policy Research Institute in the University of Ulster. His lecture will be based on the work conducted during this research project and will be entitled 'Social class, social mobility and social capital'.

6. Outputs

The Working papers from the project are available at the project web site, www.ces.ed.ac.uk/SocMobility/mobility.htm; some have been accepted for publication in journals and one has already been published as a chapter in a book. The current list of outputs is shown in Appendix 1. We also published two *CES Briefings* based on the main results from the project in 2005.

Other dissemination activities are listed in section 5 of this report.

7. Impacts

There has been significant and continuing interest in the project from senior researchers and research managers in the Scottish Executive and the Scottish Higher Education Funding Council, as evidenced in their attendance at the specialist seminar in October 2004 and at the end-of-project conference, and in their invitation to the project investigators to speak at the conference on the SHS held on 1 March 2005 (section 5).

8. Future Research Priorities

Iannelli has been awarded a three-year ESRC Research Fellowship to take this work forward (with bridging funding between the two projects coming from the University of Edinburgh Development Trust). The aims of the fellowship sum up the conclusions of the present project about the next phase of research that is required in this area. The over-arching methodological point is that a longitudinal approach is needed to understand better the processes by which social mobility comes about. The Fellowship will use the three main British birth cohorts (1946, 1958 and 1970), the young people's panel in the BHPS, and panel studies in Germany and Sweden. From a theoretical point of view, the planned research

proposes to combine Structural and Rational Choice theories to achieve a more comprehensive explanation of social mobility processes. It will investigate micro-level determinants of the process of intergenerational social mobility in the context of macro-level characteristics of national education systems (i.e. educational institutions and curricula).

Thus, the planned research will address questions such as the following:

- Does the type of school attended affect individuals' social class of destinations, after controlling for the effect of social class of origin, individuals' ability and other individual characteristics?
- Is there an effect of the curriculum taken at school on individuals' social class of destinations, after controlling for the effect of social class of origin and ability?
- How are social mobility processes mediated by educational credentials?
- How much is the effect of social class of origin on social class of destination mediated by the choice of school and curriculum?
- Has the effect of the type of school and curriculum on individuals' chances of being socially mobile changed over time?

APPENDIX 1: PROJECT PUBLICATIONS

Book chapter

Paterson, L., Iannelli, C., Bechhofer, F. and McCrone, D., (2004), 'Social class and social opportunity', ch.6 in Paterson, L., Bechhofer, F. and McCrone, D., *Living in Scotland*, Edinburgh: Edinburgh University Press, pp. 80-104.

Working Papers

WP1: Iannelli, C. and Paterson, L., 'Social Mobility in Scotland since the middle of the twentieth century', accepted by *Sociological Review*.

WP2: Paterson, L. and Iannelli, C. 'Social class and educational attainment: a comparative study of England, Wales and Scotland', submitted to *Sociology of Education*.

WP3: Paterson, L. and Iannelli, C. 'Patterns of social mobility: a comparative study of England, Wales and Scotland'.

WP4: Paterson, L. and Iannelli, C., 'Religion, social mobility and education in Scotland', accepted, subject to revision, by *British Journal of Sociology*.

WP5: Iannelli, C. and Paterson, L. 'Education and social mobility in Scotland', submitted to *European Societies*.

WP6: Iannelli, C. and Paterson, L. 'Period changes in men's class reproduction in Scotland, 1974-2001'.

WP7: Paterson, L. and Iannelli, C., 'A note on variations of social mobility in Scotland among industrial sectors and areas of residence'.

In preparation

WP8: Iannelli, C and Paterson L. 'Women's social mobility *via* marriage'.