TRENDS IN INTERGENERATIONAL CLASS MOBILITY IN MODERN BRITAIN: EVIDENCE FROM NATIONAL SURVEYS, 1972—2005
Author(s): John H. Goldthorpe and Colin Mills
Source: *National Institute Economic Review*, No. 205 (July 2008), pp. 83-100
Published by: Sage Publications, Ltd.
Stable URL: https://www.jstor.org/stable/23880782
Accessed: 18-12-2019 07:34 UTC

TRENDS IN INTERGENERATIONAL CLASS MOBILITY IN MODERN BRITAIN: EVIDENCE FROM NATIONAL SURVEYS, 1972–2005

John H. Goldthorpe and Colin Mills*

We present analyses of intergenerational social class mobility based on data from representative samples of the British population from 1972 to 2005. We distinguish throughout between absolute and relative rates of mobility. As regards absolute rates, we find little or no change in total mobility rates over the period covered. In the case of men, there is also little change in rates of upward and downward mobility – in contrast with the middle decades of the twentieth century when upward mobility steadily increased while downward mobility fell. This latter pattern does, however, prevail in the case of women. As regards relative rates, we again find, for men and women alike, an essential constancy over time. This, then, indicates that such changes as are apparent in absolute rates derive from shifts in class distributions rather than from any significant increase or decrease in social fluidity. Our results are contrary to the prevailing view in political and media circles that in Britain today the level of social mobility is in decline, although for men the pattern of mobility has become less favourable. We end with some remarks on policy implications.

Keywords: Social class; social mobility; social fluidity

JEL Classifications: J62; Y80; Z13

Introduction

In this paper we aim to contribute to the continuing discussion of trends in intergenerational social mobility in present-day Britain (see e.g. Blanden et al., 2004; Goldthorpe and Jackson, 2007; Nicoletti and Ermisch, 2007; Gorard, 2008; Erikson and Goldthorpe, 2008; Blanden, Gregg and Macmillan, 2008). The paper represents a continuation of earlier work (Goldthorpe and Mills, 2004) and shares with this work two major features on which we may briefly comment.

First, we study social mobility in terms of social class rather than in terms of, say, socioeconomic status, as do some other sociologists, or in terms of level of income or earnings, as do most economists. While we can reasonably assume that the concept of class that we adopt will be familiar to sociologists, whether they themselves use it or not – and likewise the way in which the concept is operationalised – we cannot assume this in the case of economists. We need therefore to make the following summary points and to refer those seeking a fuller account of our position to the literature that we cite.

(i) We see class positions as being defined by social relations in economic life and, more specifically, by relations within labour markets and production units (Goldthorpe, 2007, vol. 2, ch. 5). A primary level of differentiation of class positions is that which sets apart employers, self-employed workers and employees. But in modern societies further differentiation must then be recognised among employees in regard to their relations with employers or, that is, in regard to the (implicit as well as explicit) terms of their employment contracts.

(ii) Different kinds of work are associated with different forms of employment contract in consequence, primarily, of employers' responses to problems of work monitoring and human asset specificity. For work where these problems are slight, a basic labour contract can operate – in effect, an approximation to a spot contract in which effort is exchanged for wage payments as determined on a piece- or time-rate basis. But for work where these problems are more marked, efficient contracts will be ones of a more diffuse and longer-term kind in which employees give service to their employing

organisation in return for 'compensation' via a salary and various perquisites and in which important prospective elements are also involved – for example, expectations of continuity of employment, salary increments and career opportunities. Modified forms of both the basic labour contract and the 'service relationship' occur, as do mixed forms (Goldthorpe, 2007, vol.2, ch. 5; McGovern et al., 2007: ch. 3).

(iii) If classes are taken to be defined by employment relations and class categories are then constructed (see table 1) according to the Goldthorpe class schema (Goldthorpe, 1997) or the National Statistics Socio-economic Classification (NS-SEC),[1] individuals can be allocated to classes on the basis of information on their employment status and occupation with an acceptable degree of *criterion validity*. That is to say, when operationalised in this way, the class categories can be shown to capture adequately those differences in employment relations that they are, conceptually, supposed to capture (see for the Goldthorpe schema, Evans, 1992; Evans and Mills, 2000; and for NS-SEC, Rose and Pevalin, 2003; Office for National Statistics, 2005; Rose, Pevalin and O'Reilly, 2005; McGovern et al., 2007).

(iv) The class categories can also be shown to have a high degree of *construct validity*. That is to say, they can be used to display variation across a range of life-chances and life-choices on theoretically expected lines: for example in regard to security of employment and earnings prospects (Gallie et al., 1998; Goldthorpe and McKnight, 2006; Chan and Goldthorpe, 2007), health and mortality (Sacker et al., 2000; White et al., 2007), voting and political orientations (Evans, 1999; Chan and Goldthorpe, 2007), and children's educational performance and decisions (Jonsson, Mills and Müller, 1996; Jackson et al., 2007). In turn, it is primarily the finding that class appears to be highly consequential in these different ways – and often more so than income – that motivates a concern with the extent and pattern of class mobility.

The second feature that the present paper shares with our previous work is that in analysing mobility trends we draw on data from cross-sectional samples of the British population. Other recent work on this issue has drawn on data collected in the course of the two major British birth-cohort studies: the National Child Development Study, based on all children born in one week in 1958, and the British Cohort Study, based on all children born in one week in 1970. The cohort studies provide unrivalled opportunities for investigating the dynamics of social mobility (see e.g. Breen and Goldthorpe, 1999; 2001; Blanden, Gregg and Macmillan, 2007). However, as well as the two cohorts being only twelve years apart, they allow, so far, for comparisons of the mobility experience of individuals only over the relatively early stages of their working lives – i.e. up to around age 30.[2] Any differences that show up in mobility rates or patterns between the cohorts can therefore be no more than suggestive of possible changes in a more broadly defined population.

It is relevant to note that economists and sociologists have resorted to the cohort studies for somewhat different reasons. For economists, these studies represent the *only* source for studying intergenerational income or earnings mobility in Britain or, at all events, the only source that directly provides information on individuals' parental income as well as on their own, rather than requiring a resort to imputation. But sociologists concerned with trends in class mobility have turned to the cohort studies in recent years (e.g. Goldthorpe and Jackson, 2007) simply because of a hiatus in the availability of data of a more appropriate kind. From 1972 to 1992, the General Household Survey (GHS) collected information that allowed a form of class mobility tables to be constructed for most years, and it was on this data-set that our previous work (Goldthorpe and Mills, 2004) was based. Unfortunately, in 1993 the GHS ceased to collect information relevant to respondents' class origins, and so, rather ironically, as trends in social mobility became an increasingly prominent political issue, data on which reliable analyses could be undertaken were far less adequate than for several decades previously.

However, in 2005, as a result of the integration into the GHS of the British component of the EU Statistics on Income and Living Conditions Survey (EU-SILC), information was once again collected that allows intergenerational mobility tables to be produced. Here, then, we take advantage of this development in order to extend our earlier analyses into the twenty-first century. The extension is not, though, a straightforward matter. The 2005 data are not directly comparable with those for 1972–92. In the intervening period the official occupational classification was radically revised (ONS, 2000) and the NS-SEC introduced (ONS, 2005). In the next section, therefore, we have to discuss problems of data at some length before going on to indicate the analytical approach that we shall follow.

Data and methods

In order to construct intergenerational class mobility tables, we need information on individuals' own class positions in adult life (class destinations)[3] and on the class position of the families in which they grew up (class origins). In using the GHS data-set for the period 1972 to 1992, we determine respondents' class destinations by reference to their employment status and occupation at time of interview. GHS in fact uses this information to code respondents to Socio-Economic Groups (SEGs), from which it is then possible, following a standard procedure (Heath and McDonald, 1987), to move to a good approximation of the Goldthorpe class schema. However, a modification of this procedure is necessary in regard to our index of respondent's class origins – i.e. father's employment status and 'usual' occupation. In the case of fathers who were employers, GHS does not use the full SEG classification, failing to distinguish between 'large' and 'small' employers (i.e. those with 25 or more employees or less than 25). For both respondents and fathers, we therefore work with the version of the Goldthorpe schema that is shown in table 1, in which small as well as large employers are included, together with professionals and managers in a composite Class I+II+IVa.[4]

The GHS data-set allows us to construct mobility tables on this basis for all years in the period in question except 1977 and 1978, and 1972 for women.[5] But from 1979 to 1988 the relevant data are available only for respondents aged 16–49. We thus limit our attention here to those years where we can construct tables for men and women from age 25 – when almost all will have completed full-time education – up to age 59: that is, 1972–6 and 1989–92.[6] As a means of filling the gap in this series we then include comparable tables produced from the data of the British General Election Surveys (BGES) of 1983 and 1987. In the case of these surveys, there is no difficulty in coding respondent's destination or origin classes to the version of the Goldthorpe schema of table 1. But it should be noted that the BGES samples, as well as being smaller than those of the GHS, are limited to individuals appearing on the electoral register.

Turning now to what we will refer to as the EU-SILC data for 2005, we find problems at two different levels. First, while respondent's present, or destination, class is coded in this data-set to the full seven-class 'analytical' version of NS-SEC, as also shown in table 1, for respondent's father or other household head (at respondent's age 16), this is not the case and, moreover, full employment status data are not available. To establish respondents' class origins, we have therefore to resort to a procedure recommended by ONS for coding to NS-SEC on the basis of occupational data alone (ONS, 2005: ch. 13). Clearly, this procedure is a *pis aller*, and some degree of error must be expected to follow.

