Conclusions

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15

Conclusions

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In this concluding chapter we have three main aims: to summarise the results found in the preceding twelve chapters, to explain them, and to decide the extent to which they support any of the general theories of social mobility that were discussed in Chapter 1 and by a number of the authors of the country chapters.

Absolute mobility and class structure

The class distributions of men and women show less variation between countries in the 1990s than they did in the 1970s. This is mainly due to the declining significance of the farm classes, IVc and VIIb, in those countries where a large farm sector persisted until the last quarter of the twentieth century. But there have also been some internationally consistent trends, such as the growth in the service class, I + II, and the decline in manual work, particularly of the unskilled kind. Among women, increased rates of labour force participation have been associated with a reduction in international variation as more and more of them enter occupations in the white-collar classes, I + II and III. This trend towards convergence in class structures has occurred together with decreasing variation between countries in their rates of overall mobility, of vertical, of upward, and of downward mobility—and, again, this is evident among both sexes. But, further, the distribution of people in the mobility tables of the different countries has also grown more similar. If we calculate the Δs from comparisons, between all pairs of countries, of their entire mobility tables, we find that the average Δ (the average difference between countries) falls from 43 percent in the 1970s to 33 in the 1980s and 30 in the 1990s, among women, with the comparable figures for men being 39, 30, and 30 percent. And the variance around these means has also declined: from 163.2 to 62.6 to 41.6 among women and from 137.5 to 62.9 to 56.1

among men.[1] Although European countries continue to show differences in their absolute mobility flows, these have become smaller.

Absolute mobility concerns the observed rates and patterns of flows between origin and destination classes and, in mobility analysis, is treated as the consequence of social fluidity (the relative chances of people from each origin being found in each destination class) operating within fixed origin and destination distributions. In Chapter 3 we saw that a model in which origins and destinations are independent, given the observed distributions of these two in each country and at each point in time, correctly classifies over 80 percent of cases, while a model which also assumes a common level and pattern of social fluidity correctly classifies around 95 percent of cases. It is evident, therefore, that changes over time, and differences between countries, in absolute mobility are driven by variation in the origin and destination distributions rather than in social fluidity.[2]

Can such variation be said to follow a pattern? We believe that the answer, in very broad terms, is yes. We might imagine societies following a developmental path that incorporates two major transitions: from an agricultural to an industrial society, and from an industrial to a post-industrial society. The consequences, for the class structure, of the former transition are a decline in the proportions in classes IVc and VIIb and a growth in the remaining classes, especially (among men) the manual working classes V + VI and VIIa. The transition to a post-industrial society sees the decline of V + VI and VIIa and the growth of I + II and III.[3] Everywhere the decline in agriculture is either more or less complete (Britain, Germany, Sweden, Israel, the Netherlands) or well underway while, in eight of our eleven countries (Ireland, Poland, and Hungary being the exceptions), between the 1970s and 1990s, the class structure saw a steady fall in the proportion of men in classes V + VI and VIIa and a consistent increase in the proportion in I + II and III. Among women the pattern was exactly the

[1] Tables 3.10 and 3.20, show, *inter alia*, the goodness-of-fit of the model of common social fluidity among countries within each decade. This model misclassifies between 3 and 4% of cases. But if, instead of allowing each country to have its own distribution of origins and destinations, we force these to be common in the same way that social fluidity is common (so we fit the Model *C OD*) we find that such a model misclassifies, among men, 24% of cases in the 1970s, 19% in the 1980s, and 20% in the 1990s, and, among women, 29, 22, and 21%. Because this model sets both fluidity and the origin and destination distributions to be the same in all countries, and because its fit to the data (measured by Δ) improves over decades, this is further confirmation that absolute mobility flows are becoming more similar. In addition, the difference in Δ between this model and the common social fluidity model can be seen as an approximate index of the importance, for absolute mobility, of differences between countries in their origin and destination distributions. Evidently these differences are of declining importance; in particular they declined between the 1970s and 1980s.

[2] This point is widely recognised. Compare, for example, Grusky and Hauser: 'intersocietal differences in observed rates must be attributed to variations in occupational distributions' (1984: 29) and Erikson and Goldthorpe: 'if we wish to understand cross-national variation in absolute rates, it is on differences in the structural contexts of mobility that our attention must, almost exclusively, be focused' (1992: 213–4).

[3] As we observed in Chapter 3, however, for the majority of countries the decline occurred in class VIIa and not in V + VI.

same. These differences mean that some countries display a post-industrial class structure with a heavy concentration of people in classes I + II and III: this is particularly true of the male class structure in Britain and the Netherlands and it is true of the female class structure in several countries. But the important thing, from the point of view of the study of absolute mobility, is the recent rapidity of the transition out of agriculture. Similarly, we saw in our comparative analysis, that the shift towards a concentration of women in the white-collar classes has been more rapid in countries such as Hungary and Poland where the class distribution in the 1970s differed most from this. The result has been the growing similarity in destination distributions that we have already remarked upon. But because countries embarked on this developmental path long before the first of our surveys was fielded, there is also decreasing variation in class origins. The mean value of the Δ between class origins for each pair of countries fell from 33 percent in the 1970s to 23 in the 1980s and 24 in the 1990s.[4] Absolute mobility flows converged because their main determinants did.

This convergence chiefly occurred between the 1970s and 1980s (see Tables 3.3 and 3.14) and whether the trend will persist, or even strengthen, is, of course, difficult to say. Clearly, if the working classes continue to decline in those countries where the decline has begun, and if this extends from VIIa to V + VI, then further convergence will be inevitable as men, like women, come to be heavily concentrated in classes I + II and III. Recent historical experience of the location of industrial production would suggest that we can expect further convergence: in any event, it seems unlikely that any of these countries will display a growth in classes V + VI and VIIa, while some at least will experience a decline. As for the countries in which these classes have not yet begun to decline (Ireland, Poland, and Hungary), the outlook seems less certain. In Ireland the growth of classes I + II and III has outstripped that of V + VI and VIIa over this period, but this is not true of the male class structure in Poland and Hungary. On the other hand, among women in Poland and Hungary there has been a steady growth in classes I + II and III and an increase, then a decline, in V + VI and VIIa, suggesting that the second transition may be under way. Much here depends on the nature of economic development. Foreign direct investment in manufacturing, as in the Irish case, is one mechanism by which the size of the working class may be sustained and the rate of convergence consequently slowed.

Social fluidity

A striking result evident in many of the analyses presented in this volume is that the values of Δ for models allowing temporal change in fluidity, or, in

[4] These figures are for men. For women the figures are 36, 24, and 24 percent. The slight differences arise because our samples of women include only those in the labour force and we have no data for women in Ireland.

Chapter 3, cross-national variation, are often not greatly different from those deriving from models of no change or commonality. For example, Table 3.11, and, for women, Table 3.21, show that, when we analysed our data according to decade, a very small index of dissimilarity was returned by a model that allowed for no temporal or cross-national variation in social fluidity (3.95 percent for men and 3.81 for women) and allowing for such variation only improved Δ by, at most, two percentage points. This compares with a Δ of around 15 percent in models in which origins and destinations are independent. Much the same picture emerged when we used annual data, and arguments like this usually lead to the conclusion that most social fluidity is common and invariant over time, so supporting the Featherman Jones Hauser (FJH) thesis. Sometimes the same point is made using the deviance, rather than Δ, as the yardstick, and here the result is even more extreme. For example, in Table 3.12, we see that 90 percent of the deviance returned by the model of independence disappears when we add common social fluidity, and that a model allowing fluidity to change over time and differ between countries improves it only by a further 7 percent.[5] Taken together, the decompositions of the deviance and of Δ would seem to indicate that more than 85 percent of social fluidity is common over nations and time.