Second, although the seven-class version of NS-SEC can be shown to map fairly closely onto the standard seven-class version of the Goldthorpe schema, no such mapping is possible with the nine-class version that we apply to the GHS data. We have then the problem of how we 'splice' our run of mobility tables for 1972–92 with those that we can construct for 2005. We seek to do this via data from the first round of the British Household Panel Study (BHPS), carried out in 1991, which was a survey of a representative sample of households, comparable to the GHS. The BHPS data allow us to code respondents' present or destination class and their class origins (indexed in the same way as for GHS respondents) *both* to SEGs, and thence to the version of the Goldthorpe schema that we use with the GHS data, *and* to the version of NS-SEC that we use with the EU-SILC data.[7] Since the BHPS data can thus be treated so as to 'face both ways', we can see how well

Class label	Description	Levels[a]
Table 1 Social class schema		
Goldthorpe class schema – 9 category version		
I/II/IVa	Professional and managerial salariat and large employers	1
IIIa	Routine nonmanual employees, higher grade	2
IVb	Self-employed workers (non professional)	2
IVc	Farmers	2
V	Foremen and technicians	2
VI	Skilled manual workers	2
IIIb	Routine nonmanual workers, lower grade	3
VIIa	Semi-skilled and unskilled manual workers	3
VIIb	Agricultural workers	3
NS-SEC – 7 category version		
1	Higher managerial and professional and large employers	1
2	Lower managerial and professional	1
3	Intermediate	2
4	Small employers and own account workers	2
5	Lower supervisory and technical	2
6	Semi-routine	3
7	Routine	3

Note:(a) As used in determining upward and downward mobility. See text.

class mobility tables derived from the 1991 survey fit in with the GHS series when based on the Goldthorpe schema and, in so far as the fit is good – as we might expect it to be – we can then reasonably continue our analyses of class mobility trends by in turn comparing tables from the EU-SILC data with those from the BHPS, now on the basis of NS-SEC.[8]

As regards the analytical methods that we apply, these are of a fairly standard kind (cf. Breen, 2004). We are concerned with trends in both *absolute* and *relative* rates of intergenerational mobility. Absolute rates can be treated in simple percentage terms. In particular, we are interested here in total mobility rates, as represented by the proportion of individuals found in a different class to that in which they originated, and in the upward and downward components of total rates. Absolute mobility rates are influenced by the marginal distributions of mobility tables (see the following section); and, when mobility is studied in a class structural context, the distributions of both class origins and destinations can be expected to change significantly over time – with effects on both total mobility and the balance of upward and downward movement, with which we shall be much concerned.

In studying relative mobility rates, however, the aim is to control for such marginal effects. It may be noted that when income mobility is studied through tables based on income quantiles, this control is achieved in that all marginal proportions are made equal by design. In this case, one could say, the entire analysis is relativised from the start – and with the consequence that amounts of upward and downward mobility are then simply constrained to be equal.[9] In analyses of class mobility, where the heterogeneity of the marginal distributions of mobility tables must be recognised as an important feature of the social reality under investigation, the control of marginal effects requires the application of appropriate statistical modelling. In such modelling, relative rates are treated in terms of odds ratios which can be understood as representing the pattern and level of the net association existing between origin and destination classes. We will introduce and explain the particular models that we use in due course.

Absolute rates

As we have noted, absolute mobility rates are influenced by the marginal distributions of mobility tables. That is to say, in the case of class mobility the pattern and trend of absolute rates will be influenced by the changing

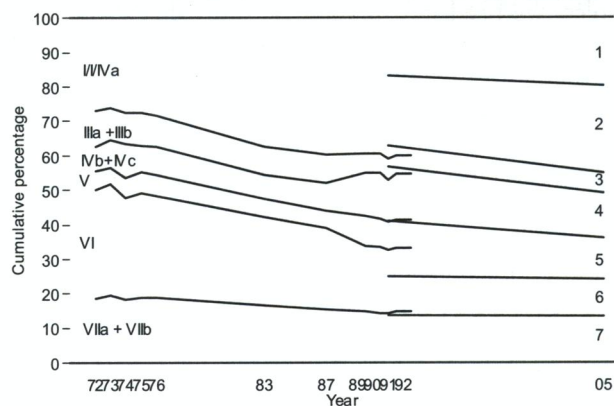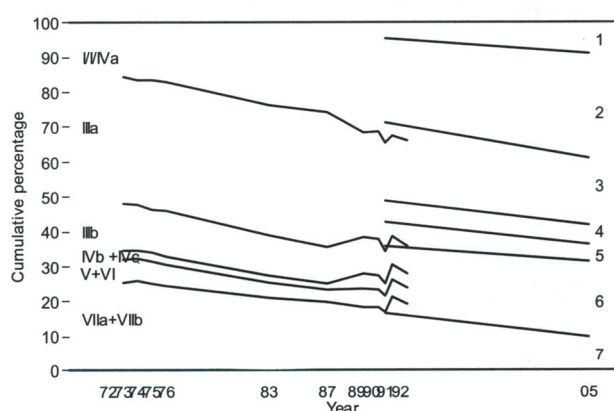Figure 1. Class distribution: cumulative percentage, males 25–59

Figure 2. Class distribution: cumulative percentage, females 25–59

distributions over time of men and women within the class structure. To give some idea of these changes, we graph in figures 1 and 2 the class distributions of respondents to the series of surveys that we use. For this purpose, we collapse Classes IVb and IVc and VIIa and VIIb, since numbers in the agricultural classes are quite small; and further, in the case of men, we collapse Classes IIIa and IIIb (men being scarcely represented in IIIb) and in the case of women Classes V and VI (women being scarcely represented in V).

As regards the class distribution of men, figure 1 reveals two points of major interest. First, from 1972 through to the late 1980s, trends of change are apparent that are in fact a direct continuation of ones dating back at least to the 1940s (see e.g. Goldthorpe, 1987: Table 2.3). The

professional and managerial salariat, as represented by Classes I and II, accounts for a steadily rising proportion of the active male population, while the body of manual wage-workers, or working class, as represented by Classes VI and VIIab, accounts for a steadily falling proportion. Over the 1970s and 1980s, the most distinctive feature of this decline of the working class is the extent to which it occurs within its skilled component. Secondly, though, it can be seen that from the late 1980s the trends in question, though still discernible, flatten out a good deal – or, in other words, the rate of change in the distribution of men within the class structure slows down. In particular, the comparison of the NS-SEC distributions for 1991 and 2005 indicates that the higher salariat, Class 1, grew rather little over this period and that the size of the working class, as represented now by Classes 6 and 7, did not diminish much further.

As regards the class distribution of women, figure 2 presents a rather different picture. It can be seen that the proportion of the female population in the professional and managerial salariat continues to grow at a fairly steady rate over the whole of the period covered, and that this is chiefly offset by a similarly steady fall in the proportion in the unskilled working class. Comparison of the NS-SEC distributions for 1991 and 2005 does, however, indicate that the increasing numbers of women within the salariat are to be found far more in its lower than in its higher level.

In the foregoing, we are concerned with the class distribution of individuals. It can, though, be argued that the appropriate unit of class analysis is not the individual but rather, in the case of those who are married or otherwise partnered, the couple; and, further, that the class position of the couple is then best seen as being determined by the employment of whichever of the partners holds the 'dominant' labour market position. We may therefore also ask about how the population is distributed within the class structure – and, subsequently, about class mobility – if the class positions of single people are established according to their own employment but those of couples according to that of the dominant individual.

To implement this approach, we use the method proposed by Erikson (1984). If both partners are in employment, full-time working dominates part-time working; but if no distinction arises in regard to working time, then both are assigned to the class of the one with the higher grade of employment. This we determine according to the dominance ordering of the classes of the Goldthorpe schema proposed by Erikson and Goldthorpe

Figure 3. Class distribution: cumulative percentage, couples as units, 25–59
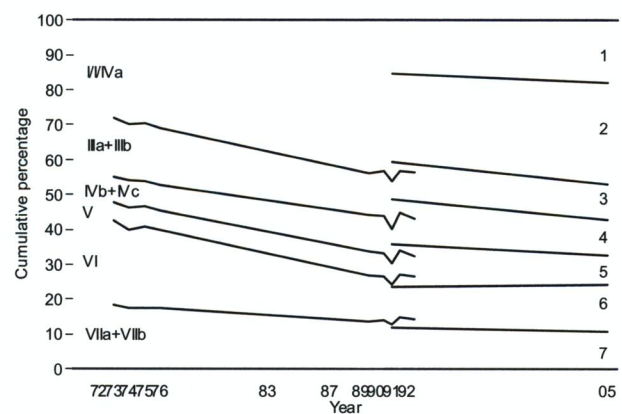
(1992: p. 266) and a corresponding ordering developed for NS-SEC.[10]   Figure 3 shows the results that are obtained.

As might be expected, a still greater expansion of the salariat is here indicated – by 2005 around 45 per cent of the active population fall into NS-SEC Classes 1 and 2 on the basis of their own or their partner's employment. Otherwise, though, the pattern of change revealed tends to be closer to that shown for men than for women.

In the context provided by figures 1–3, we can now examine the absolute rates of class mobility that emerge from the tables that we have constructed on the lines indicated in the previous section.[11] We consider total and then upward and downward rates. In figure 4 we graph these rates for men, together with 95 per cent confidence intervals.

Total mobility rates refer to the proportion, or percentage, of all individuals found in a different class from that of their father (or other household 'head') or, in other words, to the percentage of all cases in the mobility table that fall in cells off the main diagonal. In figure 4 there is some indication that the total mobility rate for men increased slightly between 1972 and 1976 and then decreased between 1983 and 1992; but, with an eye to the confidence intervals, the safer conclusion would appear to be one of 'no trend', with the rate simply fluctuating in the region of 65–66 per cent.

It may also be noted here that for 1991 the total mobility rates derived from the GHS and from the BHPS on the basis of the Goldthorpe schema are quite close to each

Figure 4. Absolute mobility rates: men 25–59

(a) Total mobility

95% confidence intervals

(b) Upward mobility

95% confidence intervals

(c) Downward mobility

95% confidence intervals
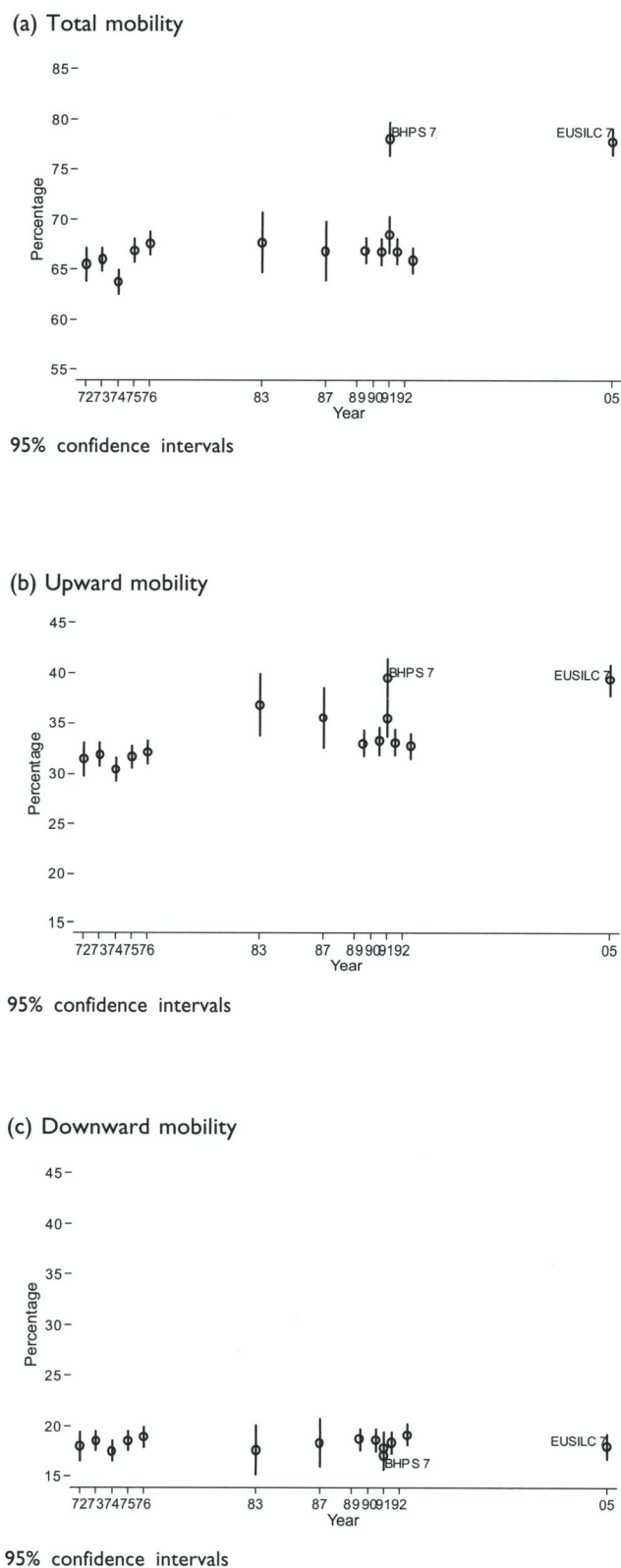
other – and this similarity is in fact found with all other absolute rates that we subsequently report. In other words, we can have some confidence in taking the BHPS as our splice in moving from the Goldthorpe schema to NS-SEC for our 1991–2005 comparison. However, one seemingly odd feature of figure 4 in this regard is the clearly higher total rate observed for these years with NS-SEC than with the Goldthorpe schema for the earlier period. The explanation is that although NS-SEC comprises only seven classes, these are, in the case of men, far more evenly sized – at least by the twenty-first century – than are those of the nine-class Goldthorpe schema and, in particular, separate the higher and lower levels of the salariat, Classes 1 and 2, between which a good deal of mobility occurs. But for our present purposes, the important finding is in any event that as between 1991 and 2005 the total mobility rate is unchanged at 78 per cent, which would then further suggest a long-term underlying stability.[12]

Turning now to rates of upward and downward mobility, we should note that these are defined by reference to the three hierarchical divisions of the Goldthorpe schema and of NS-SEC that are indicated in table 1. That is to say, only mobility between classes that entails crossing these divisions is treated as 'vertical', and thus for any year rates of upward and downward mobility do not sum to the total mobility rate. The difference is made up of mobility that can be regarded as 'horizontal' in that, while a change in class position occurs, it is not one that could be readily treated as being advantageous or disadvantageous overall.[13]

As regards upward mobility, it can be seen that, for the 1980s, the BGES data for 1983 and 1987 show somewhat higher levels than do the GHS data but, whether this is taken as a real or simply a 'survey' effect, it is still the case that for both the earlier and the later GHS points, one could draw a horizontal line across the graph within their confidence intervals at around the 32–3 per cent mark according to the Goldthorpe schema. And with upward mobility as with the total rate, a conclusion of no trend is further supported by the finding of identical rates for 1991 and 2005, at 39 per cent according to NS-SEC. As regards downward mobility, there is in fact little indication of any trend for the whole period 1972 to1992, with the rate fluctuating around 17–18 per cent, using the Goldthorpe schema, and likewise for the period 1991–2005, using NS-SEC.[14]

Overall, then, one could say that over the past three or four decades the most notable feature of the

Figure 5. Absolute mobility rates: women

(a) Total mobility

95% confidence intervals

(b) Upward mobility

95% confidence intervals

(c) Downward mobility

95% confidence intervals
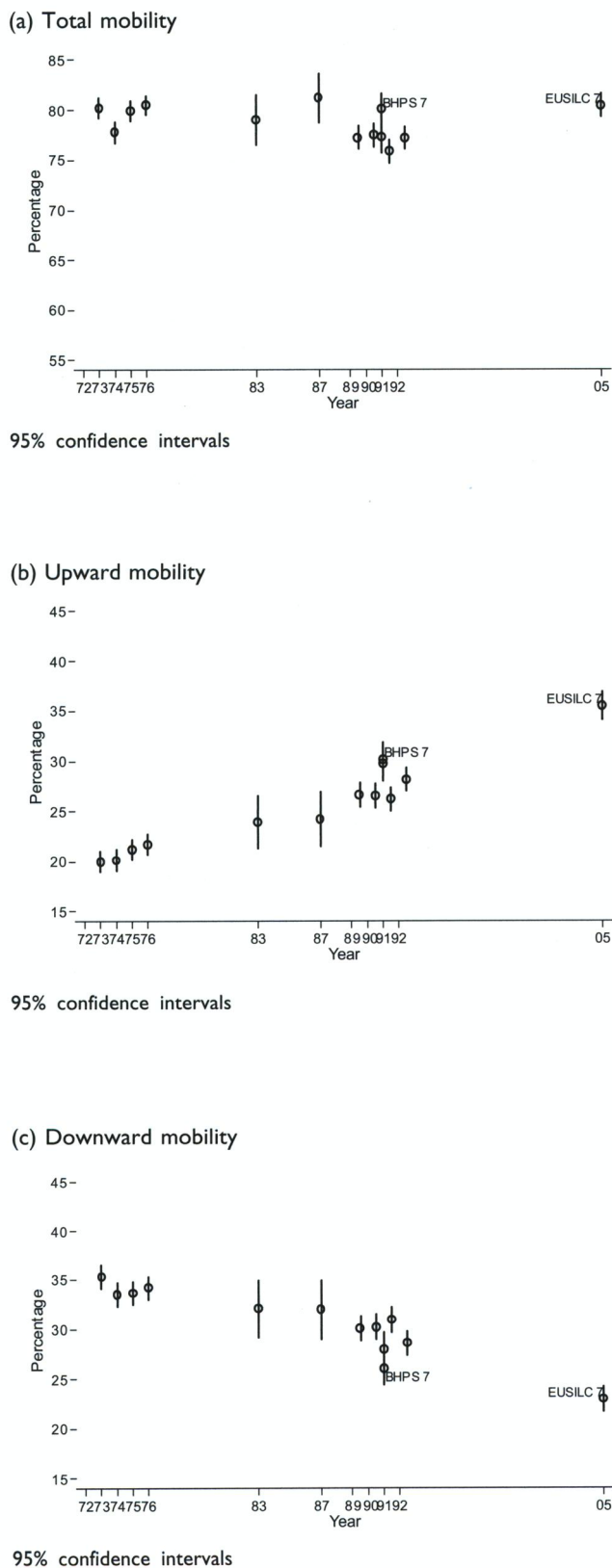
absolute mobility rates of men that is revealed is the absence of any large or directional change. However, if we now move on to consider the absolute mobility rates of women, as graphed in figure 5, we find a different situation.
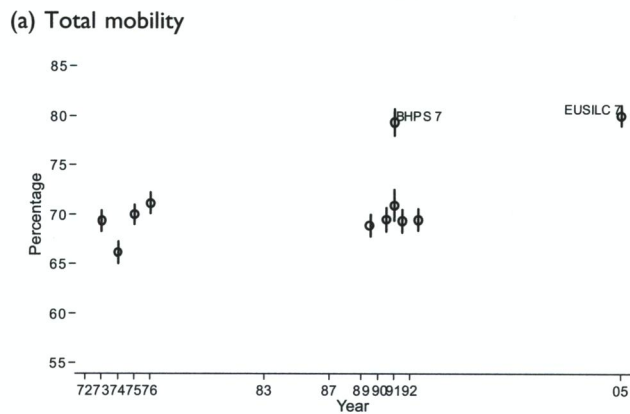
In the case of total rates, it is true, no very clear picture emerges. Between 1973 and 1992 there is a possible slight decline from, say, around 80 per cent to 77 per cent according to the Goldthorpe schema; but no decline is evident between 1991 and 2005, with the rate in both years being 80 per cent according to NS-SEC. However, it is then evident that the relatively slight change in total rates conceals marked trends in both upward and downward mobility rates. Upward mobility increases while downward mobility decreases, and the rate of change appears to be much the same for 1973 to 1992 when using the Goldthorpe schema and between 1991 and 2005 when using NS-SEC. Over the whole period covered, one could say, as the upward mobility rate rises from around 20 per cent to 35 per cent, the downward rate falls to about the same extent.