But other measures suggest rather greater variation. In Fig. 3.3, and in the additional analyses that included Israel, Norway, and Italy, we saw that, among men, the association between origins and destinations was less than two-thirds as strong in Israel in the 1970s than it was in Britain and less than half as strong as in Germany, and there are similar differences between countries in women's fluidity (see Fig. 3.5). Likewise, there have been large changes over time within several countries. For example, Table 3.8 shows that, in the Netherlands, the log odds ratios among men in the 1990s were only three-quarters of their 1970s value. So, an odds ratio of 4 in the 1970s (equivalent to a log odds ratio of 1.39) would have declined to 2.8 ($\ln(2.8) = 0.75 \times 1.39$) by the 1990s. The conclusion to be drawn from these apparently contradictory measures of the variation in fluidity is not that it is common or invariant, but, rather, that even quite substantial differences in fluidity have little impact on the distribution of cases over the mobility table—that is, on observed, absolute mobility flows.[6] To illustrate this: if we take the fluidity pattern from the 1997 Italian men's table and insert it into the 1991 Israeli men's table, while preserving the Israeli marginal distributions, the Δ between

[5] These figures are arrived at as follows. The difference in deviance between Models 0 and 1 in Table 3.12 is 60,943 which is 90% of 67,385. The difference in deviance between Models 1 and 4 is 4733, which is 7% of 67385.

[6] An analogy may help to make the point. In a linear regression, $Y = a + bX$, X (which is analogous to social fluidity) may display a lot of variation, but it will have little impact on Y (analogous to overall mobility) if the coefficient, b, is close to zero. Measures such as the change in Δ or in G^2 capture the strength of effect of fluidity on overall mobility, but they do not measure the variation in fluidity itself, and it is therefore mistaken to conclude, on this basis, that social fluidity itself is common and invariant.

the real and the constructed Israeli tables is 6 percent.[7] When we consider that the Israeli and Italian mobility regimes are close to the extremes of the range of fluidity found in our data (Israel has the lowest β of 0.64 while the Italian value of 1.07 is exceeded only by Germany's), this suggests that 6 percent represents the maximum impact of differences in fluidity on the distribution of individuals in the mobility table.

As for our substantive results concerning fluidity, in Chapter 3 we found an increase in fluidity, among both sexes, in France, the Netherlands, and Sweden. The changes in France and the Netherlands have contributed to a lessening of the difference between countries because these two were among the least fluid countries in the 1970s (see Fig. 3.3). The convergent trend was also strengthened by changes in Hungary (among men and women) and Ireland (among men) which were also among the least fluid countries in the 1970s. Hungary recorded a large increase in fluidity between the 1970s and 1980s; Ireland a large increase between the 1980s and 1990s. On the other hand, there are cases which acted in the other direction: the increases in fluidity in Poland and Sweden and the lack of any significant change in Germany have led to a divergence in fluidity levels. Overall, we can find no indication of convergence in fluidity patterns among men, whether we measure this by the Δ values for the model of common social fluidity in each decade (as in Table 3.10) or the variance of the β parameters which are shown in Fig. 3.3. Among women we see some convergence in the first of these measures (Table 3.20) but not in the second (Fig. 3.5).

How do these findings, based as they are on our analyses reported in Chapter 3, square with the results of the single-country chapters? And can we learn anything further from the reports on the countries whose data were not included in the comparative analyses (namely Italy, Norway, and Israel)? Table 15.1 summarises the results about the trend in social fluidity in all eleven of our countries as reported in the country chapters and in our own comparative analysis. As one would expect, there is a good deal of consistency between the results, though in three cases—men in Germany, Sweden, and Poland—they point to different conclusions, and we shall deal with each of these in turn.

In the German case, on the basis of data aggregated into three periods (1976–80, 1982–90, and 1991–9), Müller and Pollak argue that there are some indications of increasing fluidity among West German men. However, although the parameters of the Unidiff model show a steady decline, the model itself fails to improve on constant fluidity (see Table 4.5). Thus, applying the same models to the data, Chapters 3 and 4 are in agreement. Müller and Pollak's argument for increasing fluidity rests on the gradual improvement in fit of the core model over the three periods (Table 4.6) and the fact that most of its parameters decline in value. But their conclusions are far from unequivocal:

[7] We use the observed Italian fluidity pattern, and thus the magnitude of the difference that we report does not depend on the adequacy of any particular model of fluidity.

TABLE 15.1. *Trends in social fluidity by country (the first symbol refers to the results in the country chapter, the second to those in the comparative analysis)*

	Germany	France	Italy	Ireland	Britain	Sweden	Norway	Poland	Hungary	Israel	Netherlands
Men	↑–	↑↑	↑	↑↑	– –	– ↑	↑	–↑	↑↑	–	↑↑
Women	– –	↑↑	–	n.a.	? –	↑↑	↑	↑↑	↑↑	–	↑↑

Note: ↑: increase in social fluidity; ↓: decrease in social fluidity; and –: no change.

> . . . in some respects social fluidity has increased. . . especially due to the decline in hierarchy barriers in intergenerational class mobility. . . But other peculiarities. . . did not really change. Germany continues to have strong inheritance effects, particularly weak sector barriers as well as particularly marked distinctions between a manual and a non-manual space of social mobility (Müller and Pollak, this volume: 110).[8]

In Chapter 3 we pointed to the sparseness of the German data, and this may explain the lack of clarity about possible trends in German fluidity.

Jonsson (this volume) initially groups the Swedish data into pairs of years, so giving twelve periods covering 1976–7 to 1998–9. He later groups the data into six four-year periods. In neither case does he find change in fluidity among men though he does find it among women where there seems to be an across-the-board increase in fluidity. There are two differences between Jonsson's analysis and those of Chapter 3. First, Jonsson places members of class IIIb in class VII, whereas in Chapter 3 they are in class III; and, second, in Chapter 3 the surveys are analysed by single year or grouped into decades. These seem, however, rather minor differences, and any trend that is sensitive to them might be considered to be rather weak. Certainly, when we analysed the annual data, the evidence for growing fluidity was the improvement in fit of the linear LmSF model over constant social fluidity (CnSF): LmSF itself was no improvement (see Table 3.9). The trend in the decade data, however, is evident when we use either LmSF itself or its linear version (see Table 3.8), suggesting, perhaps, that once short-term fluctuations are removed from the data through the process of aggregation, the trend towards higher fluidity becomes evident. Nevertheless, the Swedish case—in respect of men, though not women—must be surrounded by a margin of uncertainty.

Mach, in the chapter on Poland, weights the very large first survey (from 1972) so that it has the same sample size as the 1988 survey. The result is then no change in fluidity among men but a steady increase in fluidity among women. We do not follow this same weighting procedure: nevertheless the difference in results for men reinforces our warning about the sensitivity of the Polish results to the 1972 data, without which there is no trend in fluidity.

[8] Müller and Pollak do not fit the core model to data for women. In Table 4.5 they show that the log-multiplicative social fluidity (LmSF) model does not improve on the model of common fluidity.

In Table 15.1 the question mark in the column for Britain reflects the uncertain result that Goldthorpe and Mills find in respect of women: in one of their datasets, but not the other, they detect increasing fluidity. We might also have placed a question mark next to the Irish result. Using three surveys, Layte and Whelan find no clear trend towards increasing fluidity among men: 'Our findings therefore suggest very modest changes over time... We do observe a slight reduction in the barriers to long range movement but the stability of the overall pattern indicates that the general shape of class advantage has been maintained over time (Layte and Whelan, this volume: 187).'

The parameters of the Unidiff model (as reported in Chapters 3 and 7) show a decrease in social fluidity in 1987 compared with 1973 and then an increase in 1994. On the grounds that the 1994 value is significantly different from both the 1973 and 1987 values, fluidity may be said to have increased, but the non-linear pattern of change should warn us to be cautious about drawing any firm conclusions about trends.

Table 15.1 reports results for three countries that were not included in the trend analyses of Chapter 3. In Italy, Pisati and Schizzerotto report an overall slight increase in fluidity among men between 1986 and 1997, but no change among women. Meir Yaish reports no change between 1974 and 1991 among either men or women in Israel, and Kristen Ringdal finds evidence of change in fluidity among both sexes in Norway. Change among men takes the form of an increase in fluidity followed by a decline (the β parameter from the LmSF model takes the values 1, 0.76, and 0.88 over his three time-points) and a steady increase in fluidity among women (the βs are 1, 0.83, and 0.71).