Finally, then, in figure 6 we show absolute rates derived from mobility tables in which men and women are included together, but with couples being accorded the class position of whichever spouse or partner is regarded as holding the dominant labour market position according to the criteria earlier noted.[15] These tables we refer to as 'complete' mobility tables.[16]

The most important point to emerge from figure 6 is that absolute rates derived from complete mobility tables are far more similar to those for men than to those for women. Not only the total mobility rate but also the upward and downward rates appear essentially trendless, as in the case of men. The rising upward and falling downward rates that were found for women are scarcely reflected here. This is not perhaps surprising in view of the fact that, following the criteria of labour market dominance that we apply, the class position of couples is still predominantly determined by men. In particular, it is notable that although growing numbers of women gain access to professional and managerial positions (see figure 2), the partners of these women are very largely men who hold similar class positions, while many men in the salariat continue to have partners in less advantaged class positions.[17]

How, then, do the changes in absolute rates of class mobility that we have traced out relate to the changes in the distribution of men and women within the class
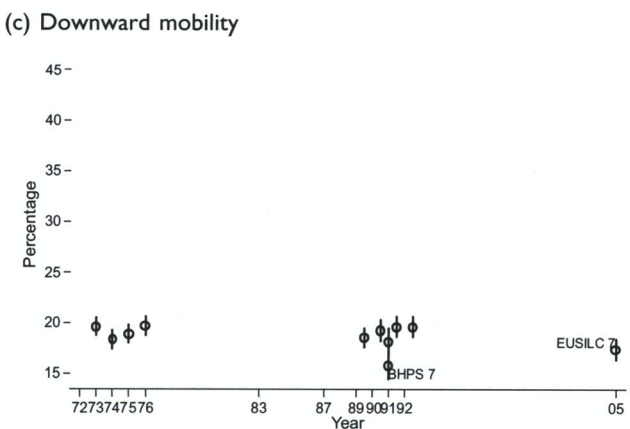
Figure 6. Absolute mobility rates: complete table, male origin for conjugal households

(a) Total mobility

95% confidence intervals

(b) Upward mobility

95% confidence intervals

(c) Downward mobility
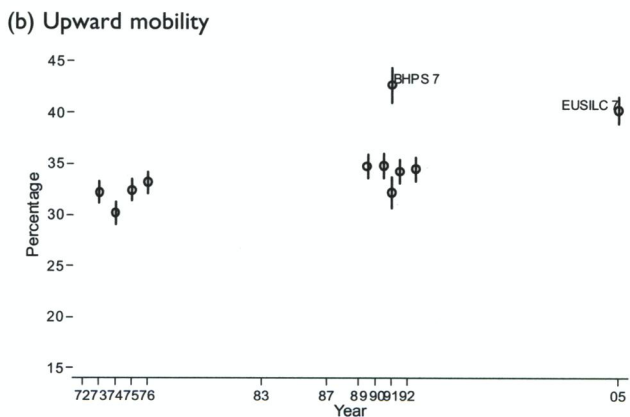
95% confidence intervals

structure that we showed at the start of this section? They would in fact appear to relate very closely.

In the case of men, the general stability of absolute rates over recent decades conforms with the much slower rate of change in their class distribution that is evident from the later 1980s onwards. It is known that in the middle decades of the twentieth century men experienced steadily rising rates of upward mobility and steadily falling rates of downward mobility that were driven essentially by class structural change: that is, by the expansion of the professional and managerial salariat and the contraction of the working class (Goldthorpe 1987: chs. 2–4). However, that dynamic is by now evidently weakened. The rate of growth of the salariat, and especially of its higher levels, has slowed, and so too, it seems, has the rate of decline in the numbers of men found in working class employment. Moreover, it is also relevant here to note that, on the supply side, men now face increasing competition from women for more advantaged class positions.

Turning then to the mobility of women themselves, the rising upward and falling downward rates that we have observed can be related to a steadily growing demand for women – now increasingly better qualified – to enter at least the lower levels of professional and managerial employment, going together with a steady decline in the number engaged in unskilled manual or otherwise entirely routine work. In other words, women might appear in this regard to be in a situation comparable to that of men several decades earlier.

Finally, though, in the perspective of complete tables, we see a picture that is closer to the fairly stable one for men than to the more positively developing one for women – in line with the rather slowly changing class distribution that is shown up if couples are treated as single units. What is reflected here is in part persisting differences in rates and forms of male and female labour force participation but also, it would seem, patterns of class homogamy and heterogamy that in their relation to intergenerational mobility would repay more detailed investigation.[18]

Given, then, such *prima facie* evidence that over the period that concerns us absolute mobility rates are very strongly influenced by class structural effects, as mediated through the marginal distributions of our mobility tables, we can go on to ask a further question. Can the patterns and trends in absolute rates that we have established be accounted for, in their essentials, entirely in terms of these effects or are they also in part influenced by changes of some systematic kind

in the *net* association of class origins and destinations found in our mobility tables – net, that is, of all effects stemming from their marginal distributions? This question requires us to turn from absolute to relative rates of class mobility.

Relative rates

As we remarked earlier, in seeking to analyse relative rates on the basis of class mobility tables with heterogeneous marginals, we need to resort to appropriate statistical modelling. In the following, we understand relative rates in terms of odds ratios in the form

$$\frac{f_{11}/f_{12}}{f_{21}/f_{22}}$$

where f_{11} is the number of individuals immobile in class 1, f_{12} the number mobile from class 1 origins to class 2 destinations, and so on. That is to say, such rates indicate the chances of an individual originating in class 1 being found in class 1 rather than in class 2, *relative to* the chances of an individual originating in class 2 being found in class 1 rather than class 2. An odds ratio with the value of 1 thus indicates that these chances are equal or, in other words, that there is no association between origins and destinations, while the further an odds ratio rises above 1, the more unequal are mobility chances or the stronger the (positive) association that exists between origins and destinations.[19]

The total set of such odds ratios embodied in a (square) mobility table with k categories is given by

$$\frac{(k^2 - k)^2}{4}$$

although there is a 'basic set' of $(k - 1)^2$ independent odds ratios from which all others can be derived. The total set of relative rates, as measured by odds ratios that is implicit in a mobility table is often referred to as 'the pattern of social fluidity' or 'the endogenous mobility regime'.

In the following, we organise our data in the form of origin x destination x year (survey) arrays, and we then apply two loglinear models and a further log-multiplicative model, the basic elements of which are odds ratios. Through these models, we can test a series of propositions concerning relative rates.

The first model we consider, essentially as a baseline, is the loglinear model that proposes statistical independence of class origins and destinations or, that is, the model of 'perfect mobility' in which *all* odds ratios defining the net association between origins and destinations, and thus relative rates, are equal at a value of 1. This model can be written as

$$\log F_{ijk} = \mu + \lambda_i^O + \lambda_j^D + \lambda_k^Y + \lambda_{ik}^{OY} + \lambda_{jk}^{DY} \qquad (1)$$

where F_{ijk} is the expected frequency in cell ijk of the three-way table comprising origin (O), destination (D) and year (Y) and, on the right-hand side of the equation, μ is a scale factor, $\lambda_i^O, \lambda_j^D, \lambda_k^Y$ represent the main effects of the distributions of individuals over class origins, class destinations and years and the remaining two terms refer to corresponding associations: i.e. the distributions of both origins and destinations are taken to vary by year.

Second, we fit the loglinear model that, while recognising an association between origins and destinations (net of marginal effects), states that the odds ratios defining this association – i.e. rates of relative mobility – do not change from one year to another. This model, known as the constant social fluidity (CSF) model, can be written as

$$\log F_{ijk} = \mu + \lambda_i^O + \lambda_j^D + \lambda_k^Y + \lambda_{ik}^{OY} + \lambda_{jk}^{DY} + \lambda_{ij}^{OD} \qquad (2)$$

i.e. the further two-way association λ_{ij}^{OD} is added to (1) but not the three-way association λ_{ijk}^{ODY} which would imply change in the association between origins and destinations between years (and which would in fact 'saturate' the model – i.e. use up all the available degrees of freedom).

Then, third, we move to the log-multiplicative model, known as the uniform difference (UNIDIFF) model (Erikson and Goldthorpe, 1992), which we write as

$$\log F_{ijk} = \mu + \lambda_i^O + \lambda_j^D + \lambda_k^Y + \lambda_{ik}^{OY} + \lambda_{jk}^{DY} + \beta_k X_{ij} \qquad (3)$$

where X_{ij} represents the general pattern of the origins-destinations association and β_k the relative strength of this association that is specific to a year. This latter model thus tests for the possibility that from one year to another the (log) odds ratios defining the origins-destinations association increase or decrease by some

Table 2. Fit statistics for the conditional independence, CSF and UNIDIFF models fitted to mobility tables 1972–92 and 1991–2005, men aged 25–59					
Model	G²	df	p	DI[a]	BIC
1972–92 Goldthorpe schema, 9 class version (N = 52,256)					
1. Independence	11331.7	768	0.00	16.9	2988.1
2. CSF	790.5	704	0.01	3.2	−6857.7
3. Unidiff	777.4	693	0.01	3.2	−6751.3
2. – 3.	13.1	11	0.29		
1991–2005 NS-SEC, and class version (N = 6435)					
4. Independence	756.9	72	0.00	13.6	125.5
5. CSF	19.3	36	0.99	1.9	−296.4
6. Unidiff	15.5	35	0.99	1.7	−291.5
5. – 6.	3.8	1	0.05		

Note: (a) Dissimilarity index or percentage of cases misclassified.

Figure 7. UNIDIFF parameter estimates and confidence intervals: males 25–59

common factor; or, in other words, for the possibility that relative rates become more or less unequal, implying either a uniform fall or uniform rise in social fluidity within the class structure.[20]

In table 2 we report the results of fitting these three models to our data for men.[21] As regards the goodness of fit statistics, it can be seen that while for the period 1972 to 1992, the CSF model shows a significant lack of fit to the data, it does none the less perform fairly well, misclassifying only 3.2 per cent of all individual cases. Moreover, the UNIDIFF model does not achieve any significant improvement in fit over the CSF model. We can therefore conclude that, although some, rather slight, differences in the pattern of relative mobility rates do occur over the years in question, they are not ones that create uniformly greater equality or inequality in such rates – nor, that is, higher or lower social fluidity – overall. This in fact confirms the finding that we reported earlier for this period (Goldthorpe and Mills, 2004) on the basis of a somewhat different data-set.

Moving on to the 1991–2005 comparison, our findings here might seem to be on different lines. The CSF model in this case gives an excellent fit to the data – but the UNIDIFF model still produces a marginally significant improvement. From figure 7, which graphs the parameters estimated under the UNIDIFF model, the indication then is that as between 1991 and 2005 all odds ratios defining relative rates of class mobility fell by a factor of around 0.86 or, that is, that fluidity within the class structure increased.

However, with due regard for the confidence intervals around the 2005 estimate (and also the bic statistic in
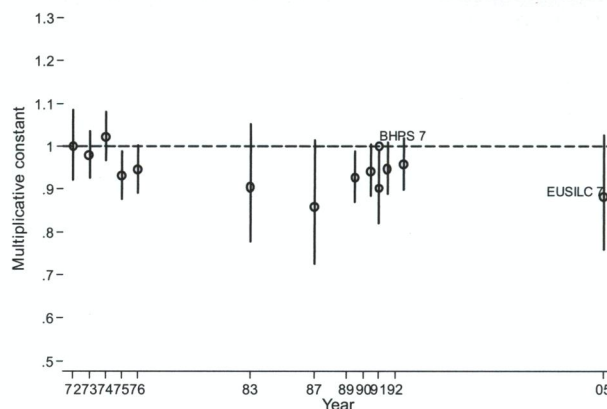
table 2) some doubt must attach to this result.[22] Moreover, even if it were to be taken at face value, viewing it alongside the series of parameters estimated for 1972 to 1992 – when UNIDIFF does not improve on CSF – would still make it difficult to believe in any unidirectional change over the whole period covered. In turn, then, we may say that the lack of any clear trends in men's absolute rates of class mobility, which we would link to the slowing rate of change in their distribution within the class structure, is paralleled by a lack of trend in their relative rates also.

In table 3 and figure 8 we show our corresponding results for women. It can be seen that, for 1973 to 1992, there is, as with men, some significant, if rather slight, deviation from the CSF model, but that, in contrast to the case with men, the UNIDIFF model does quite clearly improve on CSF and in fact gives an acceptable fit to the data. That is to say, deviations from the CSF model would appear to comprise shifts from year to year in relative rates implying greater or less fluidity overall. However, figure 8 then reveals that these shifts have no consistent direction: the parameters simply move up and down in a trendless way.

As regards the 1991–2005 comparison, we should first note that this is the main instance in which using the BHPS survey of 1991 as a splice appears somewhat problematic. For reasons that are not clear to us, a much lower β is returned for the BHPS data organised on the basis of the Goldthorpe schema than for the 1991 GHS data or indeed for any other case in this series. As things stand, table 3 shows that for the 1991–2005 data the UNIDIFF model fails to make any improvement on CSF model which itself does not provide an entirely

Table 3. Fit statistics for the conditional independence, CSF and UNIDIFF models fitted to mobility tables 1973–92 and 1991–2005, women aged 25–59

Model	G^2	df	p	DI[a]	BIC
1973–92 Goldthorpe schema, 9 class version (N = 50,755.5)					
1. Independence	6573.7	704	0.00	13.3	–1054.0
2. CSF	712.3	640	0.02	3.2	–6222.0
3. Unidiff	676.9	630	0.10	3.1	–6149.0
2. – 3.	35.4	10	0.00		
1991–2005 NS-SEC, and class version (N = 7155)					
4. Independence	673.305	72	0.00	11.6	34.3
5. CSF	53.2	36	0.03	3.1	–266.3
6. Unidiff	53.2	35	0.03	3.1	–257.4
5. – 6.	0.0	1	0.98		

Note: (a) Dissimilarity index or percentage of cases misclassified.

Figure 8. UNIDIFF parameter estimates and confidence intervals: females 25–59

satisfactory fit. However, reverting to figure 8, it might be argued that, given the uncertainty of the splice, the decrease in fluidity that is indicated should be taken more seriously than would otherwise be the case: i.e. the point for the BHPS table based on NS-SEC might in fact be lower than it appears. We would not ourselves incline to this view. But, even if such a decrease were to be supposed, it could still best be seen, in the general context of figure 8, as simply a continuation of the trendless fluctuation in levels of fluidity that is shown for the earlier period.[23]

Thus, in the end, and despite the differing pattern of results in tables 2 and 3, we do in fact reach much the same conclusion for women as for men: namely, that from the 1970s through to early years of the twenty-first century, no very great or consistent change occurred in relative rates of class mobility.[24] This means therefore that we can underwrite our earlier suggestion that the trends observed in women's absolute rates of class mobility – i.e. steadily increasing upward and steadily decreasing downward movement – have to be seen as structurally determined. They do not reflect any change in the net association between class origins and destinations that is found with women but not with men.

Finally, in this section, we give, in table 4 and figure 9, the results of our modelling of the complete mobility tables that we have constructed. As can be seen from table 4, for the 1972–92 period the CSF model once more comes fairly close to reproducing the data, although still showing a significant lack of fit, while the UNIDIFF model significantly improves on CSF but without itself providing a fit that is entirely acceptable. Then, for the 1991–2005 comparison, the CSF model fits
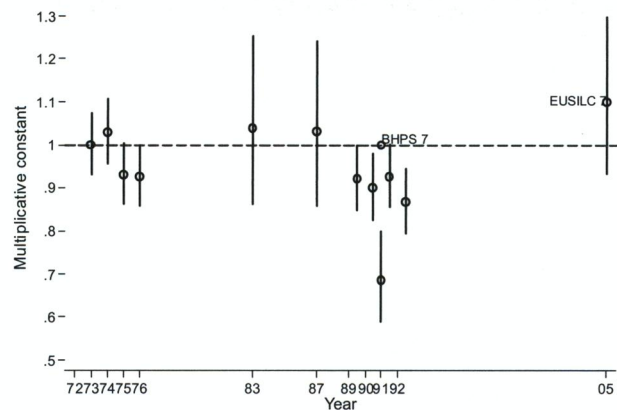
well but UNIDIFF again makes a significant improvement.

It would thus appear that over the years in question shifts in the general level of fluidity did occur. And if we move on to the parameters that are plotted in figure 9 we do find, in contrast to the corresponding plots for men and women treated separately, some possible indication of a continuing trend – that is, a trend towards increasing fluidity. We do not in fact believe that this indication is all that strong: a line could be drawn horizontally across the graph that would pass within the confidence intervals of all but two of the estimates. And further, we do not find it easy to envisage the social processes that would lead to a steady rise in fluidity not being observable within mobility tables for men and women treated separately but then showing up in complete tables relating to these same individuals. However, a conclusion that can rather safely be drawn from figure 9 – and by way of prefiguring remarks we will later have to make on prevailing ideas about mobility in Britain today – is the following: that the complete tables are still less supportive than those for men and women separately of the idea of *declining* mobility, in the sense of a strengthening association between class positions across generations.

To revert to the question from which this section started of whether changes in relative rates play any systematic part in forming the patterns and trends in absolute rates that were earlier demonstrated, our analyses allow us to give a straightforward answer: they do not. Changes in relative rates are neither large enough nor sufficiently consistent in direction for this to be the case. This point can perhaps best be brought home by saying the

Table 4. Fit statistics for the conditional independence, CSF and UNIDIFF models fitted to complete mobility tables 1973–92 and 1991–2005, men and women aged 25–59, male origins for conjugal households

Model	G^2	df	p	DI[a]	BIC
1973–92 Goldthorpe schema, 9 class version (N = 57,239.5)					
1. Independence	10598.4	576	0.00	15.3	4288.4
2. CSF	676.8	512	0.00	3.1	−4932.2
3. Unidiff	646.0	504	0.00	3.0	−4875.3
2. – 3.	30.8	8	0.00		
1991–2005 NS-SEC, and class version (N = 8312)					
4. Independence	799.7	72	0.00	11.8	149.9
5. CSF	35.2	36	0.51	2.5	−289.7
6. Unidiff	29.1	35	0.77	2.2	−286.8
5. – 6.	6.1	1	0.01		

Note: (a) Dissimilarity index or percentage of cases misclassified.

Figure 9. UNIDIFF parameter estimates and confidence intervals: complete table, male origins for conjugal households

following in regard to our findings on absolute rates from men's, women's and complete tables alike. If in the previous section we had worked not with these series of tables as we constructed them but rather with these tables as they would be under the constant social fluidity model – or, that is, if we had worked not with the actually observed cell counts but with the counts that would be predicted on the assumption of no change whatever in relative rates – then our findings on absolute rates would not have been different, in any sociologically significant way, from those that we have in fact reported.[25]

Discussion and conclusions

In the foregoing we have examined long-term trends in social mobility in Britain in the context of the changing class structure – the main sociological motivation for this being that class, and in turn class mobility, can be shown to be highly consequential for a wide range of individuals' life-chances and life-choices. Further, we have analysed class mobility on the basis of data from a series of sample surveys of the entire population of Great Britain – which, we would emphasise, is the only basis on which reliable estimates of general trends in mobility, as opposed to cohort specific trends, can be obtained.

In treating mobility in terms of class, and more specifically in constructing class mobility tables, the issue of heterogeneous marginal distributions, and the real structural changes that they reflect, is brought to the fore in a way that may not occur in analyses of income mobility, in particular if these are based on quantile tables in which marginals are homogeneous by design.
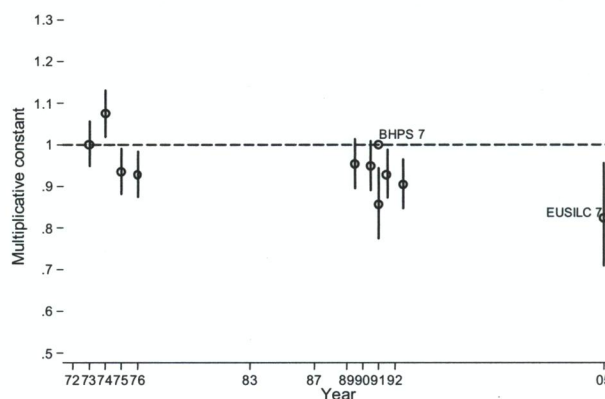
In analysing class mobility a distinction between absolute and relative rates is thus essential – the former being responsive to structural change while the latter abstract from it – and we have presented our findings on this basis, again in contrast with most analyses of income mobility in which the distinction has, so far, received little explicit attention.

How, then, do our findings relate to concerns over social mobility that in recent years have clearly extended beyond academia? We will consider their relevance to two key questions. First, is there in Britain today a 'mobility problem' and, if so, just what form does it take? Second – and in the light of the answer given to the first question – what are the main implications of our findings for policy?