The results from our eleven countries then point to a fairly clear conclusion: there is a widespread tendency for social fluidity to increase, even though this might not be a statistically significant trend in every case. Among men, the value of β is less at the end of the period than at the start in every country except Britain and Israel (where the values remain the same). Furthermore, of the nineteen decade-to-decade changes in the β parameter reported either in the country chapters or, for the most part, in Chapter 3, we find that in sixteen of them the β parameter declined, and it increased in three—in Ireland and Britain between the 1970s and 1980s and in Norway between the 1980s and 1990s. There is just one further notable case in which fluidity fell (but which is obscured by the use of aggregated decade data) and that is Hungary, where fluidity declined significantly between the 1992 and 2000 observations. Although there are some cases (such as Sweden) where we cannot be unequivocal about an increase in fluidity, we can say with confidence that nowhere (with the possible exception of post-Communist Hungary) is there any evidence of a trend in the opposite direction.[9] For women the picture is very similar. Of seventeen

[9] Our belief that this change in Hungary might indeed reflect an underlying increase in the rigidity of the mobility regime is given support from a recent finding by Gerber and Hout (forthcoming) of a decline in Russian fluidity in the 1990s.

decade to decade changes, two of them show an increase in β (Germany between the 1980s and 1990s, Britain between the 1970s and 1980s) while fourteen show a decline.

Theories of social fluidity

Given these findings, how might we go about explaining them? The broad theories that were summarised in Chapter 1—namely the liberal theory of industrialism and the FJH thesis—might be described as 'macro' theories—that is, they are hypotheses about outcomes measured at the societal level—or, more simply, characteristics of societies themselves. But such outcomes derive, ultimately, from the action and interaction of individuals and organisations, and so it is natural to seek to account for the macro-level features of societies (such as their degree of social fluidity) in terms of such actions and interactions, albeit within institutional frameworks that are themselves the product of other actions and interactions. A model of this kind is sometimes called a micro or behavioural model. The liberal and FJH theses might be said to have implicit, rather than explicit, behavioural models underlying them. In the case of the former, economic competition between firms and nations ensures that merit is rewarded and, as competition grows more severe, so societies become ever more meritocratic. As far as the latter is concerned, Erikson and Goldthorpe (1992), in their final chapter, sketch an argument for stability in rates of social fluidity: such rates remain roughly constant because an important benefit of membership of an advantaged class is the ability it gives its occupant families to maintain their position.

As well as these approaches, there have been several other attempts, in the sociological literature, to present a more or less well developed theory of social fluidity (Breen 1997; Goux and Maurin 1997; Pisati 1997; Goldthorpe 2000; Jonsson, this volume). In addition, many economists have sought to explain the relationship between advantage and disadvantage in successive generations, though their work has often been entirely theoretical with no empirical content (Banerjee and Newman 1991; Galor and Zeira 1993) or orientated to explaining income or earnings (notably Becker and Tomes 1979; see also the review by Grawe and Mulligan 2002).

It is reasonable to say that, in general terms, a theory of social fluidity should address the role played by the resources possessed by one generation in shaping the career paths of members of the following generation. The relevant resources might be material, cultural, or genetic; understanding their effects on the generation to whom they are transmitted would require that we know about the role they play in educational and occupational attainment; and an explanation of why they have these effects would be couched, at least in large part, in terms of the institutional arrangements of society. The latter

would involve the role of institutions in determining the weight attached to different resources in the attainment process and their role in determining the degree to which the resources accumulated by parents are passed on to their children. Rates of social fluidity would change through changes in the transmissibility of resources between generations and in the role played by particular resources in the attainment of class positions.

However, a difficulty in explaining the results of inquiries into social fluidity arises from the relationship between theories of the phenomenon and the data that give rise to empirical findings about it. The basic datum of social fluidity is a set of odds ratios that capture the total association between parent's and child's class. Theories of mobility or fluidity are concerned with how this association arises through the interaction of resources possessed by families and children and the demands of the labour market, most often directly expressed in the hiring decisions of employers and employing organisations. There is thus an immediate disjunction between what we observe (the odds ratios describing the association between origins and destinations) and what the theories speak of (that part of the association that arises in a particular way). As Bowles and Gintis (2002: 5) have pointed out in relation to the intergenerational association of income, 'any individual trait that affects income and for which parent–offspring similarity is strong will contribute to the intergenerational transmission of economic success'. These traits include those things to which theories of social fluidity usually refer (and which Bowles and Gintis call factors of production), such as education, cognitive skills, and personality characteristics which may be transmitted genetically or culturally and which are rewarded in the labour market, as well as other things which lie outside existing theoretical models, such as 'race, geographical location, height, beauty, or other aspects of physical appearance, health status, and personality' (Bowles and Gintis 2002: 5).

Furthermore (and particularly, but not only, when our focus is comparative, as it is here), the question must be raised of the extent to which our data do indeed consistently reflect the association between origins and destinations in the relevant population. The definition of the population from which the data are drawn, sampling design, response rates, the representativeness of the achieved sample, and measurement error will all intervene between what a theory seeks to explain and the data available to test it, and variations in these may all give rise to observed differences in fluidity—though these issues are usually ignored in mobility research (Treiman and Ganzeboom 2000: 139). We noted in Chapter 3 that these are more problematic when we try to make comparisons between, rather than within, countries, and thus such comparisons need to be approached with caution. But this does not mean that temporal comparisons within a country are free of such problems. In particular, variation in survey response rates may induce spurious changes in social fluidity. In appendix A to this chapter we have sought to assess the

degree to which declining survey response rates might have been responsible for the observed temporal increases in social fluidity. But no clear conclusions emerge because in some countries we find increasing fluidity and declining response rates (the Netherlands, Poland), in others constant response rates and increasing fluidity (France), and in yet others, declining response rates and unchanging fluidity (Germany).

Therefore, when we seek to explain a given concrete set of results about social fluidity, it is important not only to have an underlying explanatory model but also to be aware of how its implications will vary according to the data that have been used, and to bear in mind that some of the variation in fluidity that we see will be caused by things quite different from the 'factors of production' normally considered in theories of fluidity. These are issues to which we shall return.

Origins, education, and destinations

Perhaps the simplest model of the mobility process that sociologists and others have used is the so-called '*OED* triangle' illustrated in Fig. 15.1. This is an attempt to capture the main paths that link class origins with class destinations. It is widely accepted that educational attainment is the major factor in mediating social fluidity (Ishida et al. 1995; Marshall et al. 1997), and the *OED* triangle allows for this by positing an effect of class origins on educational attainment (arrow A) and an effect of education on class destinations (B). Aside from this, there is then a residual direct effect from origins to destinations (C) which captures all that part of the origin–destination association that is not mediated through education. Of course, the model could be expanded to allow separate paths for other factors that have been identified as mediating the origin–destination association and in this way make it similar to the more complex path-analytic models associated with work in the status attainment tradition, a tradition initiated by Blau and Duncan (1967).

In the absence of well developed and testable behavioural theories of the social fluidity regime, a first step in furthering our understanding would be to determine the degree to which, in each country, changes in fluidity are driven by changes in each of these paths. A second step would then be to seek to

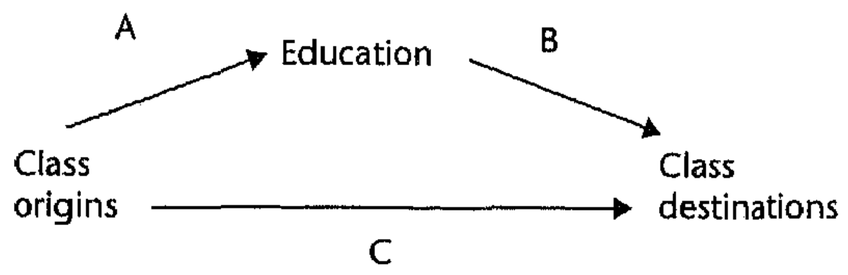

FIG. 15.1. *Origins, education, and destinations: the* OED *triangle*

account for them, whether this is in terms of changes in the impact of 'factors of production' or through some other means. In the log-linear and log-multiplicative modelling framework in which we, and the authors of the country chapters, have been working, although it is possible to estimate models for all paths of the *OED* triangle, it is not possible to carry out what is known as a 'path analytic' decomposition. In this instance, a path analytic decomposition would measure the direct impact of class origins on destinations (path C) and its impact via education (paths A and B). As a result, although we can discuss trends in each of these paths, we cannot (though see appendix B to this chapter) make definitive assessments of their relative importance for social fluidity.

Six of our country chapters analyse the role of education in social fluidity, though in the German case, a cohort rather than a period perspective is taken. For the other five, the country chapters, together with other published research and some additional analyses that we have carried out (and which are available on request from the authors), allow us to draw the following conclusions about the three paths shown in Fig. 15.1

1. Origins to education (path A in Fig. 15.1): class inequality in educational attainment has declined in this period in France, Sweden, and the Netherlands but not in Ireland or Britain.
2. The effect of education on class destination, controlling for class origins (path B), has grown weaker over the period in France, Sweden, Ireland (see Whelan and Layte 2002), Britain, and the Netherlands.
3. The partial effect of origins on destination, controlling for education (path C), remains constant in Ireland and Britain but declines in the Netherlands.
4. In the French case, Vallet reports a compositional effect deriving from an interaction between origins, destinations, and education. The association between origins and destinations is weaker among people in higher educational categories, and, as more people reach those categories, so there is an overall reduction in the strength of the association between origins and destinations. Hout (1988: 1388) earlier attributed some of the increase in social fluidity he observed in the United States to this compositional change. Our own analyses show that this effect is also present in Sweden.[10]
5. It is well known—and several of the country chapters confirm it—that education mainly mediates the hierarchical component of mobility and has little or no effect on other elements, particularly the tendency for self-recruitment among farmers and the petty bourgeoisie.[11] Our own analyses

[10] If, in the French and Swedish cases, we did not take account of this effect by including a three-way interaction between origins, destinations, and education in our model, then it would appear as a declining partial effect of origins on destinations (that is, the same change as we observe in the Dutch data).

[11] The Irish case may be thought typical in this respect: 'Education served to mediate about half of the effects associated with position in the class hierarchy. However, it played almost no role in accounting for the inheritance or property effects that also serve to determine class outcomes' (Whelan and Layte, this volume: 193).

(described in appendix B to this chapter) suggest that the overall extent to which education mediates the impact of origins on destinations increased over the last decades of the twentieth century but continues to vary considerably between countries. Its role is greatest in Sweden (which might therefore be described as the most meritocratic of our countries) and weakest in Britain.

In summary, we find several different mechanisms through which the increase in social fluidity in France and the Netherlands and possibly Sweden, and its constancy in Britain and possibly Ireland, might be explained. In all five countries, we observe a weakening of the link between education and class destination, but in France, Sweden, and the Netherlands we see two further effects neither of which is found in Britain or Ireland. First, the link between class origins and educational attainment has weakened; and, second, the direct partial effect of origins on destinations, controlling for education, has also declined. In France and Sweden (though not in the Netherlands) this seems to be due, at least in part, to the growth in the proportion of people with higher levels of educational attainment.

Ascription, achievement, and meritocracy

Jonsson (1992) calls the hypothesised increase over time in the significance of achievement at the expense of ascription 'the increased merit selection (IMS) hypothesis'. The clearest statement of this is found in the liberal theory of industrialism (Parsons 1960; Kerr et al. 1963) which argues that the intensifying competition associated with economic development makes the accurate matching of workers to jobs ever more important. As a result, ascriptive recruitment practices are forced into abeyance and selection for jobs on the basis of relevant skills and abilities, attested by the possession of educational and other formally certified qualifications, comes to predominate. It is probably in the work of Bell (1972, 1973) that this view of the central role of education is most fully elaborated. For Bell, educational qualifications signify merit and are therefore the things to which labour market rewards are attached.

Applying such arguments to the *OED* triangle we should expect a weakening of paths A and C and a strengthening of path B. What we in fact see is that all the paths either show a tendency to remain unchanged or to weaken. This certainly implies declining ascription, and, indeed, we have seen, in both the immediately preceding analysis and those of Chapter 3, a general tendency for social fluidity to increase. But it does not imply a growth in the importance of achievement, at least as this is captured in our measure of educational qualifications. Furthermore, although, as we noted earlier, education is considered to be the major factor mediating social fluidity, our results show

that it nevertheless plays a minor role when compared with the direct partial effect from origins to destinations. And it is this path, of course, which captures the workings of all the heterogenous factors that Bowles and Gintis's (2002) arguments would point towards as important determinants of the association between origins and destinations.

Macro-sociological models of variation in fluidity

There have been some attempts to link variation between countries in their social fluidity to the political, economic, or sociological characteristics of those countries. In this approach, rather than trying to decompose social fluidity into constituent pathways, the level of fluidity is treated as a societal characteristic and other macro-level characteristics are employed to account for it. In one early attempt, Grusky and Hauser (1984), using sixteen, three by three mobility tables collected in the 1960s and 1970s, found that measures of industrialisation, educational enrolment, social democracy, and income inequality accounted for three-quarters of the international variation in social fluidity as captured by their preferred model of quasi-perfect mobility. In the concluding chapter of *The Constant Flux*, Erikson and Goldthorpe (1992) undertook a similar analysis in which they examined the effects of a country's ranking on a set of measures—level of industrial development, economic and educational inequality, and the political complexion of the government—on its level of social fluidity. Their results were mainly negative, with support only for the argument that 'nations have more open class structures, the lower the level of economic inequality among their populations' (Erikson and Goldthorpe 1992: 388). But this effect is rather weak, leading Erikson and Goldthorpe to reiterate their argument that variation between nations in fluidity is non-systematic, deriving from 'effects specific to particular societies at particular times' (Erikson and Goldthorpe 1992: 388). For their analyses, Erikson and Goldthorpe largely rely on data presented by Treiman and Yip (1989: 382–3) whose measure of income inequality is based on the incomes of the respondents. It might reasonably be supposed that (as Treiman and Yip 1989: 381 imply) the income of the respondents' parents would have been a more salient measure but, for obvious reasons, this was not available.

Indeed, the question of the time to which the explanatory variables should refer presents a general difficulty for this approach, the solution to which must depend on the mechanisms that are thought to link them with social fluidity. To take the case of 'social democracy': would we expect fluidity to be greater in countries that are currently social democratic, or would it not be more plausible to suppose that sustained social democracy over a long period (the dates of which would need to be specified) would be more relevant? Likewise, if we believed that cohort-specific factors drive changes in social fluidity, we should

use measures of these factors formed as a weighted sum of their values in all the cohorts represented in the period data. Putting aside these difficulties, we have sought to test two of the most important macro-models of fluidity: that deriving from the liberal theory of industrialism which implies a relationship between social fluidity and economic development, and Erikson and Goldthorpe's argument that fluidity is related to social inequality.

In Fig. 3.3 we showed a set of LmSF β parameters for each country/decade combination, estimated under the assumption of a common pattern of social fluidity (readers will recall that although the figure does not include Norway, Italy, and Israel, results for them were discussed in the text). Bearing in mind our various caveats about the assumptions underlying these estimates, they provide us with a common yardstick by which to assess fluidity among countries over time. We therefore take those β values and regress them on the relevant Gini coefficient of income inequality, using data from the Luxembourg Income Study.[12] For each country we use the measure of Gini for the year closest to the mean year for which we have mobility data in each decade. If we have no Gini value for a given decade, we drop this observation from our analysis. We are following Treiman and Yip (1989) and Erikson and Goldthorpe (1992) in using a contemporaneous measure of income inequality rather than a measure of income inequality in the parental generations. Our model posits that, given the level of income inequality in each country in the 1970s, changes within a country in β follow the same trend as the Gini index. Thus we test for a common effect on β, in all countries, of income inequality: or, in other words, a common slope coefficient.