In political circles, and in turn in the media, it seems widely believed that in recent decades intergenerational social mobility in Britain has declined – even in fact 'ground to a halt'.[26] However, if mobility is understood in terms of movement between different class positions – and politicians and social commentators would most often appear to understand it in this way – then our results reveal that this prevailing view is simply mistaken. To repeat, total mobility rates, indicating the proportion of individuals found in different class positions to those of their families of origin, have remained remarkably stable since the 1970s; and relative rates, indicating the degree of association between class origins and destinations, net of structural effects, have changed little and certainly not in a way that would point to any reduction in fluidity. In sum, while there are no strong grounds for regarding Britain

today as being a more mobile society than it was in the 1970s, nor the British class structure as being more 'open', there are no grounds at all for taking the opposite view.[27]

The belief that social mobility has been declining would seem chiefly to derive from work by economists (see especially Blanden et al., 2004) which has attracted wide attention. But this work refers specifically to intergenerational income, not class, mobility and, as earlier noted, is based on the NCDS and BCS data-sets with consequent rather severe limitations of coverage. Moreover, while these data-sets are the best currently available for analysing income mobility, the quality of the relevant data is still not high and questions can be raised about how far the decrease in mobility – or, more precisely, the strengthening relation between family income and children's subsequent earnings – that is shown up is artefactual. In particular, as Blanden et al. (2004) themselves indicate, family income as measured for the 1958 cohort in 1974 is likely to have a higher transitional component, uncorrelated with 'permanent' income, than is family income for the 1970 cohort as measured in 1986 (see further Erikson and Goldthorpe, 2008). It may also be noted that the one available longer-term study of income mobility in Britain (Nicoletti and Ermisch, 2007) – actually a study of father-to-son earnings mobility but with father's earnings being imputed rather than observed – produces results suggesting a similarly high degree of temporal stability as we have found in the case of relative rates of class mobility.[28]

However, a more important point, we would believe, is the following. Even if the evidence of declining income mobility between cohorts born in 1958 and 1970 is taken at face value, it still could be viewed, in the larger context here provided, as a relatively short-term shift occurring within a class mobility regime that is not only more stable but at the same time stricter in character. Using the same birth cohort data as Blanden et al., Erikson and Goldthorpe (2008) show that the association between father's class and child's class is generally stronger than that between family income and child's earnings or, one might say, more fully captures intergenerational continuities in economic advantage and disadvantage.

If, then, there is not a problem of a general decline in social mobility, at least insofar as mobility is viewed in terms of class, is there a problem in some other respect? As we have already observed, our findings do indeed

point to one major change of an adverse kind – but in the pattern of mobility rather than in its level. The fact that, for men, absolute rates of upward and downward mobility, as well as of total mobility, have been more or less stable over recent decades marks an important departure from the pattern of the mid-twentieth century when rates of upward mobility steadily increased while rates of downward mobility fell. It is true that this latter pattern is now clearly in evidence for women. But results from complete mobility tables are far more comparable to those for men than to those for women. This would therefore suggest that women's improving mobility chances are mainly of significance from the point of view of their own occupational lives, rather than having any large impact on class mobility patterns where the conjugal pair or family rather than the individual is taken as the unit of analysis.

If this redefinition of the present-day 'mobility problem' is accepted, what then are the policy implications that follow? In this regard, the first point to note is that, as we have shown, the change in the pattern of men's absolute rates of mobility has little to do with relative rates. It results essentially from slower change in the class structure, in particular from a slower rate of growth of the professional and managerial salariat, and also from the greater competition that men now face from women for positions available within the salariat. What policy responses might be appropriate – or available – is not therefore all that apparent.

Suggestions have been forthcoming from New Labour to the effect that the developing global economy now removes any ceiling on the extent to which higher-level employment can be created within a particular national economy – provided only that its workforce has sufficiently competitive levels of qualifications and skills. Educational expansion and reform are thus envisaged as offering a way back to benign structural conditions of the kind that prevailed in the mid-twentieth century, so that once again, in the words of the Prime Minister, 'there will be almost no limits to aspirations for upward mobility'.[29] Whether such an approach is at all realistic remains to be seen. But an alternative scenario – already prefigured in current research – is one in which, in consequence of the growing numbers achieving higher levels of education, the 'class returns' to education tend to fall (cf. Breen, 2004a; Goldthorpe and Jackson, 2008) and in which the worklife experience of many of the higher educated is not upward mobility but rather 'over-qualification' (Green and Zhu, 2008).[30]

Another possible approach to the 'mobility problem', as we have identified it, would be to accept that the structural conditions of mobility will to a large extent have to be taken as given, and to focus policy on relative rates. In this case, the aim would be to compensate for deteriorating structural effects on men's chances of upward mobility by making relative rates more equal or, in other words, by in general reducing the net association between class origins and destinations. Such an objective would seem to be at all events implied by the emphasis given by New Labour, and now also by the Conservative Party, to educational reforms that seek to raise standards of academic performance, especially among young people from less advantaged backgrounds, and thus to increase equality of both educational opportunity and actual attainment.

However, in this regard again the question can be raised of whether the expectations of what can be achieved via educational policy are realistic. Relative rates of class mobility have remained little altered not only over the period we have considered in this paper but back, it would seem, at least to the 1940s (Goldthorpe, 1987). In other words, these rates have been largely impervious to the whole series of educational reforms undertaken in Britain from, say, the 1944 Butler Act onwards, and it is difficult to see why any of the reforms presently being implemented, or envisaged, should be significantly more effective so far as the promotion of social mobility is concerned – whatever may be their merits in other respects.[31] In present day political discourse one may observe a fairly general tendency for the obvious importance of education as a *channel* of mobility to be regarded as evidence of education as a *cause* of mobility – which is of course a very different matter. The body of available evidence would in fact point to education as being far more important in determining who is mobile (or immobile) than in determining actual levels of mobility (or immobility) or, in other words, to education having its main impact on the incidence of mobility rather than on its rate.[32]

Finally, in this regard, we would venture the suggestion that the rising concern in recent years with social mobility, and with the promotion of mobility as a policy objective, has less to do with actual social change than with purely political considerations. That is, with the political attractiveness, in the context of prevailing 'median voter' electoral strategies, of highlighting the goals of greater mobility and equality of opportunity – which, like motherhood and apple pie, it is hard to be against. But something of a paradox has then to be

noted. In comparative perspective, the countries for which there is clearest evidence of social mobility being increased as a political accomplishment, and in which today mobility appears higher than elsewhere, whether considered in terms of class or of income, are the Nordic social democracies (cf. Breen, 2004a; Jäntti *et al.*, 2006). And over the years in which this increase in mobility appears mainly to have been achieved – from, say, the 1940s through to the 1970s – the prime focus of political concern and of policy formation was not in fact on mobility *per se* nor on equality of opportunity. It was, rather (cf. Castles, 1978; Erikson *et al.*, 1987; Tilton, 1990) on equality of condition – on using fiscal and social policy to reduce, systematically and if possible permanently, class-linked inequalities in incomes, economic security, health, housing and 'levels of living' in general.

NOTES

1 The NS-SEC represents in fact a new instantiation of the Goldthorpe schema (see Rose and Pevalin, 2003; Rose, Pevalin and O'Reilly, 2005).

2 Data for members of the 1958 cohort at age 43 are now available but not, so far, comparable data for members of the 1970 cohort.

3 Of course, class mobility can and does occur in the course of individuals' working lives, so 'destinations' are not necessarily permanent ones. However, the frequency of changes in employment that also entail changes in class position is known to fall off rather sharply after age 35.

4 The original class labels of the Goldthorpe schema are retained in this somewhat cumbersome form to facilitate comparisons with analyses where other versions of the schema are applied. Two other technical points may be added here. First, we have to omit all cases where either the respondent or the respondent's father was in the armed forces. The armed forces category of the SEGs does not distinguish between different grades within the military and therefore no coding of armed forces personnel to the class schema is possible. Second, the GHS over-samples in Scotland by a factor of 2, to correct for which we have applied throughout a corresponding sub-sample weight of 0.5.

5 The 1972 GHS contains occupational information only for those respondents who were currently employed, whereas later surveys in addition collect information about last job for those currently unemployed or out of the labour market, and we use this information to determine these individuals' class destinations. The limitation of the 1972 survey has a minimal impact on the over-time comparability of the men's data, but its inclusion in the women's series would create some serious inconsistency.

Our earlier work also threw doubt on the coding of the occupational data in the 1974 GHS. It is obvious from inspection of the father-to-son mobility table that the level of association between class origins and destinations is – quite implausibly – higher than for all other years in the GHS series. We must assume that some error occurred in the coding of the original

schedules. However, a detailed examination of the data indicates that this error primarily arises in the case of respondents under the age of 25. Since we focus on respondents aged 25–59, we feel that there is now some advantage in including 1974 as an additional data point.

6 In our previous work (Goldthorpe and Mills, 2004) we did not use the 1972 GHS because of a lack of clarity in the extant documentation about the way in which father's SEG is coded. The documentation provided by the OPCS Social Survey Division and currently distributed by the UK Data Archive (UKDA) is in this respect misleading. It claims that father's occupation is coded to a collapsed 12 category version of SEG – which cannot be mapped onto the particular collapse that we wish to make. This is, however, only partially true. Detailed scrutiny of the data shows that interviews conducted between January 1st and June 25th inclusive apply the 12 category SEG. Thereafter, until December 27th when the 12 category scheme is readopted, either the full 19 category SEG is used or a slightly collapsed version similar to that applied in later GHS surveys. For 1972 we can therefore use data collected between June 26th and December 26th inclusive.

One advantage of choosing 1972 as our starting point is that we can then anchor our entire series of surveys by making a direct comparison between the 1972 GHS and what is in effect a 'gold standard' source, the 1972 Oxford Mobility Survey (OMS). After coding the data in both surveys to the same 9 class schema and restricting the GHS sample to England and Wales we can compare two random samples of men aged 25–59 drawn in the same year. Details of the sampling plans used in the two surveys are discussed in Hope (1981). The principal non-sampling difference between the two surveys is the question put to respondents to determine their class origin. In the GHS respondents living in households in which their father was not a co-resident were asked: 'How would you describe your father's usual job?'. In the OMS respondents were asked the sequence: 'Who was the head of your family when you were 14? Was it your father, mother or who? And what was your (person named above)'s job? I mean what exactly did he (she) do?' In the vast majority of cases the person named was the father. The marginal distributions of father's class match tolerably well except in the case of class V (manual supervisors and technicians) and VI skilled manual workers. The GHS returns too few class V and too many class VI fathers. We suspect that this is the result of more effort being made by the interviewers in a highly specialised inquiry like the OMS to collect the detailed proxy information required to classify the father's job accurately. This point is made by Hope (1981, 499) but, in what surely must be a misprint, he reverses the discrepancy and claims: '…the GHS finds too many foremen and too few skilled manual…workers…'.