Table 15.2 shows our results. The first model simply regresses the βs on the dummy variables for country and so the coefficients measure the within-country average, over the three decades, of β, and these echo what can be seen in Fig. 3.3. There are no significant differences in average fluidity over this thirty-year period between Germany, Italy, and Ireland, but fluidity is greater in France, Britain, and the Netherlands, and much greater in Sweden, Norway, Poland, Hungary, and Israel. The adjusted R^2 of this model is very large, indicating that much more of the variation in social fluidity lies between countries than between decades. In the second model we include income inequality, as measured by the Gini index. Not only is there no significant relationship between fluidity and the Gini index, its coefficient has the wrong sign. We thus find no support for Erikson and Goldthorpe's preferred explanation of variation in fluidity.[13]

Using annual data we were able to rerun the analysis also including calendar year (running from 70 to 100) as a regressor (one advantage of which is that we now have slightly more observations). The β values (which have

[12] Available at www.lisproject.org/keyfigures/ineqtable.htm.
[13] We obtain a similar non-significant effect when we omit the country dummy variables.

TABLE 15.2. *Regression of β on the Gini coefficient and dummy variables for country (reference category is Germany) for men in eleven countries, decade data (n = 24)*

Model:	1[a]		2[b]	
	Coefficient	*Standard error*	*Coefficient*	*Standard error*
Gini	—	—	*−1.120*	1.09
France	−0.130	0.056	*−0.094*	0.066
Italy	*−0.080*	0.056	*−0.006*	0.091
Ireland	*−0.055*	0.056	*−0.026*	0.096
Britain	−0.213	0.050	−0.164	0.069
Sweden	−0.367	0.050	−0.411	0.066
Norway	−0.405	0.056	−0.430	0.061
Poland	−0.440	0.056	−0.424	0.058
Hungary	−0.410	0.070	−0.375	0.078
Israel	−0.545	0.056	−0.493	0.075
Netherlands	−0.295	0.056	−0.298	0.056
Intercept	−1.190	0.035	1.479	0.283

Notes: Italic coefficients are not statistically significant at $p < .05$.

[a] Adjusted $R^2 = 0.89$; $F_{10.13} = 19.02$.

[b] Adjusted $R^2 = 0.89$; $F_{11.12} = 17.46$.

not hitherto been reported in the text) are taken from Model 8 in Table 3.12, and so we now dropped the Norwegian, Israeli, and Italian cases. The results are not reported but, for both men and women, we found a non-significant and incorrectly signed coefficient for the Gini index.

We can test the liberal theory directly by regressing the same set of beta values for each country and year on the corresponding measures of real GDP per capita (GDPPC).[14] Table 15.3 contains the results. There are no GDP data for Poland before 1979 and none at all for West Germany. France then becomes the omitted category for the country dummy variables. Model 1 shows that GDP per capita does indeed have a significant relationship with fluidity: within each country fluidity increases as the economy grows, but the continued statistical significance of several of the country dummy variables shows that large differences between countries remain unexplained. However, Model 2 reveals that the effect of economic development is not robust to the inclusion of the year variable: once the time trend is introduced, GDP per capita becomes non-significant, suggesting that it is acting as a proxy for a temporal trend in fluidity; this is not surprising given that year and the country dummies explain 95 percent of the variation in GDP per capita. Of course, one might argue that the temporal trend in fluidity is in fact the result

[14] The GDP per capita data are taken from the Penn World Tables, version 6.1, at http://datacentre2.chass.utoronto.ca/pwt/. We divide the value by 10,000 to reduce the excessive number of values after the decimal point in the coefficient estimates.

TABLE 15.3. *Regression of β on year, GDP per capita (divided by 10,000) and country dummies (reference category is France), annual data, men (n = 72)*

	Model							
	1[a]		2[b]		3[c]		4[d]	
	Coefficient	s.e.	Coefficient	s.e.	Coefficient	s.e.	Coefficient	s.e.
Year	—	—	*−0.009*	0.005	—	—	−0.013	0.003
GDPPC	−0.390	0.054	*−0.126*	0.155	−0.202	0.052	*−0.056*	0.053
Ireland	*−0.114*	0.084	*0.028*	0.114	—	—	—	—
Britain	*−0.170*	0.060	−0.144	0.060	—	—	—	—
Sweden	−0.255	0.059	−0.284	0.060	—	—	—	—
Poland	−0.798	0.104	−0.476	0.205	—	—	—	—
Hungary	−0.562	0.085	−0.316	0.159	—	—	—	—
Netherlands	−0.092	0.059	−0.107	0.058	—	—	—	—
Intercept	2.00	0.102	2.269	0.179	1.483	0.089	2.393	0.193

Notes: Italic coefficients are not statistically significant at $p < .05$.

[a] $F_{7,64} = 22.99$; adj. $R^2 = 0.68$.
[b] $F_{8,63} = 21.24$; adj. $R^2 = 0.70$.
[c] $F_{1,70} = 15.26$; adj. $R^2 = 0.17$.
[d] $F_{2,69} = 23.64$; adj. $R^2 = 0.39$.

of changes in economic development, but there is no way of establishing this given these data, and, in any case, such an argument would carry much more force if the effect of GDP per capita had remained large and statistically significant even when time was included in the model. The high correlation between explanatory variables and calendar time is a general problem for analyses of this sort. Fortunately the picture becomes a little clearer if we omit the country dummy variables. Now the focus is shifted from the effect of economic development on the within-country trends in fluidity (the common slope assumption) to the question of the effect of economic development on fluidity per se. We are no longer taking as given the differences between countries in their initial (1970s) level of fluidity. And now we find that, although GDP per capita once again has a significant effect (Model 3 in Table 15.3), once we add year, not only does this effect vanish, but the year variable itself is strongly significant. This suggests that the most plausible model for the relationship between these three variables is one in which a time trend drives both fluidity and economic development but in which there is no direct link between these two.[15]

[15] If we repeat the analyses reported in the section but using the logarithm of the β coefficient as our dependent variable (which is, arguably, more appropriate), the substantive results are unchanged. We report the unlogged version of the models because their interpretation is more straightforward.

Policy questions

The complexity of social fluidity, especially in a period perspective such as we have adopted here,[16] makes it resistant to simple explanation. We have seen that fluidity can and does change for several reasons, and the end result is a consequence of several diverse processes. This means that, as far as policy prescriptions for raising the level of social fluidity are concerned, things are equally complex. In our analysis of the *OED* triangle we found a consistent weakening of the link between education and destination. As long as education is positively correlated with class origins, a decline in the positive partial association between education and destination, holding constant the partial origin–destination association, should result in an increase in fluidity. But, not only is this effect not well understood, it does not lend itself to any policies that a government might want to encourage and, indeed, by itself it may not always be sufficient to increase fluidity significantly, as the British case shows. This leaves three mechanisms, any of which is able to contribute to greater fluidity. In those cases where social fluidity is greater among those with higher educational qualifications, a simple change in the distribution of education towards a greater share of more highly educated people can cause a general rise in fluidity. This seems to have been particularly important in France and, adopting a cohort, rather than a period, perspective, Breen and Jonsson (2003) show that changes in fluidity between successive Swedish birth cohorts can largely be attributed to changes in the distribution of educational attainment. But a necessary condition for this is that the origin–destination association should indeed differ by educational level, and there is no reason to suppose that this will always be the case, as the Dutch example shows. Furthermore, a policy to increase enrolments in higher education with a view to increasing social fluidity will not be effective if this also changes the degree to which labour markets for the more highly educated operate on a meritocratic basis. Indeed, Vallet (this volume: 142) finds exactly this trend in France: 'as education has expanded and the highest educational categories have grown in size, the capability of advanced education to weaken the "ascriptive effect" has declined'.

The second mechanism seems to have been partially responsible for the increase in Dutch fluidity: this is the weakening impact of origins on destinations when the effect of education is taken into account. Such a change is

[16] A period perspective means focusing on change over historical time as opposed to, say, a cohort perspective, according to which we would compare mobility among groups born at different times. There are strong arguments for focusing on cohorts as well as periods in mobility analysis. The German chapter in this volume provides a good example in which changes in fluidity—first a decline then an increase—can be attributed to specific historical events that affected particular birth cohorts but which, because period data aggregate the experiences of different cohorts, cannot be seen there.

capable of exerting a large effect on social fluidity, though this may be unsurprising given that this 'residual' path captures all the non-educational influences on social fluidity. These include avenues of intergenerational transmission based on the inheritance of property, on unmeasured (in mobility studies) factors that may be contextual (such as access to particular networks), individual (preferences and abilities whose effects are not mediated via education), and processual (discrimination and the hiring practices of employing organisations), as well as any contingencies that induce an association between origins and destinations. Evidently what is required is some understanding of the exact nature and relative importance of these which would then yield a basis on which to assess whether and how they might be susceptible to deliberate change.

Lastly, a decline in the association between class origins and educational attainment will also tend to lead to greater fluidity, but we should be cautious about the possible extent of this. For one thing, as the effect of education on destination also diminishes, changes in the origin–education association will have a smaller payoff. In addition, the effect on social fluidity of changes in the origin to education and education to destination paths will depend on how much fluidity is accounted for in this way. In Sweden, a great deal of it is mediated in this way, and so further reductions in class inequality in educational attainment will be more consequential for social fluidity here than would the same reductions in, say, Britain.

A final assessment

What do our results say about the theories which we outlined in Chapter 1 of this volume? They directly contradict the FJH hypothesis of a basic similarity in social fluidity in all industrial societies 'with a market economy and a nuclear family system' (Featherman et al. 1975: 340) and they also go against Erikson and Goldthorpe's (1992: 367) claim that 'relative rates possess a high degree of temporal stability'. It is certainly true that, across countries and time periods, a common pattern of social fluidity could be said to hold reasonably well, and, indeed, this is the basis on which we then employed the LmSF model and used the resulting β values to capture cross-national and temporal variation;[17] but, as is evident from such analyses, there is considerable difference in the strength of fluidity between countries like Israel and Sweden, on the one hand, and Italy, France, and Germany on the other, or between the Netherlands in the 1970s and the Netherlands in the 1990s. However, although

[17] At the risk of labouring a point we made in Chapter 3, the model from which these β values are derived ignores variation between countries in their pattern, as distinct from their level, of fluidity, and thus understates the extent of cross-national differences.

there is variation in fluidity regimes, this makes little difference to the patterns of mobility that we observe.

Is the variation in fluidity between countries systematic in the way in which the liberal theory might suggest? Our answer is no. The stage of economic development of our countries varies rather little, but, even so, there is no evident link between their ranking in fluidity terms (Figs 3.3 and 3.5) and their GDP per capita. Nor could we discern any tendency towards either convergence or divergence in fluidity, and thus the suggestion made in Chapter 1 that, as nations have come to follow different policy trajectories—particularly in economic policy—so we might see growing differences between them in fluidity, receives no support. There is some indication, in Figs 3.3 and 3.5, and in the further analyses reported in the text, that fluidity is greater in state-socialist (Poland and Hungary) and social democratic (Norway and Sweden) countries, and the argument for such a political explanation receives additional support from the finding of declining fluidity in Hungary during the 1990s. But, on the other hand, we observe very high fluidity in Israel and data from the General Social Survey (made available to us by Mike Hout) shows that fluidity is high in the United States. This leads to the conclusion that direct political intervention of the kinds associated with state-socialist and social democratic societies may be one means by which a society can reach relatively high rates of fluidity, but it is not the only one. Is the change over time within countries systematic? Our answer to this question is no, although we can point to some factors that may have contributed to change or stability in fluidity. In particular, the decline in the associations between origins and educational attainment and between origins and destinations, when holding education constant, seem to be significantly linked with increasing social fluidity.

However, referring to our earlier discussion of the factors shaping the observed flows in mobility tables, there may be other influences on fluidity that have nothing to do with government policy, the education system, the workings of the labour market, and suchlike. On the one hand, we need to be aware of the possibility of purely artefactual sources of variation arising from differences in the way that the data themselves represent the underlying phenomenon of interest. On the other, what we might call contingent factors, which are usually omitted from any theoretical discussion of social fluidity, may play an important role in shaping what we observe. Müller and Pollak's chapter in this volume provides a good example. They attribute the high fluidity they find among people born in the 1920s to the massive migration from the eastern part of Germany that occurred following the Second World War. The measured class origins of this cohort are thus their pre-migration origins, which had very little relevance in shaping their subsequent mobility patterns: the physical detaching of a large share of the cohort from their true origins led to higher measured social fluidity. The same argument may

explain the high level of fluidity in Israel, a country in which a very large share of the population is composed of immigrants.[18]

Mobility tables thus reflect a large number of underlying processes—artefactual, contingent, and substantive—and this poses a severe challenge for attempts to explain observed patterns of social fluidity or to develop theories of such fluidity. For one thing, this aggregation of processes renders it difficult to explain variations in fluidity; for another, it may also be the case that some of the commonality that has often been observed in comparisons of social fluidity derives from the mixing together in the mobility tables of processes that, when investigated separately, might show greater and more systematic societal and temporal differences.

In any case, the results of this volume should lead us to question the balance that mobility research has struck between social fluidity and absolute mobility. The emphasis, as in the chapters of this volume, has lain heavily on the former but, insofar as we are concerned with the mobility regime, this now seems inappropriate. This is by no means to deny that social fluidity tells us important things about the prevailing degree of inequality in the chances of attaining one class position rather than another,[19] and may be indicative of other characteristics of society. Nevertheless, although one would not want to say that fluidity can never make a difference (since we can easily construct examples in which extreme patterns of fluidity will be highly consequential for the distribution of cases in a mobility table), within the advanced industrial and post-industrial societies, the range of fluidity that we observe is relatively inconsequential in determining variation in mobility flows and in the life chances of individuals and families as these are captured in measures of class position. Many previous authors (such as Grusky and Hauser 1984; Goldthorpe 1985) have called for more attention to be paid to structural change, but, as Erikson and Goldthorpe (1992: 104, 189) suggest, it is not clear how such change should be explained nor, indeed, whether it might not better be approached as a matter of historical description rather than sociological explanation. But while this might be a valid concern if we conceive of class structures as macro-sociological phenomena, it may be less so, and may leave open the possibility of sociological explanation, if we were to turn our attention to the detailed evolution of businesses and firms and of the jobs that constitute classes.

The one area in which a measure of convergence is apparent is in class structures and rates of absolute mobility. In Chapter 1 we quoted Erikson and Goldthorpe's (1992: 375) statement that 'the structural contexts of mobility that are created by the development of industrial societies vary substantially—and

[18] Yaish (2002) and Goldthorpe et al. (1997) dispute the role of migration in accounting for high Israeli fluidity but their analyses are inconclusive because of the small number of non-immigrants in their data.

[19] And, for this purpose, odds ratios are an appropriate object on which to focus since, as Marshall and Swift (1996: 376) put it, 'the concept of equality is inherently comparative: it necessarily invites us to. . . assess (the advantages of different groups) relative to one another' (parentheses added).

so, in turn, then do their absolute mobility rates'. We can add that this variation is nowadays rather less substantial, mainly because of the near completion, in all our countries, of the transition out of farming, and, less significantly, the partial decline of the working class. It might be appropriate to conclude by returning to the Lipset Zetterberg hypothesis that, as we wrote in Chapter 1, has hitherto received rather short shrift from mobility analysts. Taken strictly, its assertion that that 'the overall pattern of social mobility appears to be much the same in the industrial societies of various western countries' (Lipset and Zetterberg 1959: 13) is clearly wrong, but, if current trends in the development of class structures are maintained, then, despite the large differences between them in their patterns of fluidity, the countries of Europe may yet prove Lipset and Zetterberg's assertion true.