We compare the origin-destination association revealed by the data from the two surveys by fitting a standard log-linear model (Bishop, Fienberg and Holland, 1975, Agresti, 2002) for the frequencies in the 9x9x2 origin (O) by destination (D) by survey (S) table – analogous in fact to what in the text below we refer to as the 'constant social fluidity model'. This assumes that the O and D margins differ by survey (as implied in the discussion above) while the odds-ratios that quantify the OD association are identical in each survey. This model fits the data rather well (G² 80.0, df 64, p. 0.09, N=9982).

That is to say, despite some localised differences in the way in which father's job was allocated to an occupational code and significant variation in the question used to elicit father's job, the two surveys agree about the way in which son's class is associated with father's class. We feel justified then in concluding that the starting point of our series is well anchored in the existing sociological evidence on the pattern and level of origin by destination class association.

7 One difference is, however, that BHPS occupational data are coded to the 1991 standard classification and EU-SILC occupational data to the much revised 2002 classification. NS-SEC could then be regarded as being in this respect better implemented in the latter case than in the former. But, on the other hand, while it is not necessary with the BHPS to use the 'occupation only' coding procedure for respondents' class origins that we have to use with EU-SILC, we do in fact use it with the BHPS data also to try to maximise comparability.

8 An alternative to our strategy of allowing a break in the series would have been to code the EU-SILC data to an approximation of SEGs that is suggested by ONS. This approximation would, however, introduce a level of measurement error into the analysis which could be seriously misleading – in the direction of suggesting higher than warranted levels of fluidity – in the context of the two point comparison, 1992–2005. On balance, we felt it better in the second period to use the class schema that could be applied most consistently, albeit at the cost of a break in the series. There is, moreover, an obvious advantage in establishing a benchmark for class mobility in the early twenty-first century on the basis of NS-SEC which, it can be assumed, will be the basis of subsequent enquiries.

9 What we mean by this is not that $p_{ij}=p_{ji}$ for all off diagonal cells, which is generally not the case even in mobility tables with homogenous marginals, but that the sum of the p_{ij} multiplied by the number of quantile boundaries crossed (the 'distance' travelled) is the same above and below the main diagonal of the table. To see this, define R_i and C_j as consecutive integer row and column scores, for example in a quintile table 1,2,3,4,5. Then

$$\sum_{ij}(R_i - C_j)p_{ij} = \sum_{ij}R_i p_{ij} - \sum_{ij}C_j p_{ij}$$
$$= \sum_i R_i (\sum_j p_{ij}) - \sum_j C_j (\sum_i p_{ij})$$
$$= \sum_i R_i \cdot \frac{1}{5} - \sum_j C_j \cdot \frac{1}{5} = 0$$

We are grateful to our colleague Dr Meg Meyer for the proof.

10 Specifically, we use the Dominance 1 ordering suggested by Erikson and Goldthorpe which is: I+II, IVa+b, IVc, IIIa, V+VI, IIIb+VIIa, VIIb. The NS-SEC ordering we use is: 1, 2, 4, 3, 5, 6, 7.

11 The tables themselves are available from the authors on request.

12 In general, what is important in analysing absolute mobility rates is not their level, which will of course vary with different forms of class categorisation and the number of classes distinguished, but rather their trend when determined over time with the same categorisation. The trends in absolute mobility rates referred to in the text here and subsequently do in fact still show up with all reasonable collapses of the

class categorisations used.

13 The Goldthorpe class schema is not intended to be fully ordered (see Erikson and Goldthorpe, 1992: 29–47). NS-SEC is more consistently hierarchical but, in the interests of comparability, we work only with the three levels shown in table 1.

14 These results are in some contrast with those reported by Goldthorpe and Jackson (2007) who find, in comparing men in the NCDS and BCS data-sets (i.e. born in 1958 and 1970, respectively), that upward mobility actually decreased and downward mobility increased. The dangers of simply extrapolating trends found in cross-cohort studies to the population at large is thus brought out. However, trends observed across still relatively young birth cohorts may point to changes that will become apparent in the total population at some later stage, since changes in mobility are known to be often driven by cohort replacement, rather than by general period, effects.

15 In the case of couples, the question arises of whether class origins should be determined by reference to the man or woman. We have in fact constructed tables on both bases and they show no significant differences. The results reported here come from tables using men's origins.

16 In the analysis of the complete tables we maintain comparability by dropping the 1972 data point, for reasons given in note 4, and the 1983 and 1987 points because the British Election Surveys contain information on individuals rather than households.

17 In conjugal households the share of those in which the household class position given by the dominance method is identical to the male partner's individual class position has declined by roughly 10 percentage points between 1973 and 2005. In 1973 the figure, using the 9 class schema, was 89 per cent and in 1992 it was 83 per cent. Between 1991 and 2005, using the 7 class schema, there was a 3 percentage point fall from 82 per cent to 79 per cent. Thus, though in terms of their individual class position women appear to have experienced increased rates of upward mobility and decreased rates of downward mobility, this can have only a muted influence on the patterns revealed in the analysis of the complete tables.

18 As well as women in professional and managerial positions showing a strong tendency to be partnered with men in similar positions, it is of course also the case that such women come disproportionately from more advantaged class backgrounds.

19 Odds ratios are 'margin-insensitive' measures of association in that they are invariant to the multiplication of the rows or columns of a contingency table by (non-zero) constants.

20 We should point out that the model of change we consider here is very general, requiring the same multiplicative change in all the log-odds ratios that describe the level of association in a particular origin by destination subtable of the three-way array. It is of course possible to specify models in which this kind of multiplicative scaling of association applies only to particular sets of association parameters: for example, those describing levels of immobility, transitions between particular sectors – e.g. between employment and self-employment or 'long-range' mobility from the bottom to the top of the class hierarchy.

21 Tables 2, 3 and 4 contain information about three different fit and model selection statistics. G^2 is the likelihood ratio chi-square or, as it is sometimes called, the model 'deviance'. The closer G^2 is to 0, the closer the expected frequencies are to the observed frequencies. The p values associated with G^2 will be found often to indicate a lack of model fit. However, with large sample sizes, such as we are dealing with here, this can result from what are substantively quite trivial differences between expected and observed frequencies. That is to say, we have a lot of statistical power to identify uninteresting details. The dissimilarity index (DI) measures the lack of fit in terms of the percentage of cases that would have to be reallocated for the expected frequencies to match the observed frequencies exactly. Finally, the Bayesian information criterion (bic) is a function of the likelihood ratio chi-square, the log sample size and the number of parameters estimated. It can be used to compare non-nested models and exacts a penalty for each extra parameter estimated. Its primary use is as a model selection tool and in the version we use here a negative value means that a constrained model should be preferred to the saturated model. It then follows that ceteris paribus the model with the most negative bic value should be selected (assuming that the objective is to select just one model for discussion).

22 The confidence intervals surrounding the point estimates in figures 7, 8 and 9 are approximations based on so called 'quasi-variances' (Firth, 2003; Firth and De Menezes, 2004) and therefore allow valid comparisons between arbitrary pairs of contrasts. It should be noted, however, that because in model estimation we have ignored the complex sampling plans employed in all three of our survey sources, these confidence intervals will be somewhat optimistic. We therefore urge readers to be cautious in the interpretation of marginally 'significant' differences. It should also be noted that quasi-variances are irrelevant for the 1991 BHPS – 2005 EU-SILC comparison. In this case there is only one possible pair to compare and therefore need for only one confidence interval. This explains why in figures 7, 8, 9 the point labelled BHPS 7 has no confidence interval attached to it.

23 In our earlier work (Goldthorpe and Mills, 2004), we found some indications of increasing fluidity in the case of women. Our results here differ on account of the inclusion of data from the BGES surveys of 1983 and 1987 which, while showing higher levels of fluidity for men than the GHS, show lower levels for women. This may serve as a salutary reminder of the likelihood of 'survey' effects in analyses of the kind in question.

24 In their cross-cohort analyses based on the NCDS and BCS data-sets, Goldthorpe and Jackson (2007) find possible indications, in the case of both men and women, of 'local' changes in relative rates (cf. n. 20 above) implying a declining propensity for long-range mobility between the higher levels of the professional and managerial salariat and the working class. But no confirmation of these tendencies emerges from the wider-ranging analyses here reported.

25 Consider the one case where there might be some evidence, albeit weak, of change in relative rates – i.e. the data contained in the complete tables – and ask: what is the magnitude of the change in absolute mobility rates attributable to a decline in the strength of the origin by destination association? We can answer this question in the following way using the 1973–92 series as an example. First, smooth the trend by fitting a variant of the UNIDIFF model that forces the multiplicative parameter to change as a linear function of time. In fact by a small margin the bic statistic prefers the no change model – constant social fluidity – to this model, but assume that the linear trend model gives a reasonable idea of what a monotonic long-term secular

decline might look like. Second, take the fitted values $\hat{F}_{ijk}$ under this model for the 1973 and 1992 tables and fit an ordinary saturated log-linear model to the 9x9 1973 table. Extract the exponentiated λ_{ij}^{OD} parameters and call them X_{ij}^{OD}. Third, fit the following model to the fitted values for the 1992 table: $\log(\hat{F}_{ij}) = \mu + \lambda_i^O + \lambda_j^D + X_{ij}^{OD}$ where X_{ij}^{OD} is a so-called 'offset'. The fitted values from this model illustrate what the observed pattern of mobility would, counterfactually, have looked like in 1992 if the marginal distributions of the origin and destination classes had remained as observed in 1992 but the origin by destination association had been at its 1973 level. The magnitudes of the counterfactual differences attributable to a 19 year secular trend towards a general weakening of the origin-destination association are slight. Expressed as differences between the percentages making particular class transitions the following figures are illustrative: an extra 1 per cent move from the unskilled working class (VII) to the salariat (I/II/IVa), an extra 0.66 per cent from the skilled working class (VI) to the salariat. These figures are representative of the general order of magnitude of differences across the whole table, and in fact of what we find when we repeat the exercise for the 14 years between 1991 and 2005.