Appendix A: assessing the possible effects of falling response rates

One noticeable feature of the data used in this book is a temporal decline in survey response rates in several countries. It has been more severe in some countries than others, but it raises the question of whether this in itself might have led to the widespread tendency towards increasing social fluidity that we have observed. To take a particularly striking example, Mach (Chapter 11 of this volume) reports response rates for the three Polish surveys of 90 percent in 1972, 76 percent in 1988, and 72 percent in 1994: the corresponding LmSF β values, reported in Table 3.8, are 1, 0.83, and 0.81. Similarly, we see declining response rates in the Netherlands (see Appendix 14.1). On the other hand, in Germany and Britain, where we observe no trends in fluidity, response rates have declined and remained constant, respectively (see Table 15.A1), and in France, where fluidity has increased, response rates have been constant: 87.8 percent in 1970; 86.9 percent in 1977; 87.8 percent in 1985; and 88.3 percent in 1993.[20] From these figures we conclude that it is far from clear that declining response rates can account for the general trend that we observe: but this is not to rule out the possibility that they may have had some effect on our findings in specific countries.

The Dutch case can serve as a useful illustration of the difficulty of knowing what impact declining response rates might have. As Appendix 14.1 showed, response rates to the Dutch surveys were, on average, just under 70 percent in the 1970s and 1980s, but then fell to around 40 percent in the 1990s. There is a very strong positive correlation between the yearly βs from the annual LmSF model (shown in Fig. 3.2) and response rates ($r = 0.77$).

[20] We thank Reinhard Pollak, Colin Mills, and Louis-André Vallet for making the German, British, and French figures, respectively, available to us.

TABLE 15.A1. *Response rates for German and British surveys*

(A) German surveys

Survey	Survey year	Sampling population	Total number of observations	Response rate in percent
ZUMABUS 1	1976	West Germany incl. West Berlin, German citizens, age 18+	2036	70.7 or 71.2
ZUMABUS 2	1977	West Germany incl. West Berlin, German citizens, age 18+	2002	70.4
Wohlfahrts survey	1978	West Germany incl. West Berlin, German citizens, age 18+	2012	67.1
Politik in der BRD	1978	West Germany incl. West Berlin, German citizens, age 18+	2030	n.a.
ZUMABUS 3	1979	West Germany incl. West Berlin, German citizens	2012	68.0
ZUMABUS 4	1979	West Germany incl. West Berlin, German citizens, age 18+	2007	70.4 or 70.5
ALLBUS 1980	1980	West Germany incl. West Berlin, German citizens, age 18+	2955	69.5
ZUMABUS 5	1980	West Germany incl. West Berlin, German citizens	1997	65.3
Politik in der BRD	1980	West Germany incl. West Berlin, German citizens, age 18+	1939	n.a.
ALLBUS 1982	1982	West Germany incl. West Berlin, German citizens, age 18+	2991	69.7
ZUMABUS 6	1982	West Germany incl. West Berlin, German citizens, age 18+	1993	67.6
ALLBUS 1984	1984	West Germany incl. West Berlin, German citizens, age 18+	3004	69.9
ALLBUS 1986	1986	West Germany incl. West Berlin, German citizens, age 18+	3095	58.6
GSOEP sample A	1986	private households in West Germany, household head carries German nationality		61[a] (53.8)
GSOEP sample B	1986	private households in West Germany, household head carries nationality of GR, I, E, YU, TR	7897 (sample A+B)	68[a] (56.6)
ALLBUS 1988	1988	West Germany incl. West Berlin, German citizens, age 18+	3052	67.7
ALLBUS 1990	1990	West Germany incl. West Berlin, German citizens, age 18+	3051	60.4
ALLBUS 1991	1991	German speaking residents in West and East Germany, age 18+	West: 1514	West: 52.7
ALLBUS 1992	1992	German speaking residents in West and East Germany, age 18+	West: 2400	West: 51.9
ALLBUS 1994	1994	German speaking residents in West and East Germany, age 18+	West: 2342	West: 53.2
ALLBUS 1996	1996	German speaking residents in West and East Germany, age 18+	West: 24026	West: 54.2

TABLE 15.A1. (*continued*)

(A) German surveys

Survey	Survey year	Sampling population	Total number of observations	Response rate in percent
ALLBUS 1998	1998	German speaking residents in West and East Germany, age 18+	West: 2212	West: 55.4
GSOEP sample E	1999	all private households in West and East Germany	West: 1290	54[a] (45.3)

[a] Initial response rate of panel. Number in parentheses displays initial response rate multiplied by panel attrition.

(B) Great Britain: General Household Survey, annual percentage response rates[a]

1973	1975	1976	1979	1980	1981	1982	1983	1984	1987	1988	1989	1990	1991	1992
81	84	84	83	82	84	84	82	81	85	85	84	81	84	83

[a] The GHS reports three response rates—minimum, maximum, and middle. We have used the last of these.

On the other hand, there are also strong correlations between β and year ($r = -0.83$), and between year and response rate ($r = -0.79$). Once we control for the correlation between β and year (i.e. the temporal trend in fluidity), the relationship between β and response rates becomes non-significant ($r = 0.33$). Even controlling for falling response rates there is still a clear trend towards increasing fluidity, which might be taken as evidence that β and the response rate are both subject to similar trends without any causal link between them.

Declining response rates will cause social fluidity to increase if non-respondents have, on average, lower social fluidity than respondents. We know, from studies of non-response and of panel survey attrition, that non-respondents are drawn from among those with low incomes and low levels of education (Lynn et al. 2004). Applied to mobility data, this would suggest that non-response reduces the proportion of people in the most disadvantaged destination classes because they will tend to have low incomes and low educational levels. One approach to trying to assess the impact of non-response is then to reweight our mobility data to enlarge the sizes of classes VIIa and VIIb and measure the impact that this has on fluidity. In a log-linear model, fluidity is unaffected by changes in the marginal distributions of the mobility table, but this is not true of log-multiplicative models such as LmSF, and it is easy to construct examples to show that reducing the proportion of cases in an origin class that has a very unequal outflow distribution or in a destination class that has a very unequal inflow distribution will reduce the value of β.

To illustrate the underlying idea, consider the two following hypothetical 3×3 tables, A and B.

250	150	100	
5	90	5	
90	90	220	
	A		

300	250	150
20	30	30
30	80	120
	B	

When we fit a LmSF model to these two, we estimate β in table B to be 0.54, relative to the value of 1 for table A. But this β value is sensitive to changes in the marginal distribution of B. If we increase the size of the first or the third rows, by multiplying the entries in that row by a constant greater than one, we find that β is larger, whereas if we do this to the second row, β is smaller.[21]

We follow this procedure using data for men from the Netherlands. For simplicity, we take the 1970 and 1990 decade tables and we reweight the latter to make classes VIIa and VIIb (henceforth, class VII) larger in both origins and destinations. We do not know the exact level of under-representation of these classes (if any) that is caused by non-response, nor is it necessary that we should: rather, we want to establish what the effect of any such under-representation might be. If we could establish, for example, that a 10 percent increase in the size of class VII was associated with a 5 percent decrease in the measured change in fluidity, then we would be able to hazard a guess at the impact of a plausible rate of non-response among members of this class.

In the observed data, relative to a β value of 1 for the 1970s, the value for the 1990s is 0.74. When we double the numbers in destination class VII in the 1990s data (so as to simulate the effects of declining response rates among members of this class) the estimated β remains unchanged. If we double the numbers in origin class VII, rather than destination class VII, β is estimated at 0.75. When class VII is doubled in size in both origins and destinations (and so the numbers in the cells which are common to both origins and destinations, VIIa/VIIa, VIIa/VIIb, VIIb/VIIb, and VIIb/VIIa, are now four times their observed value) β is 0.75. The results are striking: the β coefficient hardly differs between the observed and the various simulated datasets. The reason for this is twofold. First, and most importantly, the odds ratios associated with class VIIa, in both origins and destinations, are not particularly large: in origins, for example, odds ratios associated with IVc are much larger. Second, although the odds ratios associated with origins and destinations in VIIb are larger, these are small classes, and even doubling their size thus has almost no impact.