26   For a plethora of examples from politicians' speeches and journalists' columns, enter 'social mobility+declining' in any internet search engine.

27   We offer no predictions about future trends. A continuation of the increase in economic inequality – between as well as within social classes (cf. Goldthorpe and McKnight, 2006) – that has occurred since the 1980s could be expected to make for declining fluidity within the class structure (cf. Goldthorpe, 2007, vol. 2, ch. 7). But its effects at the level of population at large may become apparent only very slowly.

28   For cohorts born between 1961 and 1970 Nicoletti and Ermisch do find evidence of some significant – though not precisely estimable – decline in earnings mobility *if this is measured by earnings elasticities*. But for these cohorts, as for those born from 1950 to 1960, mobility as measured by the *correlation* between father's and son's earnings shows little change. Until recently, economists would not seem to have given much attention to the difference between these two measures of mobility, but working with the correlation appears the more comparable to the treatment of relative rates of class mobility via odds ratios. As Björklund and Jäntti (2008) observe, the correlation, which equals the elasticity multiplied by the ratio of the standard deviations of father's to son's income, is independent of the marginal distributions in the two generations, whereas the elasticity is not.

29   Gordon Brown, 'We'll Use our Schools to Break Down Class Barriers', *Observer*, Sunday, February 10, 2008.

30   We have reservations about the concept of 'over-qualification' and would rather think in terms of mismatches between the output of the education and training systems and employers' personnel requirements. But at the same time current New Labour discourse would seem to have an undue supply-side bias and also to neglect the historical specificity of class structural change over the middle decades of the past century, in particular of the rapid expansion of the professional and managerial salariat from a relatively small base.

31   That is to say, changes in the way that schools are organised, in the curriculum, in admission procedures etc. may be desirable in their own right – e.g. insofar as they make schools more effective sites of learning and of personal development in general – regardless of any effect they may or may not have

on the subsequent social mobility of those who pass through them.

32   The argument that educational reform is unlikely to serve as a major instrument for increasing social mobility is not new. It is an explicit message of Christopher Jenck's landmark study, *Inequality*, first published in the US in 1972. The largely negative conclusions that Jencks draws from his painstaking data analyses seem to have been forgotten by sociologists and economists alike. It may also be pointed out that politicians of all parties typically avoid mention of the fact that insofar as educational or other policy measures do succeed in increasing upward mobility through creating greater fluidity, they must increase downward mobility to exactly the same extent (see further Goldthorpe and Jackson, 2007).

REFERENCES

Agresti, A. (2002), *Categorical Data Analysis* (2nd ed.), New York, Wiley.

Bishop, Y.M.M., Fienberg, S.E. and Holland, P.W. (1975), *Discrete Multivariate Analysis: Theory and Practice*, Cambridge, Mass., MIT Press.

Björklund, A. and Jäntti, M. (2008), 'Intergenerational income mobility and the role of family background', in Salverda, W., Nolan, B. and Smeeding, T. (eds), *Oxford Handbook of Economic Inequality*, Oxford, Oxford University Press,

Blanden, J., Goodman, A., Gregg, P. and Machin, S. (2004), 'Changes in intergenerational mobility in Britain', in Corak, M. (ed.), *Generational Income Mobility in North America and Europe*, Cambridge, Cambridge University Press.

Blanden, J. Gregg, P. and Macmillan, L. (2007), 'Accounting for intergenerational income persistence: noncognitive skills, ability and education', *Economic Journal*, 117, pp. 43–60.

—(2008), 'Intergenerational persistence in income and social class: the impact of within-group inequality', Centre for Economic Performance, London school of Economics.

Breen, R. (2004), 'Statistical methods of mobility research', in Breen, R. (ed.), *Social Mobility in Europe*, Oxford, Oxford University Press.

—(ed.) (2004a), *Social Mobility in Europe*, Oxford, Oxford University Press.

Breen, R. and Goldthorpe, J.H. (1999), 'Class inequality and meritocracy: a critique of Saunders and an alternative analysis', *British Journal of Sociology*, 50, 1–27.

—(2001), 'Class, mobility and merit', *European Sociological Review*, 17, pp. 81–10.

Castles, F.G. (1978), *The Social Democratic Image of Society*, London, Routledge.

Chan, T.W. and Goldthorpe, J.H. (2007), 'Class and status: the conceptual distinction and its empirical relevance', *American Sociological Review*, 72, pp. 512–32.

Erikson, R. (1984), 'Social class of men, women and families', *Sociology*, 18, pp. 500–14.

Erikson, R. and Goldthorpe, J.H. (1992), *The Constant Flux: A Study of Class Mobility in Industrial Societies*, Oxford, Clarendon Press.

—(2008), 'Income and class mobility between generations in Great Britain: the problem of divergent findings from the data-sets of British birth cohort studies', Swedish Institute for Social Research, Stockholm.

Erikson, R., Hansen, E.J., Ringen, S. and Uusitalo, H. (eds) (1987), *The Scandinavian Model*, Armonk, N.J., Sharpe.

Evans, G. (1992), 'Testing the validity of the Goldthorpe class

schema', *European Sociological Review*, 8, pp. 211–32.

—(ed.) (1999), *The End of Class Politics? Class Voting in Comparative Context*, Oxford, Oxford University Press.

Evans, G. and Mills, C. (2000), 'In search of the wage–labour/service contract: new evidence on the validity of the Goldthorpe class schema', *British Journal of Sociology*, 51, pp. 641–62.

Firth, D. (2003), 'Overcoming the reference category problem in the presentation of statistical models', *Sociological Methodology*, 33, pp. 1–18.

Firth, D. and De Menezes, R.X. (2004), 'Quasi-variances', *Biometrika*, 91, pp. 65–80.

Gallie, D., White, M., Cheng, Y. and Tomlinson, M. (1998), *Restructuring the Employment Relationship*, Oxford, Clarendon Press.

Goldthorpe, J.H. (1987), *Social Mobility and Class Structure in Modern Britain*, 2nd edn, Oxford, Clarendon Press.

—(1997), 'The "Goldthorpe" class schema: some observations on conceptual and operational issues in relation to the ESRC review of government social classifications', in Rose, D. and O'Reilly, K. (eds), *Constructing Classes: Towards a New Social Classification for the UK*, Swindon, ESRC/ONS.

—(2007), *On Sociology*, 2nd edn, 2 vols, Stanford, Stanford University Press.

Goldthorpe, J.H. and Jackson, M. (2007), 'Intergenerational class mobility in contemporary Britain: political concerns and empirical findings', *British Journal of Sociology*, 58, pp. 526–46.

—(2008), 'Education-based meritocracy: the barriers to its realisation', in Lareau, A. and Conley, D. (eds), *Social Class: How Does it Work?* New York, Russell Sage Foundation.

Goldthorpe, J.H. and McKnight, A. (2006), 'The economic basis of social class' in Morgan, S.L., Grusky, D.B. and Fields, G.S. (eds), *Mobility and Inequality: Frontiers of Research in Sociology and Economics*, Stanford, Stanford University Press.

Goldthorpe, J.H. and Mills, C. (2004), 'Trends in intergenerational class mobility in Britain in the late twentieth century', in Breen, R. (ed.), *Social Mobility in Europe*, Oxford, Oxford University Press.

Gorard, S. (2008), 'A re-consideration of rates of "social mobility" in Britain: or why research impact is not always a good thing', *British Journal of Sociology of Education*, 29, pp.317–25.

Green, F. and Zhu, Y. (2008), 'Overqualification, job dissatisfaction, and increasing dispersion in the returns to graduate education', Department of Economics, University of Kent.

Heath, A.F. and McDonald, S. (1987), 'Social change and the future of the Left', *Political Quarterly*, 58, pp. 364–77.

Hope, K. (1981), 'Constancies in the analysis of social stratification: a replication study', *Quality and Quantity*, 15, pp. 481–503

Jackson, M., Erikson, R., Goldthorpe, J.H. and Yaish, M. (2007), 'Primary and secondary effects in class differentials in educational attainment, *Acta Sociologica*, 50, pp. 211–29.

Jäntti, M., Røed, K., Naylor, R., Björklund, A., Bratsberg, B., Oddbjørn, R., Österbacka, E. and Eriksson, T. (2006), 'American exceptionalism in a new light: a comparison of intergenerational earnings mobility in the Nordic countries, the United Kingdom and the United States', Forschungsinstitut zur Zukunft der Arbeit, Bonn.

Jencks, C. (1975), *Inequality*, Harmondsworth, Penguin.

Jonsson, J.O., Mills, C. and Müller, W. (1996), 'A half-century of increasing educational openness? Social class, gender and educational attainment in Sweden, Germany and Britain', in Erikson, R. and Jonsson, J.O. (eds), *Can Education be Equalized?* Boulder, Col., Westview Press.

McGovern, P., Hill, S., Mills, C. and White, M. (2007), *Market, Class and Employment*, Oxford, Oxford University Press.

Nicoletti, C. and Ermisch, J. (2007), 'Intergenerational earnings mobility: changes across cohorts in Britain', *The B.E. Journal of Economic Analysis and Policy*, 7, pp.1–36.

Office for National Statistics (2000), *Standard Occupational Classification 2000*, London, The Stationery Office.

—(2005), *The National Statistics Socio-economic Classification: User Manual*, London, Palgrave Macmillan.

Rose, D. and Pevalin, D. (eds) (2003), *A Researcher's Guide to the National Statistics Socio-economic Classification*, London, Sage.

Rose, D., Pevalin, D.J. and O'Reilly, K. (2005), *The National Statistics Socio-economic Classification: Origins, Development, Use*, London, Palgrave Macmillan.

Sacker, A., Firth, D., Fitzpatrick, R., Lynch, K. and Bartley, M. (2000), 'Comparing health inequality in men and women: Prospective study of mortality, 1986–96', *British Medical Journal*, 320, pp. 1303–7.

Tilton, T. (1990), *The Political Theory of Swedish Social Democracy*, Oxford, Oxford University Press.

White, C., Glickman, M., Johnson, B. and Corbin, T. (2007), 'Social inequalities in adult male mortality by the National Statistics Socio-economic Classification, England and Wales, 2001–03', *Health Statistics Quarterly*, winter, pp. 6–23.