As one might anticipate, however, simulations that change the values of selected cells of the table, rather than entire margins (e.g. increasing the size

[21] If we double the size of the rows we find that, doing this to row 1, we get $\beta = 0.59$, to row 2, $\beta = 0.45$, and to row 3, $\beta = 0.68$.

of the main diagonal) will have a larger impact on β. Simply doubling the numbers in cells VIIa/VIIa, VIIa/VIIb, VIIb/VIIb, and VIIb/VIIa while leaving everything else unchanged increases β to 0.85. On the other hand, if we entirely omit class VII from the origins and destinations of the Dutch data, we nevertheless observe an identical increase in social fluidity over the 1970s, 80s and 90s to that reported in chapters 3 and 14. Taken together, these results suggest to us that the responsibility would seem to be on those who would wish to argue that non-response distorts our findings to propose an appropriate and empirically testable mechanism for this.

Appendix B: an approximate path analytic decomposition of the *OED* triangle

We would like to know how much of the gross or unconditional *OD* association (in other words, social fluidity) is mediated via educational attainment and, following from this, how much of the change in fluidity comes about through changes in the effects of origins on educational attainment and of educational attainment on class destinations. If we had continuous measures of social position we could do this using path analysis, but with categorical variables this is not possible. We have therefore developed the following approximation.

Our starting point has to be a measure of the gross *OD* association, and so we simply fit the log-multiplicative $OD\beta_T$ model to the three-way origin by destination by decade table. Turning to a four-way table of origins by destinations by decade by education, we could fit a model which included the partial effects of education on destination controlling for origins and the partial effects of origin on destination controlling for education (corresponding to paths B and C in Fig. 15.1). The latter could also be fitted using a log-multiplicative specification. But we could not simply use the βs from these two models to compare the gross and partial *OD* association, because the pattern of association itself will differ between them. That is, the pattern of *OD* association that evolves log-multiplicatively over decades will be different if we control for the effect of education on destinations than if we do not. On the other hand, if we could force the pattern (though not the strength) of the *OD* association in the partial model to be the same as the estimated gross *OD* association then we could use the β parameters from the two models to compare the relative strength of the association with and without controlling for the effect of education. Unfortunately, we have good grounds for supposing that the pattern of the *OD* association will differ significantly depending on whether education is in the model or not. Educational attainment has different impacts on different channels of mobility: in particular, entry into self-employment or farming among children born into these classes is

a question of inheritance, rather than of educational attainment (Ishida et al. 1995). With this in mind, we therefore fit the $ODβ_T$ model to the origin by destination by decade table together with a parameter applied to each cell on the main diagonal of the table (but whose effects are held constant over decades). We then force the partial *OD* associations to have the same pattern of local origin–destination association as in the gross model, but we allow the diagonal parameters to differ between the partial and gross models (but not to change over time). By making separate provision for the cells on the main diagonal we hope to take care of those cases in which education may have weaker effects in meditating mobility. We are assuming, therefore, that the effect, on the origin–destination association, of introducing educational attainment is to change the strength, but not the pattern, of that association, except in those parts of the table that relate to individuals found in the same class as the one they were brought up in. Here we allow the pattern of association to vary freely and thus build into the model no assumptions about how education will influence this.

In summary we have the gross *ODT*, or social fluidity, model which we write as $ODβ_T$ + diag; and we have a model in which class destination, *D*, is taken as the dependent variable and from which we derive our partial effect of origins on destinations. This model is $OET\ EDT\ X^{OD}β_T$ + diag. X^{OD} is the *OD* association which is fixed to be equal to that estimated from the gross model. We fit the *OET* and *EDT* margins exactly in order to focus on the difference between the $β$s from the gross and partial models. Note that in the partial model, as in the gross model, the diagonal effects do not vary over decades. The payoff to this strategy is that we can now compare the coefficients from the gross and partial *OD* associations using only two sets of measures: the diagonal parameters, where change tells us the influence of education on class inheritance, and the $β$ parameters, which tell us the extent to which the overall association is weakened once we take education into account. In other words, the difference between the gross and partial values of $β$ tell us how much of the origin–destination association is mediated by education.

We apply this approach to four of our countries: France, Britain, Sweden, and the Netherlands. We choose them because they display rather different trends in fluidity: increasing in France, Sweden, and the Netherlands (with the most pronounced increase in the last of these) and remaining constant in Britain. In analysing the *OED* triangle in these countries we use a four-way table of class origins by educational attainment by class destination by decade (distinguishing the 1970s, 1980s, and 1990s).[22] Because this is a rather large table (with 882 cells in France, Britain, and the Netherlands and 648 in Sweden) large samples are needed if our statistical tests are going to have sufficient power.

[22] We carry out this final analysis using only data for men, not least because changes in women's labour force participation would introduce complications in interpreting results for them.

The French, British, Swedish, and Dutch data are among the biggest we have (see Table 3.2) and we regard the French, British, and Swedish data as being of a very high degree of comparability over time.

Our educational attainment measure uses the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) educational categories, defined as follows:[23]

1ab: compulsory elementary education or less;
1c: compulsory elementary education plus vocational training;
2ab: lower or intermediate secondary education;
2cd: higher secondary education;
3a: lower tertiary education;
3b: higher tertiary education (an undergraduate degree or higher).

Table 15.B1 shows the β parameters from the gross and partial models. The β parameters for the gross association between origins and destinations (social fluidity, in other words) differ slightly from those reported in Table 3.8 because here we have fitted separate effects to the main diagonal of the table. But the conclusion to which they point is the same: fluidity has increased in France, Sweden, and the Netherlands but, in Britain, even though the βs show a downward trend, this is not statistically significant. Once again, the increase in fluidity is largest in the Netherlands. The βs for the partial *OD* effect show that in France, Britain, and the Netherlands, in the 1970s, just over one-fifth of the origin–destination association was mediated via education: in Sweden just over

TABLE 15.B1. *Gross and net association between origins and destinations (β parameters)*

	1970s	1980s	1990s	1970s	1980s	1990s
	France			Britain		
Gross effect: $OD\beta_T$	1	0.87	0.82	1	0.95	0.89
Partial effect: $X^{OD}\beta_T$	0.79	0.63	0.54	0.80	0.76	0.69
	Sweden			Netherlands		
Gross effect: $OD\beta_T$	1	0.91	0.83	1	0.82	0.70
Partial effect: $X^{OD}\beta_T$	0.58	0.48	0.42	0.81	0.65	0.53

[23] A more complete description of the scheme is given in Chapter 1.

TABLE 15.B2. *Diagonal effects from the unconditional (gross) and conditional (partial) models*

Country	France		Great Britain		Sweden		The Netherlands	
Class	Gross	Partial	Gross	Partial	Gross	Partial	Gross	Partial
I + II	−0.16	−0.38	0.37	0.12	−0.56	−0.53	−0.43	−0.60
III	0.01	0.10	2.27	1.87	0.55	0.43	0.23	0.31
IVab	0.92	1.04	5.68	4.75	0.16	0.50	0.27	0.51
IVc	2.62	2.75	12.30	10.65	4.58	3.87	2.24	2.49
V + VI	−0.11	−0.01	−0.16	−0.07	0.71	0.50	0.32	0.34
VIIa	0.65	0.52	−0.14	−0.14	0.28	0.21	0.35	0.22
VIIb	2.64	2.36	2.36	2.30	—	—	−0.22	−0.08

two-fifths. In the 1990s this had increased to almost half in Sweden, one-third in France, and around a quarter in Britain and the Netherlands.

Table 15.B2 reports the parameters for the diagonal cells of the mobility table parameters—from the gross model that takes no account of the effect of education and from the partial model. Comparing these two allows us to see the extent to which adding the influence of education changes the tendency towards class inheritance. By and large, where the gross and partial effects differ, this is because the latter are smaller than the former, and this suggests that some of the tendency for class self-recruitment is explained as part of the more general processes linking educational attainment and class position. But, more obviously, this effect is rather minor (e.g. in France, only the parameter for class I + II shows any substantive difference) and so, in those cases in which class inheritance is very important (notably in class IVc in all four countries and in IVab and VIIb in some), its effect remains pronounced even controlling for education.